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Revised Statement of Basis

Proposed Permit for Storage and Processing of RCRA-Regulated Hazardous Wastes

Colorado River Indian Tribes
and Evoqua Water Technologies LLC
for Carbon Regeneration Facility Located at:
2523 Mutahar Street
Parker, Arizona 85344
(EPA ID # AZD982441263)



Proposed by
U.S. Environmental Protection Agency, Region 9
San Francisco, California

November 2016

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1. Executive Summary

The United States Environmental Protection Agency, Region 9 (EPA or the Agency) is requesting public comment on its proposal to issue a Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§6901 *et seq*., permit to Evoqua Water Technologies LLC (Evoqua), as facility operator, and the Colorado River Indian Tribes (CRIT or the Tribe), as the beneficial land owner.

The Evoqua facility is located on the Colorado River Indian Reservation near Parker, Arizona, (the Facility), and houses a thermal treatment system used to regenerate spent carbon for reuse. A RCRA hazardous waste management permit would allow the Facility operator to continue the regeneration of carbon contaminated with hazardous waste, subject to the conditions and the stipulations specified in the permit and in the RCRA regulations.

EPA is in the process of making a permit decision, and is requesting public comment on its proposal to issue a permit for RCRA storage and treatment. The public comment period starts on October 1, 2016 and will close on November 15, 2016.

2. Introduction

EPA has prepared this Statement of Basis in accordance with Title 40 of the Code of Federal Regulations (40 CFR) § 124.7. It explains EPA's decision, as part of this proposal, to issue a draft RCRA permit for the Facility to treat RCRA regulated spent carbon waste.

The Appendices to this document help support the Agency's decision to issue and request public comment on a draft RCRA hazardous waste management permit for the Facility. These Appendices are organized in the following manner:

- Appendix A – Draft Permit Modules
- Appendix B – Checklists
- Appendix C – National Historic Preservation Act Determination
- Appendix D – Endangered Species Act Determination
- Appendix E – Environmental Justice Findings
- Appendix F – Administrative Record File List
- Appendix G – RCRA Facility Assessment
- Appendix H – Evoqua Facility Unit Maps (Figures J-1 through J-7)

3. Proposed Permit Decision

EPA is proposing a RCRA permit be issued to Evoqua and CRIT as co-Permittees. The Agency is seeking public comment on this proposed decision and the draft permit that accompanies this Statement of Basis. After the public comment period closes, EPA will respond to the public comments and make a final permit decision.

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3.1 Proposed Action

EPA is proposing issuance of the attached draft RCRA hazardous waste management permit. [See Appendix A.]

3.2 Administrative Record

The public may review the Administrative Record (AR), which contains the documents and information upon which the EPA is basing this proposed action.

The AR is physically located at the EPA Region 9 Office, 75 Hawthorne Street, San Francisco, CA 94105.

There are two satellite information repositories containing key documents and a file list of the AR. The first information repository is located at the CRIT Museum and Library located at the CRIT Administrative Complex, 26600 Mohave Road, Parker, Arizona, 85344, (at the intersection of 2nd Avenue and Mohave Road). The second information repository is located at the Parker Public Library, 1001 South Navaho Ave., Parker, Arizona, 85344.

For specific documents listed on the AR file list that cannot be found at one of the repositories listed above, please contact Mike Zabaneh at (415) 972-3348 or at zabaneh.mahfouz@epa.gov.

Key documents used in the decision making process can also be found on EPA's website at: www.epa.gov/az/evoqua.

3.3 Public Participation

EPA must provide notice to the public whenever a draft RCRA permit has been prepared and when a hearing has been scheduled.

3.3.1 Request for Public Comment

Pursuant to 40 CFR §124.10(b), EPA must provide at least 45 days for public comment on proposed permit decisions under RCRA. EPA is requesting that the public submit any comments on the proposed RCRA permit decision announced today in the following manner.

Comments on this proposed Permit decision may be submitted to EPA via mail, email, fax and/or in person during the public comment period, including at the Public Hearing. Written comments must be faxed, emailed or postmarked on or before January 9, 2017, and sent to:

"Mike" Mahfouz Zabaneh, P.E., Project Manager Phone number: 415-972-3348
US Environmental Protection Agency (LND-4-2) Fax number: 415-947-3530

75 Hawthorne Street
San Francisco, CA 94105
Email: zabaneh.mahfouz@epa.gov

3.3.2 Public Meeting/Public Hearing

The Public Meeting and Public Hearing will be held on held November 1, 2016, in the **Mohave Conference Room** at the **Bluewater Resort and Casino, located at 11300 Resort Drive, Parker, AZ 85344**. **Phone number: 928-669-7000.** The Public Meeting/Public Hearing time is at **7:00 pm**. If you need reasonable accommodation, please contact Mike Zabaneh by email or phone.

During the Public Meeting, representatives from EPA will provide information about the Facility and the proposed permit decision. The public will have an opportunity to ask questions during the Public Meeting. Immediately after the Public Meeting, EPA will hold a Public Hearing, which will be recorded. The public may comment on EPA's proposed decision during the Public Hearing. EPA will respond to all public comments received during the public comment period, including during the Public Hearing, in a written Response to Comments document at the time the Agency finalizes its permit decision.

3.4 How EPA Will Make a Final Decision

After the public comment period closes, EPA will review and evaluate all the comments received. The Agency will then make a final decision to issue or deny the permit for the Facility. EPA will notify the applicants and each person who submitted written comments or requested notice of the final permit decision. The notice will include a reference to the procedures for appealing the decision under 40 CFR § 124.19.

The final permit decision to issue or to deny the permit will become effective 30 days after the notice of the decision unless a later effective date is specified in the decision or review is requested on the permit under 40 CFR § 124.19. If there are no comments opposing the issuance of the permit or requesting a change in the draft permit, the permit will become effective immediately upon issuance.

4. Facility Information

The Facility is located at 2523 Mutahar Street, Parker, Arizona, 85344. The Facility is approximately one (1) mile southeast of the town of Parker and close to Arizona Highway 95. This area is part of La Paz County and within CRIT reservation lands.

The Facility achieved RCRA "interim status" as an existing facility, effective August 21, 1991. The Facility operator was formerly known as Siemens Water Technologies LLC, Siemens Industries Inc., U.S. Filter-Westates, and Westates Carbon-Arizona, Inc. Many of the historic documents contain these former names for the Facility operator. As the beneficial landowner, CRIT signed on as co-applicant of the permit application.

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EPA is the regulatory agency with jurisdiction for the RCRA hazardous waste permit decision.

4.1 Wastes Handled

This Facility stores and treats by regeneration spent hazardous and non-hazardous activated carbon. The permit application for the Facility identified several hundred hazardous waste codes acceptable for treatment at the Facility. These wastes include, but are not limited to, volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), phthalates, amines, pesticides, and metals.

Some of the spent carbon stored and processed at the facility is received from facilities subject to the Clean Air Act National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Benzene Waste Operations.

5. Basis for the Draft Permit Conditions

5.1 Permit Application

Much of the information reflected in the attached draft permit modules is derived from the permit application submitted by the applicants to the Agency.

5.2 Statutory Provisions

RCRA authorizes EPA to issue permits to persons owning or operating hazardous waste treatment, storage, or disposal facilities. [See RCRA Sections 3004, 3005, 42 U.S.C. §§ 6924 and 6925.]

5.2.1 General Authority

RCRA requires EPA to promulgate regulations establishing standards applicable to owners and operators of hazardous waste storage, treatment, and disposal facilities (42 U.S.C. § 6924). EPA promulgated regulations implementing a federal and state permitting program for such facilities.

5.2.2 Use of Omnibus Authority

RCRA Section 3005(c)(3), 42 U.S.C. § 6925(c)(3), provides that a permit contain terms and conditions that the Administrator determines necessary to protect human health and the environment.

5.3 Regulatory Provisions

On May 19, 1980, EPA promulgated regulations establishing standards and a permitting program for the transportation, storage, treatment and disposal of hazardous waste. 45 FR 33066, May 19, 1980. The regulations have been revised, renumbered, and reorganized many times since then. [See, *e.g.*, 40 CFR Parts 260-279.]

The Facility is currently operating under RCRA's Interim Status regulations at 40 CFR Part 265 as well as complying with the requirements for hazardous waste generators at 40 CFR Part 262.

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RCRA's permitted facility standards are found at 40 CFR Part 264. In addition, regulations governing the issuance of RCRA hazardous waste management permits are found at 40 CFR Part 270. Regulations covering the issuance EPA permits generally are contained in 40 CFR Part 124.

The Facility's furnace is currently regulated under RCRA's interim status regulations as a thermal treatment unit. See 40 CFR Part 265, Subpart P. However, under RCRA's permitting regulations, the unit would be classified as a miscellaneous unit. See 40 CFR Part 264, Subpart X.

In an effort to address each of the regulatory provisions applicable to the Facility, the Region has prepared checklists matching specific regulatory requirements to their analogous provisions in the proposed draft permit. (See Appendix B.)

5.3.1 Checklists

Checklists for the applicable regulatory provisions from the following regulations are attached: 40 CFR Parts 61, 63, 124, 264, and 270.

The checklists do not repeat the regulations verbatim. They are merely excerpts, designed to assist the public in understanding the basis for specific proposed permit conditions.

5.4 Other Authorities

In addition to RCRA, a permitted Facility may be subject to other environmental statutes. A brief discussion of additional authorities and their relationship to this proposed permit decision follows.

5.4.1 National Historic Preservation Act (NHPA)

The National Historic Preservation Act of 1966. 16 U.S.C. 470 *et seq.* Section 106 of the NHPA and its implementing regulations at 36 CFR Part 800 require the Agency, before issuing a permit, to adopt, when feasible, measures to mitigate potential adverse effects of the permitted activity on properties listed or eligible for listing in the National Register of Historic Places. The NHPA's requirements are to be implemented in cooperation with State and Tribal Historic Preservation Officers and, upon notice to and when appropriate, in consultation with the Advisory Council on Historic Preservation.

The NHPA requires that EPA first review potential impacts of its proposed permit decision on historic properties. See NHPA, as amended, at 16 U.S.C. 470, *et seq.* EPA has conducted an NHPA Sec. 106 review of the potential impacts from the issuance of a RCRA hazardous waste permit for the Facility and, in June of 2012, made a final determination that "no adverse effect" on historic properties would occur as a result of EPA's decision. A report documenting the steps taken in making this finding was sent to CRIT, the Arizona State Historic Preservation Office, Evoqua, and the Town of Parker, which were all consulting parties under the NHPA process.

During the NHPA process, EPA identified two sites within a one-mile radius of the Facility (area of potential effects [APE]) as potential historic properties under the NHPA. One is the Parker Cemetery, a location where Navajo Code Talkers are interred. The second site that EPA considered consisted of all areas within the APE from where Black Peak, a mountain sacred to the members of the Native American community in the area, approximately 3 miles away, may

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be viewed or from where prayers might be directed. EPA considered both locations to be areas of traditional religious and cultural importance.

EPA identified potential effects of Facility operations on historic properties, including visual and auditory impacts, and impacts stemming from the presence of chemicals at the Facility and in the Facility's emissions. However, because the Facility could continue treating non-hazardous spent carbon, whether or not a hazardous waste management permit is issued, EPA concluded that the permit decision will not significantly affect Facility operations. Thus, EPA has determined that issuing a permit solely for the management of RCRA hazardous waste at the Facility will have no adverse effect on nearby historic properties.

5.4.2 Endangered Species Acts (ESA)

The Endangered Species Act. 16 U.S.C. §§ 1531, *et seq.* Section 7 of the ESA and its implementing regulations at 50 CFR Part 402, require the Agency to ensure, in consultation with the Secretary of the Interior or Commerce, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat.

EPA has complied with this requirement and has determined that the Risk Assessment submitted with the Part B Permit Application demonstrated that the issuance of a RCRA permit for the Facility would not be expected to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. As a result, EPA has completed its obligations under Section 7 of the ESA and does not need to consult with the U.S. Fish and Wildlife Service prior to the issuance of this draft RCRA hazardous waste permit for the Facility. An EPA memorandum reflecting this determination, along with periodic updates and other materials relating to EPA's compliance with Section 7 of the ESA, are included in Appendix D to this Statement of Basis. These materials include the most recently reviewed automated Environmental Conservation Online System-Information, Planning and Conservation (ECOS-IPaC) system print out about the resources managed in the area of the Facility by the US Fish and Wildlife Service.

5.4.3. Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act. 16 U.S.C. § 1273, *et seq.* Section 7 of the Wild and Scenic Rivers Act prohibits the Agency from assisting the licensing or construction of any water resources project that would have a direct, adverse effect on the values for which a national wild and scenic river was established.

EPA has made a determination that the issuance of a hazardous waste management permit for the Facility will not have a direct, adverse effect pursuant to the Wild and Scenic Rivers Act, since the portion of the Colorado River that passes by Parker, Arizona is not designated as part of the Wild and Scenic Rivers Act system.

5.4.4. Coastal Zone Management Act

The Coastal Zone Management Act. 16 U.S.C. § 1451, *et seq.* Section 307(c) of the Coastal Zone Management Act, and its implementing regulations at 15 CFR Part 930, prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State Coastal Zone Management program,

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and the State or its designated agency concurs with the certification (or the Secretary of Commerce overrides the State's non-concurrence).

The Coastal Zone Management Act is not applicable to this proposed action because land held in trust by the federal government, such as the CRIT Reservation on which the Facility is located, is excluded from the definition of "coastal zone." [See 16 U.S.C. § 1453(1).]

5.4.5 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act. 16 U.S.C. §§ 661, *et seq.* requires that the Agency, before issuing a permit proposing or authorizing the impoundment (with certain exemptions), diversion, or other control or modification of any body of water, consult with the appropriate State agency exercising jurisdiction over wildlife resources to conserve those resources.

This proposed permit decision would neither propose nor authorize the impoundment, diversion, or other control or modification of any body of water and thus the Fish and Wildlife Coordination Act is inapplicable to this proposed action.

5.4.6 The Clean Air Act

The Clean Air Act (CAA), 42 U.S.C. §§ 7661 *et seq.*, requires any major source of criteria or hazardous air pollutants (HAP) to obtain a title V permit. For criteria air pollutants, the title V major source threshold is 100 tons per year (tpy); for HAPs, the title V major source threshold is 10 tpy for any individual HAP and 25 tpy for any combination of HAPs.

The Facility's uncontrolled potential to emit criteria and HAP pollutants is below applicable major source thresholds, with the exception of sulfur dioxide (SO2) and oxides of nitrogen (NOx).

This draft RCRA permit, if finalized, would impose practically enforceable, synthetic minor limits on SO2 and NOx. For SO2, this includes a Facility-wide cap of 30 tpy, demonstrated on a rolling 12-month basis, using sulfur content of the feed, carbon reactivation production rate, and hours of operation over the course of the year, minus a 90% presumed sulfur removal rate from the packed bed scrubber system. For NOx, this includes a Facility-wide cap of 22 tpy, demonstrated on a 12-month rolling basis, using the NOx stack gas concentration from the most recent stack test where NOx was measured (average of 3 runs), flow rate out of the stack, and the hours of operation of the reactivation unit. The Facility is also subject to a Performance Demonstration Test (PDT), also known as a "trial burn", at least once every five years. See Draft Permit Condition I.K.1.c.

EPA believes these Facility-wide synthetic minor limits, in conjunction with the monitoring, recordkeeping, and reporting required by the draft RCRA permit in Permit Condition I.E.9. and elsewhere in the draft RCRA permit, are sufficient to limit the Facility's emissions below the title V major source threshold of 100 tpy. Because these limits on the Facility's air emissions would be practically and federally enforceable, the Facility would not be required to obtain a separate title V permit if the draft RCRA permit is made final.

5.5 Permit Conditions and Operating Parameters that are based on the Performance Demonstration Test (PDT)

The operating limits, parameters, and draft permit conditions for the carbon regeneration furnace and its associated air pollution control and other equipment are primarily found in the draft permit at Module V. These proposed limits, parameters and conditions are based on the results

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of the PDT that was performed in 2006 by Evoqua under the oversight of EPA and documented in the Risk Assessment, which was submitted as part of the Part B Permit Application. The PDT evaluated the operation of the furnace and showed that emissions from the stack meet the Hazardous Waste Combustor Maximum Achievable Control Technology (MACT) standards set forth in 40 CFR Part 63, Subpart EEE. While promulgated in the CAA MACT standards section of the Code of Federal Regulations, these 40 CFR Part 63, Subpart EEE standards are applicable to units under both the CAA and RCRA. For example, 40 CFR Part 264, Subpart X allows EPA to draw on these requirements when appropriate to apply to Miscellaneous Units, such as the carbon regeneration furnace at the Facility. [See 40 CFR § 264.601.]

5.6 Risk Assessment

On July 30, 2007, Evoqua submitted its Human Health and Ecological Risk Assessment Report to EPA. The risk assessment uses the results from the Final March 2006 PDT, conducted at the Facility in accordance with the EPA regulations for this type of facility.

The risk assessment demonstrates that even using conservative assumptions:

- The potential for adverse health impacts associated with air emissions from both the Facility's carbon reactivation furnace and from spent carbon unloading are below regulatory and other target risk levels, for both human health and ecological receptors;

- The incremental contribution of effluent from the Facility's wastewater treatment plant drainage does not pose unacceptable risks to either aquatic life or human health; and

- Both concentrations of fugitive emissions from carbon unloading at the Facility and measured worker breathing zone concentrations are below occupational exposure limits.

In conclusion, this analysis demonstrates that, even with conservative assumptions, the likelihood of adverse human health impacts from facility operations is below levels of concern and regulatory target levels.

6. Tribal Consultation with the Colorado River Indian Tribes (CRIT)

In August of 2014, EPA initiated formal Tribal consultation with respect to the RCRA Hazardous Waste Permit Application submitted to EPA for the Facility, which is operated by Evoqua on the Tribe's land. EPA regards its formal consultation with CRIT as a critical part of the RCRA permitting process for the Facility. The Tribe's status as the beneficial landowner of the trust land on which the Facility is located makes that consultation process all the more significant, because CRIT is a co-applicant on the RCRA Permit Application.

Since the time that EPA initiated formal Tribal consultation in a letter, dated August 28, 2014, EPA made two presentations about the Facility and the Agency's review of the Permit Application to the CRIT Council; one on September 22, 2014, and another on March 12, 2015.

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Formal Tribal consultation was closed on May 20, 2016. EPA will open a separate formal consultation in advance of the final permit decision. If a permit is issued, EPA will continue regular consultation regarding hazardous waste management at the facility with the Tribal Council.

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Figure 1 – Site Location Map

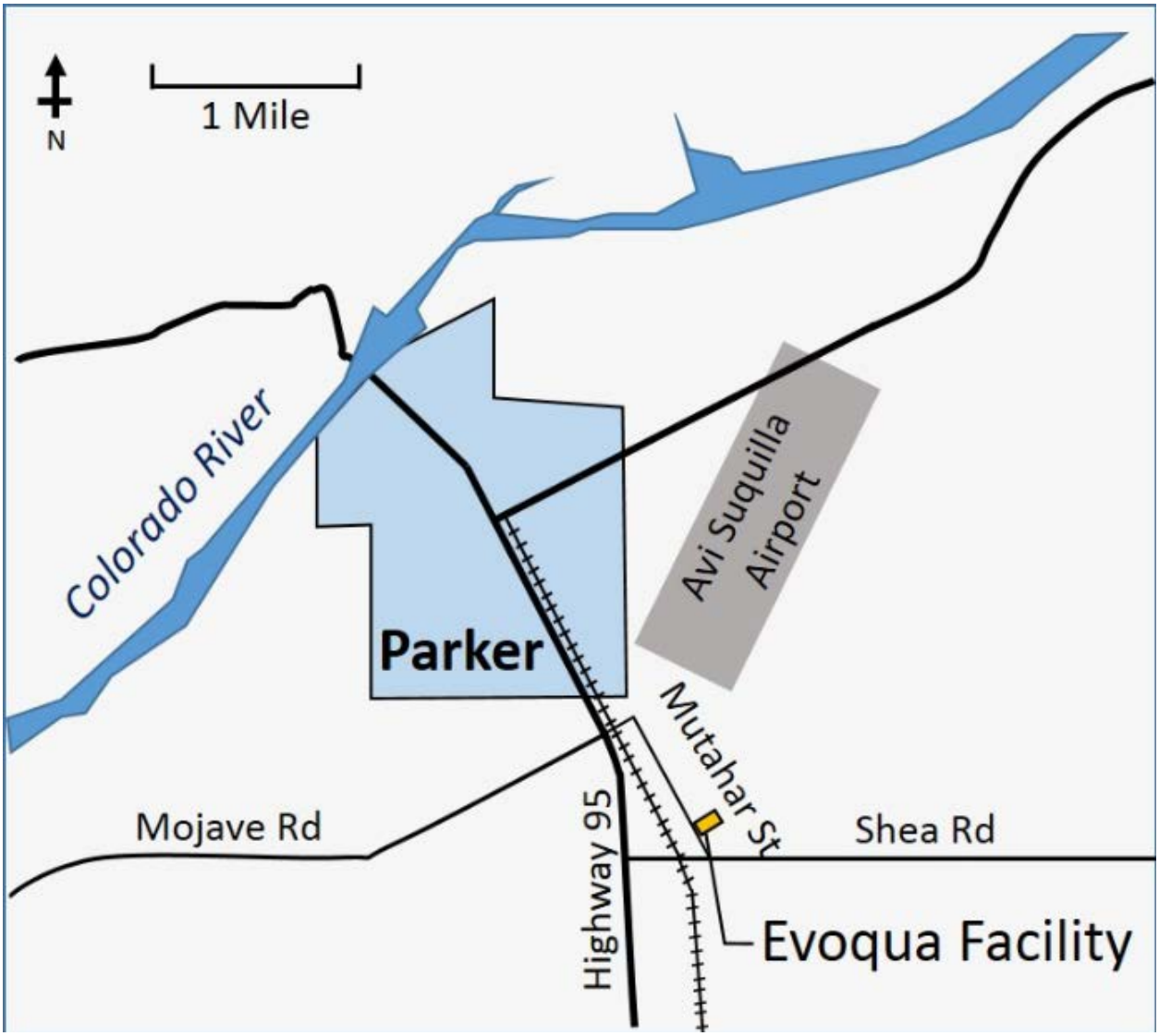

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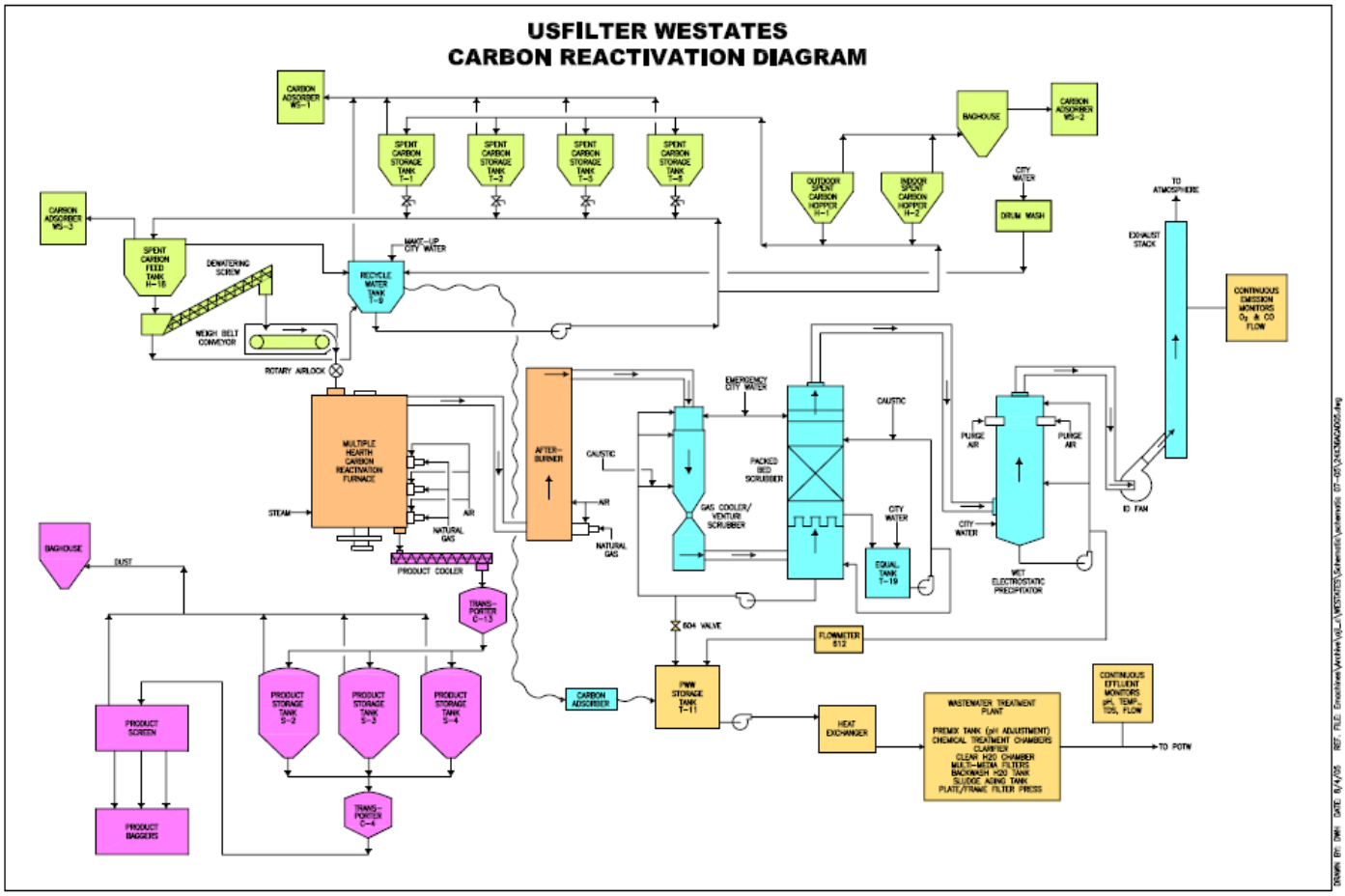
Figure 2 – Facility Process Diagram



Appendix A

Draft Permit Modules

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U.S. Environmental Protection Agency
Resource Conservation & Recovery Act Draft Permit
EPA RCRA I.D. Number: AZD982441263

BENEFICIAL LANDOWNER:	COLORADO RIVER INDIAN TRIBES	OPERATOR:	EVOQUA WATER TECHNOLOGIES, LLC
	26600 Mohave Road Parker, Arizona 85344		2523 Mutahar Street Parker, Arizona 85344

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, 42 USC Sections 6901 *et seq.*, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, P.L. 98-616 (collectively, hereafter, "RCRA"), and regulations promulgated thereunder by the U.S. Environmental Protection Agency (EPA) (codified and to be codified in Title 40 of the Code of Federal Regulations), this Permit is issued to Evoqua Water Technologies, LLC and the Colorado River Indian Tribes (collectively, hereafter, the "Permittees"), for the facility located at 2523 Mutahar Street, Parker, Arizona 85344 with the EPA RCRA ID # AZD982441263.

This Permit, with all its attachments, constitutes the full RCRA Permit for this Facility. The Permittees, pursuant to this Permit, are required to investigate any releases of hazardous waste or hazardous constituents at the Facility, regardless of the time at which waste was placed in a unit. The Permittees are required to take appropriate corrective action for any such releases.

The Permittees must comply with all the terms and conditions of this Permit. This Permit consists of the conditions contained herein (including those in any appendices) and the applicable regulations contained in 40 CFR Parts 61, 63, 124, and 260 through 270, as specified in this Permit, and the statutory requirements of RCRA. Nothing in this Permit shall preclude the Regional Administrator from reviewing and modifying the Permit at any time during its term in accordance with 40 CFR § 270.41.

This Permit is based on the premise that information and reports submitted by the Permittees prior to issuance of this Permit are complete and accurate, unless otherwise indicated in this Permit. Any inaccuracies found in this information or information submitted as required by this Permit may be grounds for termination or modification of this Permit in accordance with 40 CFR §§ 270.41, 270.42, or 270.43 and/or potential enforcement. The Permittees must inform the EPA of any deviation from or changes in the information in the application which would affect the Permittees' ability to comply with the applicable regulations or Permit conditions.

This Permit is effective _____, and shall remain in effect for ten (10) years until _____, unless revoked and reissued, or terminated under 40 CFR §§ 270.41 and/or 270.43 or continued in accordance with 40 CFR § 270.51(a). All obligations for performance of the conditions of this Permit are in effect until deemed complete by the Director of the Land Division for the U.S. Environmental Protection Agency, Region 9 (the "Director").

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If any conditions of this Permit are appealed in accordance with 40 CFR § 124.19, the effective date of the conditions determined to be stayed in accordance with 40 CFR § 124.16 shall be determined by final agency action as specified under 40 CFR § 124.19.

_9/27/2016_
Date Issued

___/SIGNED/____
Jeff Scott
Director
Land Division

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This draft permit has been created in accordance with 40 CFR § 124.6 as part of US EPA's proposed RCRA hazardous waste permit decision for the hazardous waste facility (EPA ID # AZD982441263) located on trust land of the Colorado River Indian Tribes at 2523 Mutahar Street, Parker, Arizona, 85344, and operated by Evoqua Water Technologies LLC

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This draft permit has been created in accordance with 40 CFR § 124.6 as part of US EPA's proposed RCRA hazardous waste permit decision for the hazardous waste facility (EPA ID # AZD982441263) located on trust land of the Colorado River Indian Tribes at 2523 Mutahar Street, Parker, Arizona, 85344, and operated by Evoqua Water Technologies LLC

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MODULE I - GENERAL PERMIT CONDITIONS

I. INTRODUCTION

This document, consisting of Modules I through VI and the Permit Attachments, Permit Exhibits, and any other documents incorporated herein, constitutes a hazardous waste permit under Subtitle C of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, (RCRA), and the applicable regulations at Title 40 of the Code of Federal Regulations (40 CFR) Parts 260 through 270 for hazardous waste storage and treatment at a carbon regeneration facility (EPA ID Number - AZD982441263) (Permit) located on the Colorado River Indian Tribes (CRIT) Reservation near Parker, Arizona. At the Evoqua Water Technologies LLC Facility (defined below), spent carbon is treated in a regeneration furnace to purify it and make it suitable as a commercial product. [See 40 CFR §§ 264.10 and 264.11.]

I.A. EFFECT OF PERMIT

I.A.1. The Permittees Evoqua Water Technologies LLC and CRIT are allowed to store and treat hazardous waste in accordance with the conditions of this Permit. Any storage or treatment of hazardous waste at the Facility not authorized in this Permit is prohibited. Pursuant to 40 CFR §270.4, compliance with this Permit generally constitutes compliance, for purposes of enforcement with RCRA, with some exceptions (42 U.S.C. §§6901 et seq.). [See also Permit Conditions II.A.2. and II.A.5. and 40 CFR Part 262, §§270.1(c), and 270.4.]

I.A.2. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege. [See 40 CFR §§270.4(b) and 270.30(g).]

I.A.3. Issuance of this Permit does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of Tribal, state or local law or regulations. [See 40 CFR §270.4(c).]

I.A.4. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3008(h), 3013, or

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7003 of RCRA, Sections 104, 106(a) or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. §§9601 et seq.), or any other law providing for protection of public health or the environment. In addition, compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3008(a), solely with respect to those requirements set forth at 40 CFR § 270.4(a)(1)(i)-(iv).

I.A.5. This Permit supersedes any and all requirements included in the attachments, sections, and appendices of the permit application. However, to the extent that any attachments, sections or appendices of the permit application are incorporated into and made a part of this Permit, and to the extent that any such attachments, sections or appendices contradict or conflict with the requirements of the Permit set forth in Modules I through VI, inclusive, the conditions set forth in Modules I through VI shall control. In addition, references to RCRA's interim status requirements (40 CFR Part 265) contained in such attachments, sections or appendices are superseded by the standards applicable to RCRA permitted facilities (40 CFR Part 264), as appropriate, upon the effective date of this Permit.

I.A.6. Unless set forth specifically otherwise herein, requirements of this Permit apply to both the tribal trust landowner and the operator of the Facility, who are referred to herein collectively as the "Permittees." However, compliance with such requirements of this Permit by either the Tribe, as beneficial landowner, or the operator is regarded as sufficient for both. [See 45 Federal Register (FR) 33295/col. 3, (May 19, 1980).]

I.A.7. Where citations to regulatory authority are included at the end of a permit condition -- for example "[See 40 CFR §264.XXX.]" -- such references are solely to assist those reading the Permit with identifying the source of the requirement to which the citation applies. Such citations do not, in and of themselves, incorporate the regulatory requirement into the permit condition. However, where regulations are referenced in the body of a permit condition – for example "Pursuant to 40 CFR § 264.XXX" or "In accordance with 40 CFR § 264.XXX," the requirements of the regulation so cited are incorporated into the permit condition.

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I.A.8. For the purposes of this Permit, any reference to a regulatory requirement (including any interim final regulation) shall refer to the version of such regulatory requirement which is in effect at the time of issuance of the permit. With some exceptions as set forth in 40 CFR § 270.4(a)(1), where regulatory authorities affecting conditions of this Permit are issued, revised or amended after the issuance of this Permit, such new, revised or amended provisions shall only be applicable to the operations of the Facility after a permit modification incorporates such requirements or after a renewal of the Permit, incorporating or referencing such new, revised or amended regulations, is issued. [See 40 CFR 270.32(c) and 40 CFR § 270.4(a)(1).]

I.B. PERMIT ACTIONS

I.B.1. This Permit may be modified, revoked and reissued, or terminated for cause, in accordance with 40 CFR §§ 270.41, 270.42, and 270.43. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittees, does not stay the applicability or enforceability of any permit condition. [See 40 CFR §§ 270.4(a)(2), 270.30(f), 270.41, 270.42, and 270.43.]

I.B.2. This Permit may be renewed in accordance with 40 CFR § 270.30(b) and Permit Condition I.E.2. Review of any application for a Permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations. [See 40 CFR § 270.30(b), RCRA Section 3005(c)(3).]

I.C. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. [See 40 CFR §124.16.]

I.D. DEFINITIONS

For purposes of this Permit, terms used herein shall have the same meaning as

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those in 40 CFR Parts 61, 63, 124, 260, 264, 266, 268, and 270, as appropriate, unless this Permit specifically provides otherwise. Where terms are not defined in the regulations or this Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

AOC means Area of Concern.

CEMS means continuous emissions monitoring system.

CERCLA means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, (42 U.S.C. §§9601 et seq.,) as amended.

CFR means Code of Federal Regulations, latest edition.

CMS means continuous monitoring system.

CRIT or Tribe means the beneficial landowner of the land on which the Facility is located, the Colorado River Indian Tribes.

Day or days means a calendar day or days, even if the word "calendar" is absent, unless otherwise specified.

Director means the Director of the EPA Region 9 Land Division, or his or her designee or authorized representative.

Enforcement Director means the Director of the EPA Region 9 Enforcement Division, or his or her designee or authorized representative.

EPA means the United States Environmental Protection Agency.

Facility means the carbon regeneration facility located at 2523 Mutahar Street, Parker, Arizona, 85344, on land of the Colorado River Indian Tribes and all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating or storing, of spent carbon as allowed by this Permit.

Facility mailing list means the most recent version of the interested parties mailing

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list provided by the EPA Region 9 Land Division to the Permittee(s).

HWMU means Hazardous Waste Management Unit.

Method 21 means Method 21 from Appendix A-7 of 40 CFR Part 60.

PDT means Performance Demonstration Test.

Permit Attachment(s), Permit Attachment Section(s) and Permit Attachment Appendix or Appendices mean the attachments, sections and appendices to this Permit, which were transmitted to EPA by the Permittees in their Part B Permit Application dated April 2016.

Permittee, Permittees or Permit Applicants means either Evoqua Water Technologies, LLC, the operator of the Facility, or the Colorado River Indian Tribes, the beneficial landowner of the tribal land on which the Facility is located, or both.

Product means the carbon that has been thermally treated and regenerated at the Facility.

RCRA means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 and the Hazardous and Solid Waste Amendments of 1984, as amended, 42 U.S.C. §§ 6901 et seq.

Site means the land where the Facility is physically located down to and including the groundwater zone.

SWMU means Solid Waste Management Unit.

I.E. DUTIES AND REQUIREMENTS

I.E.1. Duty to Comply

The Permittees shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any Permit noncompliance, other than noncompliance

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authorized by an emergency permit, constitutes a violation of RCRA and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [See 40 CFR §270.30(a).]

I.E.2. Duty to Reapply

If the Permittees wish to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittees shall submit a complete application for a new permit at least 180 days prior to the Permit's expiration. [See 40 CFR §§270.10(h) and 270.30(b).]

I.E.3. Permit Expiration

This Permit shall be effective for a fixed term not to exceed ten years. This Permit and all conditions herein will remain in effect and enforceable beyond the Permit's expiration date, if the Permittees have submitted a timely, complete application and, through no fault of the Permittees, the Director has not issued a new permit. [See 40 CFR §§270.10, 270.13, 270.14, 270.50, and 270.51.]

I.E.4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittees in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit. [See 40 CFR §270.30(c).]

I.E.5. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittees shall take all reasonable steps to minimize releases to the environment and shall carry out such measures, as are reasonable, to prevent significant adverse impacts on human health or the environment. [See 40 CFR §270.30(d).]

I.E.6. Proper Operation and Maintenance

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The Permittees shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), which are installed or used by the Permittees to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit. [See 40 CFR §270.30(e).]

I.E.7. Duty to Provide Information

The Permittees shall furnish to the Director or the Enforcement Director, as appropriate, within a reasonable time, any relevant information which the Director or the Enforcement Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittees shall also furnish to the Director or the Enforcement Director, as appropriate, upon request, copies of records required to be kept by this Permit. [See 40 CFR §270.30(h).]

I.E.8. Inspection and Entry

The Permittees shall allow the Director or the Enforcement Director, as appropriate, or an authorized representative, upon presenting credentials and other documents, as may be required by law, to:

I.E.8.a. Enter during business hours or at a reasonable time upon the Facility and/or either Permittees' premises where a regulated activity is located or conducted, or where records must be kept under the conditions of this Permit;

I.E.8.b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;

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I.E.8.c. Inspect at reasonable times any equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and

I.E.8.d. Sample or monitor, at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location at the Facility. [See 40 CFR §270.30(i).]

I.E.9. Monitoring and Records

I.E.9.a. Samples and measurements taken by the Permittees for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste must be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Director. Laboratory analytic methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Standard Methods of Wastewater Analysis, or an equivalent method, as specified in the Waste Analysis Plan (See Permit Condition II.C, Permit Attachment Section C and Permit Attachment Appendix IV). [See 40 CFR §270.30(j)(1).]

I.E.9.b. The Permittees shall retain records of all monitoring information (including all calibration and maintenance records and all digital and original strip chart recordings for continuous monitoring instrumentation), copies of all reports and records required by this Permit, the certification required by 40 CFR § 264.73(b)(9) and Permit Condition II.A.6., and records of all data used to complete the application for this Permit for a period of at least 3 years from the date of the sample, measurement, report, record, certification, or application. These periods may be extended by request of the Director at any time and are automatically extended during the course of any unresolved enforcement action

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regarding this Facility. The Permittees shall maintain records for all ground-water monitoring wells and associated ground-water surface elevations for the active life of the Facility. This provision does not apply to any records required to be maintained in accordance with Permit Condition V.G, which shall instead be subject to that requirement. [See 40 CFR §§ 264.73(b)(9), 264.74(b) and 270.30(j)(2). See also Permit Condition V.G.]

I.E.9.c. Records of monitoring information shall specify:

I.E.9.c.i. The dates, exact place, and time of sampling or measurements;

I.E.9.c.ii. The individual(s) who performed the sampling or measurements;

I.E.9.c.iii. The date(s) analyses were performed;

I.E.9.c.iv. The individual(s) who performed the analyses;

I.E.9.c.v. The analytical technique(s) or method(s) used; and

I.E.9.c.vi. The results of such analyses. [See 40 CFR §270.30(j)(3).]

I.E.10. Reporting Planned Changes

The Permittees shall give notice to the Director, as soon as possible, of any planned physical alterations or additions to the Facility. If any planned "changes" (as defined at 40 CFR § 63.1206(b)(5)(iii)), to the design, operation, or maintenance practices of the source may adversely affect compliance with any emission standard that is not monitored with a CEMS, the Permittees shall follow the procedures set forth at 40 CFR § 63.1206(b)(5)(i) for notification, performance testing and restrictions on

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waste burning, or otherwise shall comply with the requirements of 40 CFR § 63.1206(b)(5)(ii). Any notice provided under this section shall include any necessary request for a permit modification pursuant to Permit Condition I.G.7. and 40 CFR § 270.42. [See 40 CFR §§ 63.1206(b)(5), 63.1207(j), 63.1210(d), 270.30(l)(1) and 270.42.]

I.E.11. Reporting Anticipated Noncompliance

The Permittees shall give advance notice to the Director of any planned changes in the Facility or activity which may result in noncompliance with Permit requirements. [See 40 CFR §270.30(l)(2).]

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I.E.12. Transfer of Permits

This Permit is not transferable to any person, except after notice to the Director. The Director may require modification or revocation and reissuance of the Permit to change the name of a Permittee and incorporate such other requirements as may be necessary in accordance with 40 CFR §270.40. Before transferring ownership or operation of the Facility, the Permittees shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270 and this Permit. [See 40 CFR §§264.12(c), 270.30(l)(3) and 270.40.]

I.E.13. Twenty-Four Hour Reporting

I.E.13.a. The Permittees shall report to the Director any noncompliance which may endanger human health or the environment. Any such information shall be reported orally within 24 hours from the time whichever Permittee first becomes aware of the circumstances. The report shall include the following:

I.E.13.a.i. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies; and

I.E.13.a.ii. Any information of a release or discharge of hazardous waste, or of a fire or explosion from the Facility which could threaten the environment or human health inside or outside the Facility. [See 40 CFR §270.30(l)(6)(i).];

I.E.13.b. The description of the noncompliance and its cause shall include:

I.E.13.b.i. Names, addresses, and telephone numbers of the Permittees;

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I.E.13.b.ii. Name, address, and telephone number of the Facility;

I.E.13.b.iii. Date, time, and type of incident;

I.E.13.b.iv. Name and quantity of materials involved;

I.E.13.b.v. The extent of injuries, if any;

I.E.13.b.vi. An assessment of actual or potential hazards to the environment and/or human health outside the Facility, where this is applicable; and

I.E.13.b.vii. Estimated quantity and disposition of recovered material that resulted from the incident. [See 40 CFR §270.30(l)(6)(ii).]

I.E.13.c. A written submission shall also be provided within five days of the time that whichever Permittee first becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected, and, if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Director may waive the five-day written notice requirement in favor of a written report within 15 days. [See 40 CFR §270.30(l)(6)(iii).]

I.E.14. Compliance Schedule Reporting

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 14 days following each schedule date. [See 40 CFR §270.30(l)(5).]

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I.E.15. Other Noncompliance

The Permittees shall report all other instances of noncompliance not otherwise required to be reported in Permit Conditions I.E.10 through I.E.14, at the time monitoring reports are submitted. The reports of noncompliance shall contain the information listed in Permit Condition I.E.13. [See 40 CFR §270.30(l)(10).]

I.E.16. Other Information

Whenever either Permittee becomes aware that either Permittee failed to submit any relevant facts, or submitted incorrect information, in a Permit application or in any report to the Director, the Permittees shall promptly submit such facts or information. [See 40 CFR § 270.30(l)(11).]

I.F. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to or requested by the Director, the Enforcement Director, or a designee or authorized representative of the Director or the Enforcement Director, shall be signed and certified in accordance with 40 CFR §§ 270.11 and 270.30(k). [See 40 CFR §§ 270.11 and 270.30(k).]

I.G. REPORTS, NOTIFICATIONS, AND DELIVERABLES

I.G.1. All reports, correspondence, notices or other deliverables required by this Permit, or required to be submitted to EPA or the Regional Administrator under regulatory provisions cited in this Permit, shall be delivered by U.S. Postal Service or private courier service to:

Director, Land Division
US Environmental Protection Agency, Region IX
75 Hawthorne St. (LND-1)
San Francisco, CA 94105

I.G.2. All deliverables submitted pursuant to this Permit shall be printed on recycled paper and shall be copied double-sided, whenever practicable. Additionally, all deliverables submitted pursuant to this Permit shall also be submitted in electronic format (*e.g.*,

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CD ROM, flash drive). Permittees may submit such deliverables by electronic mail where the Permittees and the Director have agreed in writing as to the appropriate email address for such electronic mail submissions.

I.G.3. For the computation of time periods set forth in this Permit, the Permittees shall conduct the following:

I.G.3.a. Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event.

I.G.3.b. Any time period scheduled to begin before the occurrence of an act or event shall be computed so that the period ends on the day before the act or event.

I.G.3.c. If the final day of any time period falls on a weekend or legal holiday, the time period shall be extended to the next working day. [See, *e.g.,* 40 CFR § 124.20.]

I.G.4. Where this permit references or incorporates any standard from 40 CFR Part 63 for which a notice or notification is required to be submitted to EPA, including any notice or notification required under 40 CFR §§ 63.1206(b)(5), 63.1207(j) or 63.1210, the Permittees shall submit such notice or notification with reference to the specific provision of this Permit requiring the notice or notification. [See 40 CFR §§ 63.1206(b)(5), 63.1207(j) and 63.1210.]

I.G.5. Deliverables Submitted for the Director's Review and Approval

I.G.5.a. Deliverables that are explicitly required by this Permit to be submitted to the Director for review and approval must be post-marked by the due date specified in this Permit or by the specific schedules developed pursuant to the requirements of this Permit that apply to such deliverables. The Director shall review and respond to the deliverable in accordance with Permit Condition I.G.5.b.

I.G.5.b. Subject to the provisions of I.G.5.c., after review of any deliverable that is required to be approved by the Director pursuant to this Permit, the Director will either:

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(i) approve, in whole or in part, the submission;
(ii) approve the submission on specified conditions;
(iii) modify the submission to cure the deficiencies;
(iv) disapprove, in whole or in part, the submission, directing that Permittee modify the submission; or
(v) any combination of the above.

I.G.5.c. The Director will not modify a deliverable under Permit Condition I.G.5.b. without first providing the Permittees at least one notice of deficiency and an opportunity to cure within ten (10) days, except:

(i) where the Director determines that to do so would cause serious disruption to the work required by this Permit or could present an unacceptable risk to human health or the environment; or

(ii) where the Director has disapproved previous submission(s) due to material defects and the Director determines that the deficiencies in the submission under consideration indicate a bad faith lack of effort to submit an acceptable deliverable.

I.G.5.d. Upon approval of any deliverable pursuant to this Permit, including approval on conditions or modification by the Director, the Permittees shall maintain a copy of the approved deliverable in the Operating Record and proceed to take any action required by and in accordance with the approved deliverable.

I.G.5.e. Resubmission of Deliverable: Upon receipt of a notice of disapproval, in whole or in part, pursuant to this Permit Condition I.G.5., the Permittees shall, within twenty-one (21) days or such longer time as specified by the Director in such notice, correct the deficiencies and resubmit the deliverable for approval.

I.G.5.f. Notwithstanding the receipt of a notice of disapproval pursuant to this Permit Condition I.G.5., the Permittees shall proceed, at the direction of the Director, to take any action required by any non-deficient portion of the submission. Implementation of any non-deficient portion of a submission shall not relieve the Permittees of the obligation to address any deficient portion of the submission.

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I.G.5.g. In the event that a resubmitted deliverable, or portion thereof, is disapproved by the Director, the Director may again require the Permittees to correct the deficiencies, in accordance with this Permit Condition I.G.5.

I.G.5.h. If upon resubmission, a deliverable is disapproved or modified by the Director due to a material defect, the Permittees shall be deemed to have failed to submit such deliverable in a timely or adequate manner.

I.G.5.i. The disapproval or modification of a deliverable by the Director pursuant to this Permit Condition I.G.5. is subject to the informal dispute resolution procedures set forth in Permit Condition I.L.

I.G.6. Modifications to Previously Approved Deliverables

I.G.6.a. If at any time during the life of this Permit, the Permittees identify a need for a modification of any previously approved deliverable required by this Permit or of any deadline required by this Permit, the Permittees shall submit a memorandum documenting the need for the modification to the Director. Where appropriate, such memorandum shall be accompanied by a request for a Permit Modification pursuant to 40 CFR § 270.42. [See 40 CFR § 270.42.]

I.G.6.b. Where a Permit Modification is not requested by the Permittees, the Director will determine if the requested modification to the previously approved deliverable or to the deadline is warranted as soon as practicable after receipt of any memorandum submitted pursuant to Permit Condition I.G.6.a. and so inform the Permittees in writing that the proposed modification to the deliverable or deadline has been approved, modified or disapproved as provided in Permit Condition I.G.5.b. and subject to Permit Condition I.G.5.c. Where the memorandum is accompanied by a request for a Permit Modification under 40 CFR § 270.42, RCRA's permit modification procedures shall apply. [See 40 CFR § 270.42.]

I.G.6.c. Requests for extensions of the due dates for deliverables may be granted by the Director in accordance with either the procedures in Permit Condition I.G.6.a. of this Permit or RCRA's permit modification processes. [See 40 CFR § 270.42.]

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I.G.7. Deliverables that Require a Permit Modification

I.G.7.a. Deliverables that are explicitly required by this Permit to be submitted with an accompanying request for a permit modification in accordance with this Permit Condition I.G.7., must specify the class of permit modification for which the request is being submitted in accordance with 40 CFR § 270.42 and Appendix 1 to that section. Or, if the request is for a permit modification not explicitly identified in Appendix 1 to 40 CFR § 270.42, the Permittees may submit a Class 3 modification request to the Director, or may request a determination by the Director that the modification should be reviewed and approved as a Class 1 with no prior Director approval, Class 1 with prior Director approval, or Class 2 modification. [See 40 CFR § 270.42 and Appendix 1 to 40 CFR § 270.42.]

I.G.7.b. For any permit modification not explicitly identified in Appendix 1 to 40 CFR § 270.42, if the Permittees request that the modification be classified as a Class 1 with no prior Director approval, Class 1 with prior Director approval, or Class 2 modification, the request must include the necessary information to support the requested classification in accordance with 40 CFR §270.42. [See 40 CFR § 270.42(d).]

I.G.7.c. The Director's determination that the modification should or should not be treated as a Class 1 with no prior Director approval, Class 1 with prior Director approval, or Class 2 modification shall be subject to the Informal Dispute Resolution provisions of Permit Condition I.L., but any other decisions made by the Director as part of the permit modification process shall only be reviewable in accordance with 40 CFR Part 124. [See 40 CFR Part 124.]

I.G.8. Deliverables That May Trigger a Permit Modification

Where a report or other deliverable required by this Permit includes a recommendation that the Permit be modified, and the report or other deliverable is subject to approval by the Director under Permit Condition I.G.5., the request for the permit modification should only be submitted after the report or other deliverable recommending the modification has been approved by the Director.

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I.H. CONFIDENTIAL INFORMATION

In accordance with 40 CFR §270.12, either Permittee may claim any information required to be submitted by this Permit as confidential. If no claim is made at the time of submission, the information may be made available to the public without further notice. [See 40 CFR Part 2, Subpart B, and § 270.12.]

I.I. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

I.I.1. The Permittees shall maintain at the Facility, until closure is completed and certified by an independent, registered professional engineer, the following documents and all amendments, revisions, and modifications to these documents:

1. Waste Analysis Plan, as required by 40 CFR §264.13 and this Permit;
2. Inspection schedules, as required by 40 CFR §264.15(b)(2) and this Permit;
3. Personnel training documents and records, as required by 40 CFR §264.16(d) and this Permit;
4. Contingency Plan, as required by 40 CFR §264.53(a) and this Permit;
5. Operating record, as required by 40 CFR §264.73 and this Permit;
6. Closure Plan, as required by 40 CFR §264.112(a) and this Permit;
7. Annually-adjusted cost estimates for Facility closure, as required by 40 CFR §264.142(d) and this Permit;
8. The Startup Shutdown and Malfunction Plan (SSMP), as required by this Permit;
9. The Subpart FF Compliance Plan; and
10. All other documents required to be maintained for the life of the Facility in accordance with the requirements of this Permit.

I.I.2. All records, including plans, required under this Permit must be furnished upon request, and made available at all reasonable times for inspection by any officer, employee, or representative of EPA who is duly designated by the Director. [See 40 CFR § 264.74(a).]

I.J. INFORMATION REPOSITORY

I.J.1. The Permittees must establish and maintain an information repository that meets the requirements of 40 CFR § 124.33 and includes the records identified in Permit Exhibit

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This draft permit has been created in accordance with 40 CFR § 124.6 as part of US EPA's proposed RCRA hazardous waste permit decision for the hazardous waste facility (EPA ID # AZD982441263) located on trust land of the Colorado River Indian Tribes at 2523 Mutahar Street, Parker, Arizona, 85344, and operated by Evoqua Water Technologies LLC.

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I. [See 40 CFR §§124.33 and 270.30(m).]

I.J.2. The Permittees must update the information repository with appropriate information at least every five (5) years throughout the life of this Permit. [See 40 CFR §§ 124.33(f) and 270.30(m).]

I.J.3 Permittees shall send notice of the location of the information repository to all persons on the facility's mailing list. [See 40 CFR §§ 124.33(e) and 270.30(m).]

I.K. COMPLIANCE SCHEDULE

I.K.1. Performance Demonstration Test. The Permittees shall perform periodic trial burns or "Performance Demonstration Tests" in accordance with the following requirements. (The Performance Demonstration Test is a combination of the Comprehensive Performance Tests and traditional RCRA "Trial Burn" to address site specific risk assessments. Unless otherwise specified, references in this Permit to 40 CFR Part 63 testing and related requirements applicable to incinerators should be interpreted as applicable to the operating reactivation furnace (RF-2) and its associated equipment.)

I.K.1.a. The Permittees shall submit a Performance Demonstration Test (PDT) Work Plan meeting the requirements of Permit Condition I.K.1.c. to the Director for approval in accordance with Permit Condition I.G.5. ***within 120 days after the final Permit is made effective***.

I.K.1.b. As for future PDTs, the Permittees shall conduct testing periodically in accordance with this Permit Condition I.K. and 40 CFR §§ 63.1207 and 63.1208. The date of commencement of each PDT is the basis for establishing the deadline to commence the subsequent PDT. The Permittees shall submit PDT Work Plans to the Director for approval ***at least one year before the start date of each subsequent PDT***. The Permittees shall commence testing no later than 61 months after the date of commencing the previous PDT. Except as provided in Permit Condition I.K.1.c., the Permittees may conduct performance testing at any time prior to the required date. [See 40 CFR Part 60 and §§ 63.8(d) and (e), 63.9(g), 63.1206(c)(5)(ii), 63.1207, 63.1208, 264.344(a)(1) and 270.62.]

I.K.1.c. The Permittees shall submit PDT Work Plans to the Director for approval in accordance with Permit Condition I.G.5. PDT Work Plans must include a

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proposed schedule for performance of the PDT. The Permittees shall not undertake the performance of the PDT less than 60 days after the public notice required under Permit Condition I.K.1.f. Nor shall the Permittees undertake the performance of the PDT prior to the time the PDT Work Plan is approved by the Director. The PDT Work Plans shall be done in accordance with and must include the information listed at 40 CFR §§ 63.7, 63.8, 63.9(e), (f), (g) and (j), 63.1206(c)(5)(ii), 63.1207(b)(1), 63.1219 and 270.62(b)(2). The information provided in these regulatory provisions that are applicable to incinerators must be included in the PDT Work Plans, and address each performance parameter and emission limit set forth in Table V-4 of this permit. [See 40 CFR §§ 63.7, 63.8, 63.9(e), (f), (g) and (j), 63.1206(c)(5)(ii), 63.1207(b)(1), 63.1219, and 270.62(b)(2).]

I.K.1.d. The portions of the PDT Work Plans addressing provisions for testing for SOx and NOx emissions during the PDT, shall reference EPA Test Method 6 for SOx (as SO2) and EPA Test Method 7 for NOx as provided in Appendix A of 40 CFR Part 60. [See Appendix A of 40 CFR Part 60.]

I.K.1.e. Where appropriate, the Permittees shall incorporate into PDT Work Plans appropriate methods and/or performance specifications, as set forth in specifically applicable requirements and/or in the Appendices in 40 CFR Part 60. [See 40 CFR Part 60.]

I.K.1.f. The Permittees shall make the PDT Work Plans available to the public for review no later than 60 calendar days before initiation of the test. The Permittees must also provide a public notice to all persons on the facility's mailing list announcing the availability of the PDT Work Plan and the location where the PDT Work Plan is available for review. The PDT Work Plans must be accessible to the public for 60 calendar days, beginning on the date of the public notice. The location must be unrestricted and provide access to the public during reasonable hours and provide a means for the public to obtain copies. The notification must, at a minimum, include the information identified at 40 CFR § 63.1207(e)(2). [See 40 CFR § 63.1207(e).]

I.K.2. The Permittees shall complete performance testing ***within 60 days*** after the date of commencement of each of the PDTs in accordance with the approved PDT Work Plans. [See 40 CFR § 63.1207(d)(3).]

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I.K.3. The Permittees shall submit to the Director for review and approval, in accordance with Permit Condition I.G.5., a PDT Report regarding the performance of the PDT ***within 90 days*** of the completion of each PDT.

I.K.3.a. The PDT Reports shall also include the results of the required CMS and CEMS Performance Tests, and the analysis of the parameters evaluated in accordance with Permit Condition I.K.1.

I.K.3.b. The PDT Reports shall also include the Permittees' recommendations, if any, regarding any appropriate modifications to permit conditions based on the results of one or more PDTs in accordance with Permit Condition I.G.8. and 40 CFR Part 270.

I.K.3.c. The PDT Reports shall also include the CMS and CEMS Performance Test results, and any other information that is required in notifications of compliance status and certifications for incinerators under 40 CFR § 63.9(h)(2).

I.K.4. PDT Reports must include an assessment as to whether the operating parameters and emission limits set forth in Module V are being met with specific reference to the Group A1, Group A2, Group B and Group C parameters set forth in Module V of this Permit at Table V-2 – Operating Limits and Parameters.

I.K.4.a. If a PDT Report concludes that such parameters or limits are not being met, the Permittees must comply with the AWFCO requirements of the SSMP and otherwise comply with Permit Condition V.C.5.v., as appropriate for the particular parameter or limit not being met.

I.K.4.b. When a PDT Report concludes that such operating parameters or emission limits are not being met, the Permittees shall cease processing hazardous waste except in accordance with the provisions of 40 CFR §§ 63.1207(l)(1)(i) and (ii) and 63.1207(l)(2)(i),(ii) and (iii), as appropriate. [See 40 CFR § 63.1207(l).]

I.K.4.c. Where 40 CFR §§ 63.1207(l)(1)(ii)(A) or (C), and/or 63.1207(l)(2)(ii) and (iii) require the submittal of a revised Notification of Compliance, the Permittees shall submit Supplemental PDT Report(s) to the Director for review and approval in accordance with Permit Condition I.G.5. within 90 days of any subsequent test(s). [See 40 CFR § 63.1207(l).]

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I.K.5. Human Health and Ecological Risk Assessment

I.K.5.a. Within 90 days after the approval of a PDT Report, the Permittees shall submit a Human Health and Ecological Risk Assessment Work Plan to the Director for review and approval in accordance with Permit Condition I.G.5. The Work Plan should be consistent with good scientific principles. For example, the Permittees should consider EPA's current risk assessment guidance for combustion facilities and proposing the use of the latest air dispersion modeling software. The Risk Assessment Work Plans must include a proposed schedule for performance and completion of the Human Health and Ecological Risk Assessment.

I.K.5.b. In accordance with the schedule set forth in the approved Human Health and Ecological Risk Assessment Work Plan, the Permittees shall submit a Draft Human Health and Ecological Risk Assessment to the Director for approval in accordance with Permit Condition I.G.5.

I.K.5.c. Where an approved Human Health and Ecological Risk Assessment includes a recommendation for a modification of this Permit, the Permittees shall submit a request for such modification in accordance with Permit Condition I.G.8. and 40 CFR § 270.42. [See 40 CFR § 270.42.]

I.K.6. RF-1 Closure. ***Within 90 days after the final permit is effective***, the Permittees shall submit to EPA a closure activity notification designating the start date for the implementation of the schedule as specified in Section 9.0 of the Permit Attachment Appendix XVI. This closure activity notification, which will trigger the closure and dismantling of the non-operational reactivation furnace (RF-1) in accordance with the schedule set forth in Section 8.0 of the Permit Attachment Appendix XVI, shall include a start date that allows for completion of RF-1's closure no later than one (1) year from the effective date of this Permit. [See Sections 8.0 and 9.0 in Permit Attachment Appendix XVI.]

I.K.7. Hopper H-1 Containment. The Permittees shall submit a work plan for implementation of the requirements for the secondary containment for Hopper H-1 (H-1 Work Plan) to the Director for approval in accordance with Permit Condition I.G.5. ***within 90 days after the final Permit is effective***. The H-1 Work Plan shall include a schedule for implementation of the requirements for the secondary containment for Hopper H-1 and otherwise conform

to the requirements of Permit Condition IV.F.6. This schedule shall provide for completion of implementation of the requirements for the secondary containment for Hopper H-1 no later than one (1) year from the effective date of this Permit. [See 40 CFR § 264.193.]

I.K.8. Integrity Assessment/Leak Test

I.K.8.a. The Permittees shall have the integrity of Hopper H-1 assessed by a professional engineer ***within 60 days after the final Permit is effective*** in accordance with 40 CFR § 264.191. This assessment must include a leak test, as described in 40 CFR § 264.191, or other integrity examination that is certified by a qualified Professional Engineer in accordance with 40 CFR § 270.11(d), that addresses cracks, leaks, corrosion, and erosion. [See 40 CFR §§ 264.191, 264.193(i), and 270.11(d).]

I.K.8.b. Until such time as the secondary containment for Hopper H-1 is implemented in accordance with Permit Conditions I.K.7, and IV.F.6.a., the Permittees must conduct a leak test, (or other integrity examination that meets the requirements of 40 CFR § 264.191), in accordance with 40 CFR § 264.193(i) and Permit Condition IV.F.6.b. to ensure the integrity of Hopper H-1. [See 40 CFR §§ 264.191, 264.193(i), and 270.11(d).]

I.K.9. If the secondary containment for Hopper H-1 is not implemented within a year from the effective date of this Permit, as provided in accordance with Permit Conditions I.K.7., the Permittees shall submit to the Director a contingent closure plan and proof of financial responsibility meeting the requirements of 40 CFR § 264.197(c), incorporated herein by this reference. [See also Permit Conditions IV.F.6.b.iii. and IV.M.3., and 40 CFR § 264.197(c).]

I.K.10. 40 CFR Part 264, Subpart BB Compliance

I.K.10.a. The Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with an accompanying revised Permit Attachment Section N and Subpart BB Compliance Plan (Permit Attachment Appendix XIX) within ***120 days after the final permit is effective.*** The revised Permit Attachment Section N and Subpart BB Compliance Plan shall identify the equipment subject to 40 CFR Part 264, Subpart BB at the facility and, for each piece of equipment so identified, whether the Permittees elect to determine compliance with this Permit either by documentation pursuant to 40 CFR Part 264,

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Subpart BB, or by documentation of compliance with the regulations at 40 CFR Part 60, Part 61, or Part 63, pursuant to the relevant provisions of the regulations at 40 CFR Parts 60, 61, 63 and 264. [See 40 CFR Part 264, Subpart BB.]

I.K.10.b. The revised Subpart BB compliance plan shall identify each piece of equipment that contains or contacts a hazardous waste with organic concentration that equals or exceeds 10% by weight using one of the methods described in 40 CFR § 264.1063(d). [See 40 CFR § 264.1063(d).]

I.K.10.c. If revisions to Permit Attachment Section N and the Subpart BB Compliance Plan also necessitate any changes to the Waste Analysis Plan in order to comply with 40 CFR § 264.1063(d), the Permittees shall include a revised Waste Analysis Plan (WAP) with the Permit Modification request. [See 40 CFR § 264.1063(d).]

I.K.10.d. The documentation of compliance elected by the Permittees in accordance with 40 CFR § 264.1064(m) shall be included in the facility operating record in accordance with Permit Condition II.M.1.ii. [See 40 CFR § 264.1064(m).]

I.K.10.e. If the Permittees and EPA do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the procedures in 40 CFR § 264.1063(d)(1) or (d)(2) shall be used to resolve the disagreement. [40 CFR § 264.1063(d)(1) or (d)(2) and Permit Attachment Appendix XIX.]

I.K.11. Waste Carbon Feed Monitoring for Sulfur. The Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with an accompanying revised Permit Attachment Section C, if necessary, and a revised Permit Attachment Appendix IV (Waste Analysis Plan) within ***60 days after the final Permit is effective.***

I.K.11. a. The revised Waste Analysis Plan shall include sampling for sulfur at the waste carbon feed every 6 hours to be composited and sent to the lab for analysis every 14 days.

I.K.11.b. The revised Waste Analysis Plan shall include a feed limit for sulfur oxides with reference to the limit expressed in Table V-1 of Module V of this Permit.

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I.K.11.c. Once the revised Waste Analysis Plan is incorporated into the Permit, the Permittees are not authorized to feed in the RF-2 spent activated carbon that contains sulfur in concentrations exceeding permissible feed limits set forth in the revised Waste Analysis Plan in accordance with Module V, Table V-1.

I.K.12. Information Repository. ***Within 120 days of the effective date of this Permit***, the Permittees must establish an information repository that meets the requirements of 40 CFR § 124.33 and includes the records identified in Permit Exhibit I. ***Within 150 days of the effective date of this Permit***, the Permittees shall send notice of the location of the information repository to all persons on the facility's mailing list. [See 40 CFR §§ 124.33, 270.30(m), Permit Condition I.J. and Permit Exhibit I.]

I.K.13. Training Outline. ***Within 120 days of the effective date of this Permit***, the Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with an accompanying revised and updated Permit Attachment Section H (Personnel Training Program) and Permit Attachment Appendix XIV (Training Syllabus Outline and Training Summary) that, in addition to addressing the requirements of 40 CFR § 264.16, specifically address the requirements of 40 CFR § 63.1206(c)(6). [See 40 CFR §§ 63.1206(c)(6) and 264.16.]

I.L. INFORMAL DISPUTE RESOLUTION (IDR)

I.L.1. Where the informal dispute resolution procedures of this Permit Condition I.L. are expressly identified as applicable, the following procedures shall apply:

I.L.1.a. The Permittee(s) may invoke the dispute resolution procedures by sending an Informal Dispute Resolution ("IDR") Notice to the Director in writing in accordance with Permit Conditions I.G.1. and I.G.2. Within the first fourteen (14) days after receipt of any such Notice, (the "informal dispute resolution period"), the Permittee(s) and the EPA staff person(s) responsible for the matter under dispute (the "permitting staff") will attempt to resolve any disputes informally. If requested by either of the Permittees, a meeting should be held between the permitting staff and the Permittee(s) and/or their representative(s) to discuss the matter. Unless otherwise agreed to by the permitting staff, the meeting will be held at the EPA Region 9's office in San Francisco, California, or by video or teleconference.

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I.L.1.b. If agreement is not reached between the permitting staff and the Permittee(s) within the fourteen (14) day informal dispute resolution period, and the Permittee(s) wish to continue the IDR process, the Permittee(s) must submit written arguments and evidence to the Director. The written arguments and evidence shall be submitted to the Director within thirty (30) days of the end of the informal dispute resolution period (*i.e.*, within 44 days after EPA's receipt of the IDR Notice) at the address identified in Permit Condition I.G.1.

I.L.1.c. If written arguments and evidence are submitted by the Permittee(s) to the Director, the Director will resolve the dispute within a reasonably prompt time period. The Director's resolution of the dispute shall include a written response to the evidence and arguments submitted by the Permittee(s). The Permittee(s) shall comply with the Director's decision regardless of whether the Permittee(s) agree with the decision. The Director's resolution of the dispute is not subject to administrative or judicial appeal.

I.L.2. Unless otherwise agreed to by the Director, invocation of IDR by the Permittee(s) shall not extend, postpone, or affect in any way any obligation of the Permittee(s) under this Permit not directly in dispute.

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MODULE II - GENERAL FACILITY CONDITIONS

II. GENERAL FACILITY DESCRIPTION

Spent carbon is trucked to the Facility in several kinds of containers (*e.g.*, drums, vessels, supersacks, roll-off bins, *etc.*) or in tanker trucks. The spent carbon typically contains benzene or other volatile organic compounds (VOCs). The spent carbon is either introduced to the carbon regeneration system at the Facility upon receipt via one of two hoppers (H-1 or H-2) or it is moved to the Container Storage Area to be put in the hoppers later. The spent carbon is transferred from the hoppers to one of four Spent Carbon Storage Tanks (T-1, T-2, T-5, or T-6). During the transfer, water is added to the spent carbon, creating a slurry, to help in pumping the spent carbon from the hoppers to the storage tanks. From the storage tanks, the spent carbon is transferred in slurry form to the furnace Feed Tank (T-18). The spent carbon in its slurry form then gets sent from T-18 through a dewatering screw where the carbon slurry gets dewatered. The dewatered carbon then gets on the weigh belt where it is weighted and sampled, before it is fed to the operating Carbon Regeneration Furnace (RF-2).. The regenerated carbon is cooled in a cooling screw and is then sent to the product storage area for commercial packaging. Wastewater is processed through the waste water treatment system and is discharged to the local publically owned treatment works pursuant to a Clean Water Act discharge permit.

II.A. DESIGN AND OPERATION OF FACILITY

II.A.1. The Permittees shall maintain and operate the Facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment. [See 40 CFR § 264.31.]

II.A.2. Except for those requirements set forth in 40 CFR §§270.4(a)(1)(i) – (iv), the Permittees are prohibited from any storage or treatment activity not specifically described in this Permit except insofar as the Permittees' hazardous waste generation, accumulation or less than 90 day storage activities are governed by 40 CFR Part 262. [See 40 CFR Part 262 and §§ 270.1(c) and 270.4(a)(1)(i) – (iv).]

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II.A.3. The Permittees shall not store on land or land dispose of any hazardous waste on or at the Facility, whether temporarily or permanently. The Permittees shall comply with all applicable land disposal restriction requirements, including the prohibition on storage of restricted waste for over a year. [See 40 CFR Part 268].

II.A.4. Any Permittee-initiated modifications to the units designated in this Permit shall first be the subject of a Permit Modification request in accordance with Permit Condition I.G.7. and the permit modification procedures of 40 CFR § 270.42. [See 40 CFR § 270.42.]

II.A.5. The Permittees may store hazardous waste generated on-site in accordance with the provisions of 40 CFR Part 262. Any hazardous waste generated on-site that is to be treated on-site, or disposed of or transported off-site must be stored, handled, treated, transported and otherwise managed in accordance with the regulations applicable to hazardous waste generators at 40 CFR Part 262 and any other applicable requirements, such as 40 CFR Part 265 Subpart BB or requirements listed under 40 CFR §§ 270.4(a)(1)(i)-(iv), or this Permit. [See 40 CFR Part 262, 40 CFR Part 265, Subpart BB and §§ 270.1(c) and 270.4(a)(1)(i)-(iv).]

II.A.6. No less often than annually, the Permittees must certify, in accordance with 40 CFR § 264.73(b)(9), that there is a program in place to reduce the volume and toxicity of hazardous waste that is generated on-site to the degree economically practicable and that the proposed method of treatment, storage or disposal is that practicable method currently available to the Permittees which minimizes the present and future threat to human health and the environment. A copy of the certification must be maintained in the operating record in accordance with Permit Conditions I.E.9.b and II.M.1. [See 40 CFR § 264.73(b)(9) and Permit Conditions I.E.9.b., and II.M.1.]

II.B. REQUIRED NOTICES

II.B.1. If the Permittees expect to receive hazardous waste from a foreign source, the Permittees shall notify the Regional Administrator in writing at the address below

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at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source in the same calendar year is not required. [See 40 CFR § 264.12(a)(1).]

Regional Administrator
US EPA, Region 9
Mail Code: ORA-1
75 Hawthorne St.
San Francisco, CA 94105

II.B.2. When the Permittees are to receive hazardous waste from an off-site source (except where either Permittee is also the generator), they must inform the generator in writing that they have the appropriate hazardous waste Permit, and will accept the waste the generator is shipping. The Permittees must keep a copy of this written notice as part of the Facility's operating record in accordance with 40 CFR § 264.73. [See 40 CFR §§ 264.12(b) and 264.73.]

II.C. GENERAL WASTE ANALYSIS

II.C.1. The Permittees shall follow the waste analysis procedures in accordance with 40 CFR § 264.13, Permit Attachment Section C, and the Waste Analysis Plan, Permit Attachment Appendix IV. [See 40 CFR §264.13.]

II.C.2. The Permittees shall review the analysis of each waste stream provided by the generator as part of their quality assurance program in accordance with the frequencies set forth in the Waste Analysis Plan, Permit Attachment Appendix IV.

II.C.3. If an on-site lab is used, then the Permittees shall maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations.

II.C.4. If the Permittees use a contract or other off-site laboratory to perform analyses, then the Permittees shall inform the laboratory in writing that it must operate under the waste analysis conditions set forth in this Permit. Any failure of the

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laboratory to operate under the waste analysis conditions set forth in this Permit shall constitute a violation of the Permit by the Permittees. [See 40 CFR §264.13 and the Waste Analysis Plan, Permit Attachment Appendix IV.]

II.C.5. The Director, the Enforcement Director, or either's designee reserve the right to audit the on-site laboratory or the off-site laboratory utilized by the Permittees at any time.

II.C.6. The Director, the Enforcement Director, or either's designee reserve the right to sample the waste steam at the weigh belt to ensure compliance with this Permit.

II.C.7. The Permittees shall review the Waste Analysis Plan at least every two calendar years to determine if it is in compliance with current RCRA regulations and otherwise meets the needs of the Facility in accordance with Section 7.0 of the Waste Analysis Plan, Permit Attachment Appendix IV, incorporated herein by this reference. [See Section 7.0 of the Waste Analysis Plan, Permit Attachment Appendix IV.]

II.C.8. The Permittees shall comply with the test methods and procedural requirements described in 40 CFR § 264.1063 in accordance with the RCRA Subpart BB standards, where applicable, Permit Attachment Section N and Permit Attachment Appendix XIX, incorporated herein by this reference. [See 40 CFR § 264.1063, Permit Attachment Section N and Permit Attachment Appendix XIX. See also Permit Condition I.K.10.]

II.C.9. At the request of the Director, the Permittees shall perform a waste determination for a hazardous waste managed in any tank or container exempted from using air emission controls under the provisions of 40 CFR § 264.1082. [See 40 CFR § 264.1082(d).]

II.D. SECURITY

II.D.1. The Permittees shall comply with the security provisions of 40 CFR §264.14. The treatment process and operating areas of the Facility are surrounded by a fence as depicted on the Reactivation Facility Site Plan (D14789-08) contained

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in Permit Attachment Appendix III. This Reactivation Facility Site Plan also shows gates for the Facility. All gates and building entrances must be locked or monitored when open. Additional access control requirements for the Facility are contained in Permit Attachment Section F (Procedures to Prevent Hazards), incorporated herein by this reference. [See 40 CFR § 264.14.]

II.D.2. The Permittees shall prevent, and minimize the possibility for, livestock and unauthorized people from entering the Facility. [See 40 CFR § 264.14(a).]

II.D.3. The Permittees shall post and maintain a sign at each entrance to the Facility, and at other prominent locations, in sufficient numbers to be seen from any approach to the Facility. The sign shall bear the legend "Danger - Unauthorized Personnel Keep Out". The legend shall be in English and in Spanish and must be legible from a distance of at least 25 feet. The Permittees may use existing signs with a legend other than "Danger--Unauthorized Personnel Keep Out" if the legend on the sign indicates that only authorized personnel are allowed to enter the Facility, and that entry onto the Facility can be dangerous. [See 40 CFR § 264.14(c).]

II.E. GENERAL INSPECTION REQUIREMENTS

II.E.1. The Permittees shall follow the inspection schedule as per Permit Attachment Section F and Permit Attachment Appendix XII and shall comply with the requirements of 40 CFR § 264.15. [See 40 CFR § 264.15.]

II.E.2. The Permittees shall inspect the facility for malfunctions and deterioration, operator errors, and discharges that may be causing, or may lead to any release of hazardous waste constituents to the environment or any threat to human health. The Permittees shall conduct these inspections often enough to identify problems in time to correct them before they result in harm to human health or the environment. [See 40 CFR § 264.15(a).]

II.E.3. The inspection should include at a minimum, monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards. Areas subject to spills,

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such as loading and unloading areas, shall be inspected daily when in use. [See 40 CFR 264.15(b). See also Table V-3 in Module V.]

II.E.4. The Permittees shall remedy any deterioration or malfunction discovered by an inspection in accordance with 40 CFR §§ 264.15(c) and 264.171. [See 40 CFR §§ 264.15(c) and 264.171.]

II.E.5. The Permittees shall record all inspections. The Permittees shall keep these records for at least three years from the date of inspection. At a minimum, the Permittees must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions. [See 40 CFR § 264.15(d).]

II.F. MAINTENANCE AND OPERATION

II.F.1. The Permittees shall maintain, calibrate, and operate the Facility in accordance with this Permit and Table V-3 in Module V. [See 40 CFR § 264.15 and Table V-3 in Module V.]

II.F.2. The Permittees shall maintain the SWMUs, HWMUs, and AOCs and their equipment in good operating condition.

II.G. PERSONNEL TRAINING

II.G.1. The Permittees shall conduct personnel training in accordance with 40 CFR § 264.16, and in accordance with Permit Attachment Section H and Permit Attachment Appendix XIV, both of which are incorporated herein by this reference. [See 40 CFR § 264.16.]

II.G.2. The Permittees shall maintain training documents and records in accordance with 40 CFR §§ 264.16(d) and (e). [See 40 CFR §§ 264.16(d) and (e).]

II.H. SPECIAL PROVISIONS FOR CERTAIN WASTES

II.H.1. The Permittees are prohibited from storing or treating hazardous waste that is not

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identified in Table II-2.

TABLE II-2 - PERMITTED HAZARDOUS WASTE

Description of permitted hazardous waste
D001, D004, D005 ,D006, D007, D008, D009, D010, D011, D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043. F001, F002, F003, F004, F005, F006, F012, F019, F025, F035, F037, F038, F039 (except for F039 that contains dioxin or furans). K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K014, K015, K016, K017, K018, K019, K020, K022, K023, K024, K025, K026, K029, K030, K031, K032, K033, K034, K035, K036, K037, K038, K039, K040, K041, K042, K046, K048, K049, K050, K051, K052, K061, K064, K065, K066, K071, K073, K083, K084, K085, K086, K087, K088, K090, K091, K093, K094, K095, K096, K097, K098, K100, K101, K102, K103, K104, K105, K106, K112, K113, K114, K115, K116, K117, K118, K125, K126. P001, P002, P003, P004, P005, P007, P008, P010, P011, P012, P013, P014, P015, P016, P017, P018, P020, P021, P022 (rust), P023, P024, P026, P027, P028, P029, P030, P031, P033, P034, P036, P037, P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048, P049, P050, P051, P054, P056, P057, P058, P059, P060, P062, P063, P064, P066, P067, P068, P069, P070, P071, P072, P073, P074, P075, P077, P078, P082, P084, P085, P087, P088, P089, P092, P093, P094, P095, P096, P097, P098, P099, P101, P102, P103, P104, P105, P108, P109, P110, P113, P114, P115, P116, P118, P119, P120, P121, P123. U001, U002, U003, U004, U005, U007, U008, U009, U010, U011, U012, U014, U015, U016, U017, U018, U019, U022, U024, U025, U026, U027, U028, U029, U030, U031, U032, U034, U035, U036, U037, U038, U039, U041, U042, U043, U044, U045, U046, U047, U048, U049, U050, U051, U052, U053, U055, U056, U057, U058, U059, U060, U061, U062, U063, U064, U066, U067, U068, U069, U070, U071, U072, U073, U074, U075, U076, U077, U078, U079, U080, U081, U082, U083, U084, U085, U086, U087,

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U088, U089, U090, U091, U092, U093, U094, U095, U097, U098, U099, U101, U102, U103, U105, U106, U107, U108, U109, U110, U111, U112, U113, U114, U115, U116, U117, U118, U119, U120, U121, U122, U124, U125, U126, U127, U128, U129, U130, U131, U132, U135, U136, U137, U138, U140, U141, U142, U143, U144, U145, U146, U147, U148, U149, U150, U151, U152, U153, U154, U155, U156, U157, U158, U159, U161, U162, U163, U164, U165, U166, U167, U168, U169, U170, U171, U172, U173, U174, U176, U177, U178, U179, U180, U181, U182, U183, U184, U185, U186, U187, U188, U190, U191, U192, U193, U194, U196, U197, U200, U201, U202, U203, U204, U206, U207, U208, U209, U210, U211, U213, U214, U215, U216, U217, U218, U219, U220, U221, U222, U225, U226, U227, U228, U235, U236, U237, U238, U239, U240, U243, U244, U246, U247, U248, U249, U328, U353, U359.

II.H.2. The Permittees shall follow the procedures for handling ignitable and incompatible waste and otherwise comply with the requirements of 40 CFR § 264.17. The Permittees shall follow the procedures for handling ignitable wastes set forth in Permit Attachment Section C, incorporated herein by this reference. [See 40 CFR § 264.17 and Permit Attachment Section C, at C.2.4.]

II.H.3. Waste received from off-site may only be stored at the Facility if it is to be regenerated through thermal treatment in RF-2.

II.H.4. The Permittees shall comply with the requirements for Air Emission Standards for Equipment Leaks (40 CFR Part 264, Subpart BB) in accordance with Permit Application Appendix XIX and Permit Attachment Section N, incorporated herein by this reference. [See 40 CFR § 264.1050 *et seq.*, including 40 CFR § 264.1063(f), and Permit Condition I.K.10.]

II.H.5. The Permittees shall not accept, store, consolidate or treat any of the following:

II.H.5.a. Radioactive or nuclear wastes regulated by the U.S. Department of Energy and U.S. Nuclear Regulatory Commission including any spent carbon contaminated with such material;

II.H.5.b. Wastes associated with dioxins and/or furans (*e.g.* F020, F021, F022, F023, F026, F027, F028, F032, K043, K099, K156, K158, K174, K178, P127, and/or P189)

This draft permit has been created in accordance with 40 CFR § 124.6 as part of US EPA's proposed RCRA hazardous waste permit decision for the hazardous waste facility (EPA ID # AZD982441263) located on trust land of the Colorado River Indian Tribes at 2523 Mutahar Street, Parker, Arizona, 85344, and operated by Evoqua Water Technologies LLC.

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including any spent carbon contaminated with such material;

II.H.5.c. Leachate from the disposal of more than one restricted waste (F039) including any spent carbon contaminated with such material if it contains wastes associated with dioxins and/or furans (*e.g.* F020, F021, F022, F023, F026, F027, F028, F032, K043, K099, K156, K158, K174, K178, P127, and/or P189), [See definition of "Dioxins and furans" in 40 CFR 260.10.];

II.H.5.d. Wastes regulated under the Toxic Substances Control Act (TSCA) that contain levels of polychlorinated biphenyls (PCBs) equal to or greater than 50 mg/Kg (ppm), or where the source of the PCBs is equal to or greater than 50 ppm including any spent carbon contaminated with such material;

II.H.5.e. Medical or infectious wastes including any spent carbon contaminated with such material; or

II.H.5.f. RCRA mixed waste (radioactive and hazardous waste) including any spent carbon contaminated with such material.

II.H.5.g. Corrosive (D002) or reactive waste (D003) including spent carbon containing corrosive or reactive waste.

II.H.5.h. Benzedine-contaminated waste (U021) including spent carbon containing benzedine.

II.I. LOCATION STANDARDS

The Facility is not within a 100-year floodplain. In the event of a flood, the Permittees shall remove all hazardous waste, before flood waters can reach the Facility, to a location where the wastes will not be vulnerable to the flood waters. [See 40 CFR § 264.18(b), Permit Attachment Section B and Permit Attachment Appendix II.]

II.J. PREPAREDNESS AND PREVENTION

II.J.1. Required Equipment

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At a minimum, the Permittees shall maintain the following at the Facility:

- An internal communications or alarm system at or near areas of the Facility where hazardous waste is stored, treated or otherwise managed that is or are capable of providing immediate emergency instruction (voice or signal) to facility personnel;

- A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;

- Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

- Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems. [See 40 CFR § 264.32.]

II.J.2. Testing And Maintenance Of Emergency Equipment

The Permittees shall test and maintain all the communications and alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, as necessary, to assure its proper operation in time of emergency. Specific testing and maintenance procedures are included in the inspection schedule in Permit Attachment Section F and in Permit Attachment Appendix XII. [See 40 CFR § 264.33.]

II.J.3. Access To Communications Or Alarm System

Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, the Permittees shall ensure that all personnel involved in the operation have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee. If there is ever just one employee on the premises while the Facility is operating, the Permittees shall ensure that he or she has immediate access to a device, such as a telephone (immediately available at the scene

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of operation) or a hand-held two-way radio, capable of summoning external emergency assistance. [See 40 CFR § 264.34.]

II.J.4. Required Aisle Space

The Permittees shall maintain adequate aisle space at the Facility in accordance with Permit Attachment Section D, Permit Attachment Appendix III, and Permit Attachment Appendix VII. At a minimum, the Permittees shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency and for the purposes of conducting inspections. [See 40 CFR § 264.35.]

II.J.5. Arrangements with Local Authorities

The Permittees shall maintain arrangements with the appropriate state, local, and Colorado River Indian Tribes (CRIT) authorities in accordance with 40 CFR § 264.37. The Permittees shall periodically update the arrangements, at least every five years from the effective date of this Permit. If state, local, or CRIT officials refuse to renew the preparedness and prevention arrangements with the Permittees, the Permittees must get this refusal in writing and document this refusal and maintain such documentation in the Facility's operating record until closure is completed and certified. The Permittees shall also notify the Director of the Waste Management Division of this refusal by the local authority(ies). [See 40 CFR §§ 264.37, Permit Attachment Section G and Permit Appendix XIII.]

II.K. CONTINGENCY PLAN

II.K.1. Implementation of Plan

The Permittees shall comply with the requirements of 40 CFR §§264.50 through 264.56. The Permittees must immediately carry out the provisions of the Contingency Plan, Permit Attachment Section G and Permit Attachment Appendix XIII, whenever there is a fire, explosion, or release of hazardous waste or constituents which could threaten human health or the environment. [See 40 CFR §§ 264.50 through 264.56.]

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II.K.2. Copies of Plan

The Permittees shall maintain a copy of the Contingency Plan at the Facility, including all revisions to the plan and must submit a copy (and a copy of all revisions) to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services. The Contingency Plan, Permit Attachment Section G and Permit Attachment Appendix XIII is hereby incorporated into this Permit by this reference. [See 40 CFR § 264.53.]

II.K.3. Amendments to Plan

II.K.3.a. The Permittees shall review and immediately amend, if necessary, the Contingency Plan, whenever:

II.K.3.a.i. The facility permit is revised;

II.K.3.a.ii. The plan fails in an emergency;

II.K.3.a.iii. The facility changes—in its design, construction, operation, maintenance, or other circumstances—in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;

II.K.3.a.iv. The list of emergency coordinators changes; or

II.K.3.a.v. The list of emergency equipment changes. [See 40 CFR § 264.54.]

II.K.3.b. The Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with the accompanying amended Contingency Plan. [See 40 CFR § 270.42.]

II.K.4. Emergency Coordinator

The Permittees shall ensure that a trained emergency coordinator is available at all times at the Facility or on call in case of an emergency, in accordance with 40 CFR § 264.55.

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[See 40 CFR §§ 264.52(d) and 264.55.]

II.L. MANIFEST SYSTEM

II.L.1. The Permittees shall comply with the manifest requirements of 40 CFR §§264.70, 264.71, 264.72, and 264.76. [See 40 CFR §§ 264.70, 264.71, 264.72, and 264.76. See also § 270.30(l)(7) and (8).]

II.L.1.a. If a significant discrepancy in a manifest is discovered, the Permittees must attempt to reconcile the discrepancy. If not resolved within fifteen days, the Permittees must submit a letter report, including a copy of the manifest, to the Director. [See 40 CFR §§264.72 and 270.30(l)(7).]

II.L.1.b. An unmanifested waste report must be submitted to the Director within 15 days of receipt of unmanifested waste. [See 40 CFR §§264.76 and 270.30(l)(8).]

II.L.1.c. Pursuant to 40 CFR § 264.71, electronic manifests that are obtained, completed, and transmitted in accordance with §262.20(a)(3) and used in accordance with 40 CFR § 264.71 in lieu of the paper manifest form are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement to obtain, complete, sign, provide, use, or retain a manifest. [See 40 CFR §§ 262.20(a)(3) and 264.71.]

II.M. RECORDKEEPING AND REPORTING

In addition to the recordkeeping and reporting requirements specified elsewhere in this Permit, the Permittees shall do the following:

II.M.1. Operating Record

II.M.1.a. The Permittees shall maintain a written operating record at the facility in accordance with 40 CFR § 264.73. [See 40 CFR § 264.73.]

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II.M.1.b. The Permittees shall record and maintain, in the operating record for this Permit, all monitoring, inspection, and other data compiled under the requirements of this Permit in accordance with 40 CFR §§ 63.1211, 264.73 and 264.1064. The Permittees shall also maintain the test burn reports, data, and calculations in the operating record. [See Permit Condition I.K. and 40 CFR §§ 63.1211, 264.73 and 264.1064.]

II.M.1.c. The Permittees shall maintain, in the operating record for this Permit, the manuals listed in the Operating and Maintenance Manuals Maintained on Site Table identified in Permit Attachment Appendix XXI. Whenever the list of manuals needs to be revised, the Permittees shall submit a request for a Permit Modification in accordance with Permit Condition I.G.7. along with the accompanying revised Table. [See 40 CFR §§ 63.8(c)(3) and 63.1209(b)(2).]

II.M.1.d. The Permittees shall maintain, in the operating record for this Permit, the site specific CMS quality control performance evaluation test plan procedures in accordance with 40 CFR § 63.8(d). [See 40 CFR § 63.8(d).]

II.M.2. Reporting Requirements

The Permittees shall comply with the reporting requirements of 40 CFR §§ 61.357, 63.1211, 264.77, 264.1089 and 264.1090, as appropriate. To the extent that the cited regulatory requirements call for overlapping reporting of information, the Permittees may merge the information into one or more reports and need not provide duplicative information. [See 40 CFR §§ 61.357, 63.1211, 264.77, 264.1089 and 264.1090.]

II.M.3. Biennial Report

The Permittees shall comply with the biennial reporting requirements of 40 CFR §264.75. [See 40 CFR §§ 264.75 and 270.30(l)(9).]

II.M.4. Subpart BB Recordkeeping and Reporting

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In accordance with 40 CFR § 264.1064(m), if any "equipment" at the facility, as defined at 40 CFR § 264.1031, contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for 300 hours or more per calendar year and is subject to regulations at 40 CFR Part 60, Part 61, or part 63 and the Permittees elect to determine compliance with 40 CFR Part 264, Subpart BB by documentation of compliance with the regulations at 40 CFR Part 60, Part 61, or Part 63 pursuant to the relevant provisions of the regulations at 40 Part 60, Part 61, or Part 63, the documentation of compliance under the regulations at 40 CFR Part 60, Part 61, or Part 63 shall be kept with or made readily available with the facility operating record. Otherwise, the Permittees shall comply with the recordkeeping and reporting requirements described in 40 CFR §§ 264.1064 and 264.1065 in accordance with the RCRA Subpart BB standards, Permit Attachment Section N and Permit Attachment Appendix XIX, incorporated herein by this reference. [See 40 CFR §§ 264.1031, 264.1064 and 264.1065, Permit Attachment Section N and Permit Attachment Appendix XIX. See also Permit Condition I.K.10.]

II.M.5. Application Recordkeeping

Except as provided in Permit Condition I.J., the Permittees shall comply with the recordkeeping requirements described in 40 CFR § 270.10(i). [See 40 CFR § 270.10(i).]

II.N. GENERAL CLOSURE REQUIREMENTS

II.N.1. Performance Standard

II.N.1.a. The Permittees shall close the Facility in accordance with Permit Conditions III.L., IV.M., and V.H., and 40 CFR Part 264, Subpart G, (40 CFR §§264.110 *et seq.*), Permit Attachment Section I, and Permit Attachment Appendices XV and XVII, each of which is incorporated herein by this reference. [See 40 CFR Part 264, Subpart G, (40 CFR §§264.110 *et seq.*), the RCRA Facility Closure Plan, Permit Attachment Section I, and Permit Attachment Appendices XV and

XVII.]

II.N.1.b. The Permittees shall close RF-1 in accordance with Permit Conditions I.K, and V.H., and 40 CFR Part 264, Subpart G, (40 CFR §§264.110 *et seq.*), RF-1 Closure Plan, Permit Attachment Section I, and Permit Attachment Appendices XVI and XVII, each of which is incorporated herein by this reference. [See 40 CFR Part 264, Subpart G, (40 CFR §§264.110 *et seq.*), RF-1 Closure Plan, Permit Attachment Section I, and Permit Attachment Appendices XVI and XVII.]

II.N.2. Closure Plan Review

The Director reserves the right to review the closure plans at any time to ensure both contain all the requirements to meet the closure requirements of 40 CFR Part 264, Subpart G, (40 CFR §§264.110 *et seq.*). This review may include any unusual activities, notices of violation, and inspection reports. [See 40 CFR Part 264, Subpart G.]

II.N.3. Amendment to Closure Plans

II.N.3.a. The Permittees shall amend either or both the RCRA Facility Closure Plan and the RF-1 Closure Plan, in accordance with 40 CFR §264.112(c), whenever necessary. [See 40 CFR § 264.112.]

II.N.3.b. If the Director determines at any time that either or both closure plans require modification, the Permittees shall modify either or both closure plans as appropriate to incorporate findings identified by the Director's review in accordance with 40 CFR §§264.112(c)(4) and 270.42. [See 40 CFR §§ 264.112 and 270.42.]

II.N.3.c. If, prior to the time the notice of closure required by Permit Condition II.N.4. is submitted, the Permittees determine that an amendment to the Closure Plan is appropriate, the Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with an accompanying revised closure plan at least

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180 days before initiation of closure activities in accordance with 40 CFR § 270.42. [See 40 CFR § 270.42.]

II.N.4. Notification of Closure

In addition to the Notice of Closure of RF-1 required by Permit Condition I.K., the Permittees shall notify the Director in writing at least 60 days prior to the date on which they expect to begin closure of any additional part of the Facility or to begin final closure of the Facility. [See 40 CFR § 264.112(d).]

II.N.5. Time Allowed For Closure

Within 90 days after receiving the final volume of hazardous waste, the Permittees shall treat, remove from the unit or Facility, or dispose of on-site all hazardous waste and shall complete closure activities, in accordance with 40 CFR § 264.113 and the schedules specified in the Closure Plans, Permit Attachment Section I and Appendices XV and XVI. [See 40 CFR §§ 264.113 and 270.42.]

II.N.6. Disposal or Decontamination of Equipment, Structures, and Soils

The Permittees shall decontaminate and dispose of all contaminated equipment from the Facility, support structures, and soils in accordance with 40 CFR § 264.114 and the Closure Plans, Permit Attachment Section I, and Permit Attachment Appendices XV and XVI. **[**See 40 CFR § 264.114.]

II.N.7. Certification of Closure

The Permittees shall certify that the Facility has been closed in accordance with 40 CFR § 264.115 and the specifications in the Closure Plans, Permit Attachment Section I, and Permit Attachment Appendices XV and XVI. **[**See 40 CFR § 264.115.]

II.O. GENERAL POST-CLOSURE REQUIREMENTS

If waste is left in place (*e.g.* equipment, platforms, SWMUs), the Permittees shall submit

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a post-closure permit application in accordance with the requirements of 40 CFR Part 264, Subpart G. [See 40 CFR §§ 264.117 through 264.120.]

II.P. COST ESTIMATE FOR FACILITY CLOSURE

II.P.1. The Permittees' most recent closure cost estimates, for facility-wide closure and RF-1 closure, respectively, are specified in Attachment 4 to the Closure Plan, Permit Attachment Section I, and Permit Attachment Appendix XV and Attachment 4 to the RF-1 Closure Plan, Permit Attachment Section I and Permit Attachment Appendix XVI, which are each incorporated herein by this reference. [See 40 CFR §§ 264.142, 264.144, 264.197(c)(3) and (5), 264.228(c)(2), and 264.258(c)(2).]

II.P.2.

II.P.2.a. The Permittees must adjust the closure cost estimate for inflation within 60 days prior to each annual anniversary date of the establishment of the financial instrument(s) used to comply with 40 CFR § 264.143. [40 CFR § 264.142(b).]

II.P.2.b. If at any time during the operation of the Facility, the Permittees use a financial test or corporate guarantee to meet the financial responsibility requirements in accordance with 40 CFR §264.143(f), the Permittees must adjust the closure cost estimate for inflation within 30 days after the close of owner or operator's fiscal year, as appropriate, and before submission of updated information to the Director in accordance with 40 CFR § 264.142(b). [See 40 CFR § 264.142(b).]

II.P.3. The Permittees must revise either or both closure cost estimates whenever there is a change in either or both of the Facility's Closure Plans in accordance with 40 CFR § 264.142(c). [See 40 CFR § 264.142(c).]

II.P.4. The Permittees must keep the latest closure cost estimates (for RF-1 and the Facility-wide closure) at the Facility in accordance with 40 CFR § 264.142(d). [See 40 CFR § 264.142(d).]

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II.P.5. New, updated or revised financial assurance instruments and updated cost estimates must be submitted to the Director in accordance with 40 CFR §§ 264.142 and 264.143. [40 CFR §§ 264.142 and 264.143.]

II.Q. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

The Permittees shall demonstrate continuous compliance with the requirements of 40 CFR § 264.143 by providing documentation of financial assurance, as required by and in accordance with 40 CFR § 264.151, in at least the amount of the cost estimates required by Permit Condition II.P. Requests for changes in financial assurance mechanisms demonstrating compliance with this Permit Condition II.Q. shall be submitted to the Director for review and approval in accordance with Permit Condition I.G.5. before being implemented. [See 40 CFR §§ 264.143 and 264.151.]

II.R. LIABILITY REQUIREMENTS

The Permittees shall demonstrate continuous compliance with the requirement of 40 CFR § 264.147(a) to have and maintain liability coverage for sudden and accidental occurrences in the amount of at least $1 million per occurrence, with an annual aggregate of at least $2 million, exclusive of legal defense costs. [See 40 CFR § 264.147(a).]

II.S. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Permittees shall comply with 40 CFR § 264.148, whenever applicable. [See 40 CFR § 264.148.]

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MODULE III - CONTAINERS

III.A. APPLICABILITY

This Module provides requirements for any containers used to store or treat hazardous waste at the Facility, including those received from off-site sources. Waste analysis requirements are contained in Module II, in Permit Condition II.C., in Permit Attachment Section C, and in Permit Attachment Appendix IV, the Waste Analysis Plan. [See 40 CFR § 264.13.]

III.B. GENERAL REQUIREMENTS FOR CONTAINERS

III.B.1. The Permittees shall not manage, store, treat, and/or consolidate hazardous waste in containers other than in the designated container storage areas listed in Table III-1 below. [See 40 CFR § 264.170.]

III.B.2. The Permittees must maintain the Spent Carbon Container Storage Area containment capacity of at least 10,000 gallons. [See 40 CFR § 264.175(b)(3).]

III.B.3. The Permittees shall not manage, store, and/or consolidate containers of hazardous wastes in excess of the maximum capacities for each individual container storage area identified in Table III-1.

TABLE III-1
CONTAINER STORAGE AREAS, SATELLITE ACCUMULATION AREAS, AND DESIGN CAPACITIES

Description	Location*	Capacity
Spent Carbon Container Storage	Warehouse	100,000 gallons
Satellite accumulation area	North side of container storage area	55 gallons
Satellite accumulation area	South side of container storage area	55 gallons
Satellite accumulation area	East of control room	55 gallons or less

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Description	Location*	Capacity
Satellite accumulation area	Facility on-site screening laboratory	55 gallons or less
Container storage area for waste generated on-site	South east of H-1 hopper	40 cubic yards or less per bin

* Note: Locations may vary due to facility needs. Permit Attachment Appendix III contains diagrams and maps with unit locations

III.B.3. The Permittees must manage all containers used to store or otherwise manage hazardous waste at the Facility in accordance with 40 CFR Part 264, Subpart I. [See 40 CFR Part 264, Subpart I.]

III.B.4. Closure requirements for containers used to store or otherwise manage hazardous waste are included in Module II, in Permit Condition II.N, in this Module III, in Permit Condition III.L., Permit Attachment Section I and Permit Attachment Appendices XV and XVI. [See 40 CFR §§ 264.111 and 264.178.]

III.C. CONDITION OF CONTAINERS

The Permittees shall maintain containers in good condition (*e.g.*, no severe rusting, apparent structural defects, etc.). If a container holding hazardous waste is not in good condition or, if the container begins to leak, the Permittees shall repair the container or place it into another suitable container or transfer the waste from such a container into a container that is in good condition. [See 40 CFR § 264.171.]

III.D. COMPATIBILITY OF WASTE WITH CONTAINER

III.D.1. The Permittees must use containers that are made of or lined with materials that will not react with, and are otherwise compatible with, the hazardous wastes to be stored, so that the ability of the containers to contain the waste is not impaired. [See 40 CFR § 264.172.]

III.D.2. For all containers within a singular secondary containment system, the Permittees shall ensure that the containers are compatible with all wastes within that containment system. [See 40 CFR § 264.172.]

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III.D.3. The Permittees shall assure compliance with Permit Condition III.D.1. by utilization of the procedures (*e.g.*, testing of waste and containers) and equipment specified in the Waste Analysis Plan, Permit Attachment Section C and Permit Attachment Appendix IV.

III.D.4. The Permittees shall conduct pre-acceptance characterization of waste, as specified in the Waste Analysis Plan, Permit Attachment Section C and Permit Attachment Appendix IV, and ensure proper precautions are taken so as to prevent accidental ignition or reaction of ignitable or incompatible wastes. [See 40 CFR §§ 264.172, 264.176 and 264.177.]

III.E. MANAGEMENT OF CONTAINERS

III.E.1. The Permittees shall always keep all containers holding hazardous waste closed during storage, except when it is necessary to add or remove waste. [See 40 CFR § 264.173(a).]

III.E.2. The Permittees shall never open, handle, or store a container holding hazardous waste in a manner that may rupture the container or cause the container to leak. [See 40 CFR § 264.173(b).]

III.E.3. Storage Configuration

III.E.3.a. The Permittees shall maintain adequate aisle space between rows of containers to allow for the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the facility. [See 40 CFR § 264.35.]

III.E.3.b. A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak. [See 40 CFR § 264.173(b).]

III.E.3.c. The Permittees shall not exceed the maximum volumes of waste for each category of containers listed in Table III-2. [See 40 CFR § 264.173.]

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TABLE III-2

LIST OF CONTAINER TYPES AND VOLUMES

Container Type	Volume (ft^3)	Volume (US Gallons)
VSC/ASC 200/Drums	7.9	59
VSC/ASC 400	17.5	131
VSC/ASC 1000	44.9	336
VSC/ASC 2000	82.0	614
VSC 3000	164	1228
PV1000	44.9	336
PV2000	82.0	614
"Supersack"	Up to 67	Up to 500

III.F. CONTAINMENT SYSTEMS

III.F.1. The Permittees shall provide secondary containment for all hazardous waste containers in accordance with 40 CFR § 264.175(b) except that storage areas that store containers holding only wastes that do not contain free liquids need not have such a containment system so long as the storage area meets the requirements of 40 CFR § 264.175(c). [See 40 CFR §§ 264.175(b) and (c).]

III.F.2.

III.F.2.a. The Permittees shall remove all accumulated liquid, including spilled and/or leaked wastes and all accumulated precipitation or run-on from the sump or collection area in a timely manner to prevent overflow of the collection system. [See 40 CFR § 264.175(b)(5).]

III.F.2.b. At a minimum, removal of liquid shall occur within 24 hours of the initial accumulation of liquid, or sooner, based on inspection of the containment area. [See Permit Attachment Section F and Permit Appendix XII.]

III.F.2.c. If the collected material from a secondary containment system is a hazardous waste, it must be managed as a hazardous waste in accordance with all applicable requirements of this Permit and RCRA. [See 40 CFR § 264.175(b).]

III.F.2.d. The Permittees shall address any spills or leaks from the pad and, if applicable, containment system in accordance with 40 CFR §§264.15(c) and 264.171. [See 40 CFR §264.15(c) and 264.171.]

III.G. AIR EMISSION CONTROLS FOR CONTAINERS

III.G.1. The Permittees shall store and manage hazardous waste in containers in accordance with the requirements specified in 40 CFR Part 264, Subpart CC, Permit Attachment Section O and Permit Attachment Appendix XX. [See 40 CFR §264.179, and Part 264, Subpart CC.]

III.G.2. For containers exempted under 264.1082(c), the Permittees shall determine the average volatile organic concentration of the waste at the point of waste generation, in accordance with the procedures specified in 40 CFR § 264.1083(a). The average volatile organic concentration shall be determined over an annual timeframe, as specified in 40 CFR § 264.1083(a). [See 40 CFR §§ 264.1082(c) and 264.1083(a).]

III.G.3. In accordance with 40 CFR § 264.1082(c)(1), for containers exempted under 264.1082(c)(1), the Permittees shall review and update, as necessary, the determination of average volatile organic concentration of the waste at the point of waste generation at least once every 12 months following the date of the initial determination for the hazardous waste streams managed and/or stored in such containers. [See 40 CFR §§ 264.1082 and 264.1083.]

III.G.4. For any hazardous waste that has been treated at the Facility, the Permittees shall perform the applicable waste determinations for each treated hazardous waste placed in containers exempted under the provisions of 40 CFR § 264.1082(c)(2)(i) through (c)(2)(vi) in accordance with the procedures specified in 40 CFR §§ 264.1082(c)(2) and 264.1083(b). [See 40 CFR §§ 264.1082(c)(2) and 264.1083.]

III.G.5. Certain hazardous wastes or volumes of hazardous wastes managed at the facility trigger air emission control requirements under the RCRA air emission control provisions at 40 CFR Part 264, Subpart CC (referred to as "CC"). For wastes subject to the requirements of RCRA CC that are not subject to one of the exemptions listed at 40 CFR § 264.1082(c), that are received in containers at the facility, in addition to any other applicable provisions in this Module, the Permittees shall:

III.G.5.a. Visually observe container condition and record the material (carbon size) and how full the container is by percentage as per Permit Attachment Appendix IV, Appendix B Tally Sheet;

III.G.5.b. This Permit Condition III.G.5.b. applies to: (1) any hazardous waste containers having a design capacity greater than 0.1 cubic meters and less than or equal to 0.46 cubic meters for which all hazardous waste in or entering the unit has an average volatile organic concentration at the point of waste origination of more than 500 parts per million by weight; and (2) any hazardous waste containers having a design capacity greater than 0.46 cubic meters that is not "in light material service" as that term is defined in 40 CFR § 265.1081, for which all hazardous waste in or entering the unit has an average volatile organic concentration at the point of waste origination of more than 500 parts per million by weight. These containers must comply with the "Container Level 1 standards" in accordance with 40 CFR Part 264, Subpart CC. [See 40 CFR § 264.1086(b) and (c).]

III.G.5.c. This Permit Condition III.G.5.c. applies to any hazardous waste containers having a design capacity greater than 0.46 cubic meters that is "in light material service" as that term is defined in 40 CFR § 265.1081, for which all hazardous waste in or entering the unit has an average volatile organic concentration at the point of waste origination of more than 500 parts per million by weight. These containers must comply with the "Container Level 2 standards" in accordance with 40 CFR Part 264 Subpart CC. [See 40 CFR § 264.1086(b) and (d).]

III.G.5.d. This Permit Condition III.G.5.d. applies to any hazardous waste containers having a design capacity greater than 0.1 cubic meters that is used for

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treatment of a hazardous waste by a waste stabilization process, for which all hazardous waste in or entering the unit has an average volatile organic concentration at the point of waste origination of more than 500 parts per million by weight. These containers must comply with the "Container Level 3 standards" in accordance with 40 CFR Part 264 Subpart CC. [See 40 CFR § 264.1086(b) and (e).]

III.G.6. For containers that contain or contact hazardous wastes with organic concentrations of 10% by weight or less, the Permittees shall comply with 40 CFR §§ 264.1063 and 264.1064. [See 40 CFR §§ 264.1050(b), 264.1063(d), and 264.1064(k).]

III. H. INSPECTION SCHEDULES AND PROCEDURES

III.H.1. The Permittees shall, upon receipt of containers of hazardous waste, inspect the containers in accordance with Permit Attachment F and Permit Appendices IV and XII and shall also ensure the container is in good condition within the meaning of 40 CFR § 264.171. Pursuant to 40 C7FR § 264.171, if any container is determined to be not in good condition or if it begins to or has leaked, the Permittees must transfer the hazardous waste from the container to a container that is in good condition or manage the waste in some other way that complies with the provisions of this Permit. [See 40 CFR § 264.171.]

III.H.2. The Permittees shall conduct daily inspections of the Spent Carbon Container Storage Area and the containers stored there in accordance with Permit Attachment F and Permit Appendix XII and shall maintain daily records of inspections at the facility.

III.H.3. The Permittees shall, at a minimum, conduct weekly inspections of all areas where hazardous waste containers are stored or managed, in accordance with the provisions of and inspection schedule in Permit Attachment F and Permit Appendix XII, to detect leaking containers and deterioration of containers or the containment system, which may be caused by corrosion or other factors. [See 40 CFR § 264.174.]

III.H.4. The Permittees' inspections shall include inspection and monitoring of any air emission control equipment used to comply with the provisions of Permit

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Condition III.G. in accordance with a written plan and schedule in accordance with 40 CFR § 264.1088.

III.H.5.

III.H.5.a. Prior to their receipt, identify any hazardous waste containers subject to the Container Level 1 Standards that will not or may not be emptied within 24 hours of their receipt at the Facility and conduct an inspection on or before receipt of such containers as follows:

III.H.5.a.i. Visually inspect the container, cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position;

III.H.5.a.ii. Repair defects, if detected, in accordance with the requirements, including time frames, of 40 CFR § 264.1086(c)(4)(iii) ;

III.H.5.a.iii. If a container used for managing hazardous waste remains at the facility for a period of 1 year or more, the owner or operator shall visually inspect the container and its cover and closure device(s) initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. [See 40 CFR § 264.1086(c)(4).]

III.H.5.b. Prior to their receipt, identify any hazardous waste containers subject to the Container Level 2 Standards that will not or may not be emptied within 24 hours of their receipt at the Facility and conduct an inspection on or before receipt of such containers in accordance with the requirements of 40 CFR § 264.1086(d)(4). [See 40 CFR § 264.1086(d)(4).]

III.H.5.c. Prior to their receipt, identify any hazardous waste containers subject to the Container Level 3 Standards and inspect and monitor the closed vent systems and control devices on such containers in accordance with the

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requirements of 40 CFR § 264.1086(e)(4). [See 40 CFR § 264.1086(e)(4).]

III.I. RECORD KEEPING AND REPORTING

III.I.1. For hazardous waste containers subject to the requirements of RCRA CC, including those subject to one of the exemptions listed at 40 CFR § 264.1082(c), the Permittees shall comply with the recordkeeping requirements of 40 CFR §§ 264.1086 and 264.1089. [See 40 CFR §§ 264.1086 and 264.1089.]

III.I.2. For hazardous waste containers subject to the requirements of RCRA CC, including those subject to one of the exemptions listed at 40 CFR § 264.1082(c), the Permittees shall comply with the reporting requirements of 40 CFR § 264.1090. [See 40 CFR § 264.1090.]

III.I.3. The Permittees shall retain sketches, drawings, or data demonstrating compliance with Permit Condition III.J.1., (location of buffer zone [15 m or 50 ft] and containers holding ignitable or reactive wastes). [See 40 CFR §§ 264.176.]

III.I.4. The Permittees shall retain sketches, drawings, or data demonstrating compliance with Permit Condition III.K.3., (location of incompatible wastes in relation to each other), where applicable. [See Permit Appendix IV (Waste Analysis Plan) and 40 CFR § 264.177.]

III.I.5. The Permittees shall maintain at the Facility until closure is completed and certified by an independent, registered professional engineer, the following hazardous waste container-specific documents and information and all amendments, revisions, and modifications to these documents and information:

III.I.5.a. For storage areas that store hazardous waste containers having free liquids, a description of the containment system to demonstrate compliance with container storage area provisions of 40 CFR § 264.175. This description must show the following:

III.I.5.a.i. Basic design parameters, dimensions, and materials of construction;

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III.I.5.a.ii. How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system;

III.I.5.a.iiii. Capacity of the containment system relative to the number and volume of hazardous waste containers to be stored;

III.I.5.a.iv. Provisions for preventing or managing run-on; and

III.I.5.a.v. How accumulated liquids can be analyzed and removed to prevent overflow.

III.I.5.b. For storage areas that store containers holding hazardous wastes that do not contain free liquids, a demonstration of compliance with 40 CFR 264.175(c), including:

III.I.5.b.i Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and

III.I.5.b.ii. A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids.

III.I.6. When management of ignitable or reactive waste or incompatible waste occurs at the Facility, the Permittees must document compliance with Permit Conditions III.J. and III.K. This documentation may be based on references to published scientific or engineering literature, data from trial tests (e.g., bench scale or pilot scale tests), waste analyses (as specified in the Waste Analysis Plan), or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions. [See Permit Appendix IV (Waste Analysis Plan) and 40 CFR § 264.17(c).]

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III.J. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE AND REACTIVE WASTES

III.J.1. The Permittees shall not locate containers holding ignitable or reactive waste within 50 feet (15 meters) of the facility property line. The physical location of this 50-foot boundary shall be permanently marked and maintained while the facility is in operation. [See 40 CFR § 264.176.]

III.J.2. The Permittees shall prevent accidental ignition or reaction of ignitable or reactive waste. The Permittees shall follow the procedures specified in the Waste Analysis Plan (Permit Appendix IV) regarding the identification of ignitable and reactive wastes. [40 CFR §§ 264.177(a) and 264.176.]

III.J.3 The Permittees shall comply with the general requirements of 40 CFR § 264.17 for ignitable or reactive wastes managed or stored in containers at the Facility. [See 40 CFR § 264.17.]

III.J.4. Containers of ignitable and reactive wastes shall be stacked no more than two containers high.

III.K. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

III.K.1. The Permittees shall not place incompatible wastes, or incompatible wastes and materials, in the same container unless such placement is performed in accordance with the provisions of 40 CFR § 264.17(b). [See 40 CFR §§ 264.17(b) and 264.177(a).]

III.K.2. The Permittees shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material. [See 40 CFR § 264.177(b).]

III.K.3. The Permittees shall separate containers of incompatible wastes as specified in the Waste Analysis Plan. Storage containers with incompatible wastes shall be separated from other material or be protected from other materials by means of a berm, dike, wall, or other device. [See 40 CFR § 264.177(c).]

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III.K.4. The Permittees shall ensure that the management of any incompatible wastes at the Facility will not result in any leak, corrosion, compromise or failure of any secondary containment required by this Permit. [See 40 CFR § 264.175.]

III.L. CLOSURE

III.L.1. At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. [See 40 CFR § 264.178.]

III.L.2. At closure, the Permittees must manage any hazardous waste removed from the containment system in accordance with the requirements of this Permit. [See comment to 40 CFR § 264.178.]

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MODULE IV - STORAGE IN TANKS

IV.A. APPLICABILITY

IV.A.1. All hazardous waste tank systems and tank-like systems managed at the Facility must comply with the design, installation, and other requirements for "new tank systems" at 40 CFR § 264.192, incorporated herein by this reference, as opposed to the requirements for "existing tank systems" at 40 CFR § 264.191. [See 40 CFR §§ 260.10, 264.191 and 264.192.]

IV.A.2. Except as otherwise specifically set forth in this Permit, the requirements of 40 CFR § 264, Subpart J, Subpart BB (Subpart BB), and Subpart CC (Subpart CC), and 40 CFR § 61, Subpart FF (Subpart FF) are applicable to the hazardous waste tanks systems (T-1, T-2, T-5, T-6, and T-18) that are used to store or otherwise manage hazardous waste at the Facility. Map of Tanks systems' locations can be found in the Permit Attachment Appendix III. Certain air emission control requirements also apply to Tank T-11, as indicated in Permit Condition IV.G.1. and Table IV-2.

IV.A.3. This module also contains Permit Conditions for the Hoppers H-1 and H-2, which are ancillary equipment to Tank Systems T-1, T-2, T-5 and T-6 and are used to transport or feed hazardous waste to these Tank Systems. These Hoppers are defined as "open valves or lines" under RCRA's air emissions requirements found at 40 CFR Part 264, Subpart BB, and as "individual drain systems" under the Clean Air Act's air emission control requirements for individual drain systems found at 40 CFR Part 61, Subpart FF.

IV.A.4. Table IV-1 below provides descriptions of the hazardous waste tank systems that are discussed in this Module and that are subject to the permit conditions of this Module.

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TABLE IV-1
INFORMATION ABOUT HAZARDOUS WASTE TANK SYSTEMS

Tank/Ancillary Equipment No. & Description	*Tank/Ancillary Equipment Materials Of Construction*	*Tank/Ancillary Equipment Dimensions*	*Tank/Ancillary Equipment Design Capacity (Gallons)*	*Tank/Ancillary Equipment Maximum Allowable Design Vapor Pressure (kPa)*
T-1 spent carbon storage tank	300 Series Stainless Steel, Fixed Roof	16'-0" Straight Side 10'-0" Diameter 8'-0" 62° Bottom Cone	8,319 gal.	Atmospheric
T-2 spent carbon storage tank	300 Series Stainless Steel, Fixed Roof	16'-0" Straight Side 10'-0" Diameter 8'-0" 62° Bottom Cone	8,319 gal.	Atmospheric
T-5 spent carbon storage tank	300 Series Stainless Steel, Fixed Roof	16'-0" Straight Side 10'-0" Diameter 8'-0" 62° Bottom Cone	8,319 gal.	Atmospheric
T-6 spent carbon storage tank	300 Series Stainless Steel, Fixed Roof	16'-0" Straight Side 10'-0" Diameter 8'-0" 62° Bottom Cone	8,319 gal.	Atmospheric
T-18 RF-2 Feed Tank	300 Series Stainless Steel	7'-6" Straight Side 10'-4.5" Diameter 9'-4.75" 60° Bottom Cone	6,500 gal.	Atmospheric
H-1 Outdoor spent	Mild Steel	14' length x 8' width	5000 lb. capacity	Atmospheric

Tank/Ancillary Equipment No. & Description	*Tank/Ancillary Equipment Materials Of Construction*	*Tank/Ancillary Equipment Dimensions*	*Tank/Ancillary Equipment Design Capacity (Gallons)*	*Tank/Ancillary Equipment Maximum Allowable Design Vapor Pressure (kPa)*
carbon unloading hopper		x 7' height		
H-2 Indoor spent carbon unloading hopper	Mild Steel	4' length x 4' width x 4' height	5000 lb. capacity	Atmospheric

IV.B. GENERAL REQUIREMENTS FOR TANK SYSTEMS

IV.B.1. Tank design capacities for the tanks and the hoppers are shown in Table IV-1. This design capacity for each tank or hopper shall not be exceeded.

IV.B.2. Prior to the installation of any new tank systems, tank-like systems or components, the Permittees shall submit to the Director the information required in a Part B permit application for new tank systems or components in accordance with 40 CFR §§ 264.192, along with an accompanying request for a permit modification in accordance with Permit Condition I.G.7. (See 40 CFR §§ 264.192 and 270.42.)

IV.B.3. Hoppers H-1 and H-2, described in Table IV-1, are considered ancillary equipment to Tanks T-1, T-2, T-5 and T-6 and must meet each of the requirements applicable to ancillary equipment that are set forth in 40 CFR Part 264, Subpart J, which is incorporated herein by this reference. (See 40 CFR § 264.190 *et seq.*)

IV.B.4. Pursuant to the Schedule of Compliance set forth in Permit Condition I.K., the Permittees must obtain and submit written assessments for Hoppers H-1 and H-2 that meet the requirements of 40 CFR § 264.192(a) as follows:

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IV.B.4.a. Pursuant to the Schedule of Compliance set forth in Permit Condition I.K., the Permittees must obtain and submit written assessments for Hopper H-1 that meet the requirements of 40 CFR § 264.192(a) and that demonstrate compliance with 40 CFR § 264.192. The Permittees must maintain a copy of these assessments on file at the Facility in accordance with 40 CFR § 264.192(g). [See 40 CFR § 264.192 and Permit Condition I.K.]

IV.B.4.b. Pursuant to the Schedule of Compliance set forth in Permit Condition I.K., the Permittees must obtain and submit written assessments for Hopper H-2 that meet the requirements of 40 CFR § 264.192(a) and that demonstrate compliance with 40 CFR § 264.192. The Permittees must maintain a copy of these assessments on file at the Facility in accordance with 40 CFR § 264.192(g). [See 40 CFR § 264.192 and Permit Condition I.K.]

IV.C. CONDITION OF TANK SYSTEMS

IV.C.1. The Permittees shall maintain hazardous waste tank systems in good condition (*e.g.*, no severe rusting, apparent structural defects, etc.). If a tank system holding hazardous waste is not in good condition or, if the tank system begins to leak, the Permittees shall repair the tank system or transfer the waste from such a tank system into one or more tanks systems or containers that are in good condition. [See 40 CFR § 264.171.]

IV.D. COMPATIBILITY OF WASTE WITH TANK SYSTEMS

IV.D.1. Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the tank's containment system to rupture, leak, corrode, or otherwise fail. [See 40 CFR § 264.194(a).]

IV.E. MANAGEMENT OF TANK SYSTEMS

IV.E.1. The Permittees must use appropriate controls and practices to prevent spills and overflows from tank systems or containment systems. [See 40 CFR § 264.194(b).]

IV.E.2. The Permittees must utilize appropriate spill prevention controls (*e.g.*, check valves, dry disconnect couplings), overfill prevention controls (*e.g.*, level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank), and maintenance of sufficient freeboard in uncovered tanks and H-1 to prevent overtopping by wind action or by precipitation. [See 40 CFR § 264.194(b).]

IV.E.3. The Permittees shall ensure that the unloading and feeding of waste into H-1 and H-2 are done in a manner that prevents the migration of waste from these units. The Permittees may not use the units H-1 or H-2 for waste storage and are required to pump any waste fed into H-1 or H-2 into Tanks T-1, T-2, T-5 or T-6 as soon as practical, even if carbon regeneration operations at the Facility have ceased or been curtailed.

IV.F. CONTAINMENT SYSTEMS

IV.F.1. The Permittees must maintain secondary containment in accordance with the requirements of 40 CFR § 264.193. [See 40 CFR § 264.193.]

IV.F.2. The secondary containment must be designed or operated to contain 100 percent of the capacity of the largest tank within its boundary, and must be designed and operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. [See 40 CFR §§ 264.193(e)(1)(i), (ii), (iii) and (iv) and Permit Attachment Appendix IX.]

IV.F.3. The Permittees shall maintain the secondary containment in a manner so as to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank systems. The Permittees must ensure that the secondary containment is free from cracks or gaps by maintaining a sealant on any such areas that is compatible with the spent carbon. [See 40 CFR §§ 264.193(b)(1) and (e)(1)(iii).]

IV.F.4. The Permittees must retain the containment volume of secondary containment within the concrete pad that serves as the secondary containment for Tanks T-1, T-2, T-5 and T-6 at or above the 9,847 gallons at all times. The maximum tank volume of Tanks T-1, T-2, T-5 and T-6 is 8,319 gallons and the calculated applicable rainfall volume for secondary containment for Tanks T-1, T-2, T-5 and T-6 is 1,528 gallons. The containment volume must meet the total required volume of 9,847 gallons. [See 40 CFR § 264.193(e) and Permit Attachment Appendix IX.]

IV.F.5. The Permittees shall maintain the double walled tank T-18 in accordance with 40 CFR 264.193(e)(3). [See 40 CFR § 264.193(e)(3).]

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IV.F.6. Spent Carbon Unloading Hopper H-1

IV.F.6.a. In accordance with the Compliance Schedule set forth in Permit Condition I.K., the Permittees shall submit to EPA for approval a work plan with a schedule for providing secondary containment for the spent carbon unloading Hopper H-1 in accordance with 40 CFR § 264.193. [See 40 CFR § 264.193.]

IV.F.6.b.i. Until such time as the secondary containment for Hopper H-1 is provided in accordance with Permit Condition IV.F.6.a., the Permittees must conduct a leak test or other integrity assessment to ensure the integrity of Hopper H-1 annually from the date of the leak test or other integrity assessment required in Permit Condition I.K. and maintain a record of the results of each such assessment in the operating record at the Facility and otherwise comply with the requirements of 40 CFR § 264.193(i), incorporated herein by this reference. [See 40 CFR § 264.193(i).]

IV.F.6.b.ii. Until such time as the secondary containment for Hopper H-1 is provided in accordance with Permit Condition IV.F.6.a., the Permittees must perform daily inspections of the spent carbon unloading Hopper H-1 in accordance with 40 CFR § 264.195(f). [See 40 CFR § 264.195(f).]

IV.F.6.b.iii. If the secondary containment for Hopper H-1 is not implemented within a year from the effective date of this Permit, as provided in accordance with Permit Conditions I.K.7. and IV.F.6.a., the Permittees shall be subject to the requirements of Permit Conditions I.K.9. and II.M.3., and 40 CFR § 264.197(c), incorporated herein by this reference. [See 40 CFR § 264.197(c).]

IV.F.7. The Permittees shall maintain the secondary containment for the spent carbon unloading Hopper H-2 in the container storage warehouse in accordance with 40 CFR § 264.193(e)(1). The pad under H-2 serves as a liner external to the hopper, providing secondary containment. [See 40 CFR § 264.193(e)(1).]

IV.G. AIR EMISSION CONTROLS

IV.G.1. Tank systems T-1, T-2, T-5, T-6, T-11 and T-18 are subject to air emission control requirements pursuant to this Permit. Tanks T-1, T-2, T-5, T-6 and T-18 and hoppers H-1 and H-2 are equipped with closed vent systems leading to air pollution control devices. The Permittees must comply with the RCRA and CAA

regulations that are identified in the column labeled "Air Emission Control Regulations Applicable to this Unit" in Table IV-2 and that relate to the emissions standards, monitoring records, reporting and management requirements for the correlating units, *i.e.*, tanks T-1, T-2, T-5, T-6, T-11 and T-18, and their associated ancillary equipment, (H-1 and H-2), and the carbon adsorbers WS-1, WS-2, and WS-3, and their associated closed vent systems (e.g. hoses/piping and connections). [See Permit Attachment Sections N and O, Permit Attachment Appendices XIX and XX, Permit Attachments Subpart BB Compliance Plan and Subpart FF Compliance Plan and 40 CFR Part 61 and §§ 264.1050 *et* seq., 264.1087, 264.1088, 264.1089, and 264.1090.]

IV.G.2.

IV.G.2.a. If sampling and analysis or operator knowledge of the waste entering Tank T-11 demonstrates that the average annual Volatile Organic concentration of the waste entering the unit is greater than or equal to 500 parts per million by weight, the Permittees shall ensure that tank T-11 complies with the "Air Emission Control Regulations Applicable to this Unit" in Table IV-2.

IV.G.2.b. For Hoppers H-1 and H-2, the Permittees must ensure that H-1 and H-2 are at all times in compliance with either 40 CFR Part 264, Subpart BB requirements for open ended valves or lines or with 40 CFR Part 61, Subpart FF requirements for individual drain systems, as set forth in the column labeled "Air Emission Control Regulations Applicable to this Unit" in Table IV-2. [See 40 CFR §§ 264.1050 *et seq.*, and §§ 61.340 *et seq.* See also Permit Condition I.K.10.]

IV.G.2.c. For carbon adsorber WS-2 and the piping, connections, and any flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to WS-2, the Permittees must ensure that WS-2, and any such piping, connections and devices, are at all times in compliance with either 40 CFR Part 264, Subpart BB requirements for closed-vent systems and control devices or with 40 CFR Part 61, Subpart FF requirements for closed vent systems and control devices, as set forth in the column labeled "Air Emission Control Regulations Applicable to this Unit" in Table IV-2. [See 40 CFR §§ 264.1050 *et seq.*, and §§ 61.340 *et seq.* See also Permit Condition I.K.10.]

IV.G.3. In accordance with Permit Attachment Section N and Permit Attachment Appendix XIX, the Permittees must comply with the requirements of 40 CFR Part

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264, Subpart BB. **[**See 40 CFR Part 264, Subpart BB. See also Permit Condition I.K.10.]

IV.G.4. In accordance with Permit Attachment Section O and Permit Attachment Appendix XX, the Permittees must comply with the record-keeping and reporting requirements of 40 CFR §§ 264.1089(f)(1) and 264.1090(a) when operating the scrubber, recycler, boiler and cooling tower blow-down storage tank, T-11. [See Permit Attachment Section O, Permit Attachment Appendix XX, and 40 CFR §§ 264.1089(f)(1) and 264.1090(a).]

IV.G.5. The Permittees shall maintain and operate the air pollution control equipment at the Facility in a manner consistent with good air pollution control practice for minimizing emissions. [See, *e.g.*, 40 CFR §264.31.]

TABLE IV-2
MANAGEMENT OF EACH TANK SYSTEM, HOPPERS AND THE AIR POLLUTION CONTROL DEVICES

Tank or Unit No.	**Description**	**Air Emission Control Requirements Applicable to this Unit**
T-1	Spent Carbon Storage Tank. Tank T-1 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-1).	40 CFR Part 61, Subparts A and FF and 40 CFR §264.1089(j).
T-2	Spent Carbon Storage Tank. Tank T-2 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-1).	40 CFR Part 61, Subparts A and FF and 40 CFR §264.1089(j).
T-5	Spent Carbon Storage Tank. Tank T-5 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-1).	40 CFR Part 61, Subparts A and FF and 40 CFR §264.1089(j).
T-6	Spent Carbon Storage Tank. Tank T-6 vapors are controlled by a closed vent system leading to carbon adsorber (WS-1).	40 CFR Part 61, Subparts A and FF and 40 CFR §264.1089(j).
T-11	Scrubber/ Recycle/	40 CFR §§ 264.1082(c)(1),

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Tank or Unit No.	Description	Air Emission Control Requirements Applicable to this Unit
	Boiler and Cooling Tower Blow-Down Water Storage Tank	264.1089(f)(1) and 264.1090(a). Tank T-11 is subject to monitoring and record keeping requirements of 40 CFR Part 264, Subpart CC. If sampling and analysis or operator knowledge of the waste entering Tank T-11 demonstrates that the average annual Volatile Organic concentration of the waste entering the unit is greater than or equal to 500 parts per million by weight, the Permittees shall at such time ensure that tank T-11 meets the additional requirements of 40 CFR §§ 264.13(b)(8), 264.1082, 264.1084 and 264.1087.
T-18	Hearth feed tank or spent carbon feed tank. Tank T-18 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-3).	40 CFR Part 61, Subparts A and FF and 40 CFR §264.1089(j).
H-1	Outdoor spent carbon unloading hopper (open ended line; individual drain system). Hopper H-1 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-2).	40 CFR §§ 61.01 through 61.19, 61.346 (or 40 CFR Part 264, Subpart BB), and Permit Conditions I.K.10., II.H.4. and IV.G.3.
H-2	Indoor spent carbon unloading hopper (open ended line; individual drain system). Hopper H-2 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-2).	40 CFR §§ 61.01 through 61.19, 61.346 and 264.1064(m) (or 40 CFR Part 264, Subpart BB), and Permit Conditions I.K.10., II.H.4. and IV.G.3.
WS-1	Carbon Adsorber No.1 and associated Closed Vent System (e.g. connections and hoses/piping) for tanks T-1, T-2, T-5, and T-6. WS-1, and the piping, connections, and any flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to WS-1, is an air pollution control device.	40 CFR §§ 61.01 through 61.19, 61.349, 61.354(d), 264.1089(j), and Permit Conditions II.H.4. and IV.G.3.

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Tank or Unit No.	Description	Air Emission Control Requirements Applicable to this Unit
WS-2	Carbon Adsorber No.2 and associated Closed Vent System (e.g. connections and hoses/piping) for hoppers H-1 and H-2. WS-2, and the piping, connections, and any flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to WS-2, is an air pollution control device.	40 CFR §§ 61.01 through 61.19, 61.349, 61.354(d), and 264.1064(m) (or 40 CFR Part 264, Subpart BB, for closed vent systems and control devices) and Permit Conditions I.K.10., II.H.4. and IV.G.3.
WS-3	Carbon Adsorber No.3 and associated Closed Vent System (e.g. connections and hoses/piping) for tank T-18. WS-3, and the piping, connections, and any flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to WS-3, is an air pollution control device.	40 CFR §§ 61.01 through 61.19, 61.349, 61.354(d), 264.1089(j), and Permit Conditions II.H.4. and IV.G.3..
Closed Vent Systems Connected to WS-1 and WS-3	Hoses/piping and connections leading from tanks to adsorbers. The piping, connections, and any flow-inducing devices that transport gas or vapor from the hazardous waste tanks to air pollution control devices, such as WS-1, and WS-3, are closed vent systems.	40 CFR §§ 61.01 through 61.19, 61.349, 61.354(d), 264.1089(j), and Permit Conditions II.H.4. and IV.G.3.
Closed Vent Systems Connected to WS-2	Hoses/piping and connections leading from hoppers to adsorbers. The piping, connections, and any flow-inducing devices that transport gas or vapor from the hoppers to an air pollution control device, such as WS-2, are closed vent systems.	40 CFR §§ 61.01 through 61.19, 61.349, 61.354(d), 264.1064(m), (or 40 CFR Part 264, Subpart BB, for closed vent systems) and Permit Conditions I.K.10., II.H.4. and IV.G.3.

IV.G.6. For hazardous waste managed and/or stored on site in any tank systems that are not equipped with air pollution control devices installed prior to December 6, 1996, the Permittees shall determine the average volatile organic concentration of the waste at the point of waste generation, in accordance with the procedures

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specified in 40 CFR § 264.1083(a). The average shall be determined over an annual timeframe, as specified in 40 CFR § 264.1083(a). In accordance with 40 CFR § 264.1082(c)(1), the Permittees shall review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the hazardous waste streams managed and/or stored in such containers. [See 40 CFR §§ 264.1082 and 264.1083.]

IV.G.7. For any hazardous waste that has been treated at the Facility, the Permittees shall perform the applicable waste determinations for each treated hazardous waste placed in tanks that are exempted under the provisions of 40 CFR § 264.1082(c)(2)(i) through (c)(2)(vi) in accordance with the procedures specified in 40 CFR § 264.1083(b). [See 40 CFR § 264.1083.]

IV.G.8. Certain hazardous wastes or volumes of hazardous wastes managed at the facility trigger air emission control requirements under either the RCRA air emission control provisions at 40 CFR Part 264, Subpart CC or the Clean Air Act air emission control provisions at 40 CFR Part 61, Subpart FF, or both. For wastes subject to the requirements of either RCRA Subpart CC or CAA Subpart FF or both that are not subject to one of the exemptions listed at 40 CFR § 264.1082(c), that are managed in tank systems at the Facility, in addition to the requirements in Permit Condition III.G.1, the Permittees shall:

IV.G.8.a.i. This Permit Condition IV.G.8.a.i. applies to any hazardous waste tank that meets all of the conditions specified in 40 CFR § 264.1084(b)(1)(i) through (iii), which is not equipped with a carbon canister meeting the requirements of 40 CFR § 61, Subpart FF. The Permittees must control air pollutant emissions from such tanks in accordance with the Tank Level 1 controls specified in 40 CFR § 264.1084(c) or the Tank Level 2 controls specified in 40 CFR § 264.1084(d). If Tank Level 1 or Tank Level 2 controls apply, the Permittees must perform inspections, recordkeeping and reporting required for tanks subject to Tank Level 1 or Tank Level 2 controls, as applicable. [See 40 CFR §§ 264.1084(b)(1), (c) and (d).]

IV.G.8.a.ii. This Permit Condition IV.G.8.a.ii. applies to any hazardous waste tank that does not meet all of the conditions specified in 40 CFR § 264.1084(b)(1)(i) through (iii), and which is not equipped with a carbon canister meeting the requirements of 40 CFR § 61, Subpart FF. The Permittees must control air pollutant emissions from such tanks in accordance with the Tank Level 2 controls specified in 40 CFR § 264.1084(d). If Tank Level 2 controls

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apply, the Permittees must perform inspections, recordkeeping and reporting required for tanks subject to Tank Level 2 controls. [See 40 CFR §§ 264.1084(b)(2), and (d).]

IV.G.8.a.iii. This Permit Condition IV.G.8.a.iii. applies to any hazardous waste tank for which air pollution emissions are controlled by venting the tank to a control device, other than those tanks equipped with a carbon canister meeting the requirements of 40 CFR § 61, Subpart FF. The Permittees shall control air emissions from such tanks in accordance with the requirements set forth at 40 CFR § 264.1084(g)(1) through (g)(3). If the requirements of 40 CFR § 264.1084(g)(1) through (g)(3) apply, the Permittees must perform inspections, recordkeeping and reporting required for tanks subject to 40 CFR 264.1084(g). [See 40 CFR §§ 264.1084(g).]

IV.G.8.a.iv. This Permit Condition IV.G.8.a.iv. applies to the transfer of hazardous waste to any hazardous waste tank where the average volatile organic concentration is above the standard set forth at 40 CFR 264.1082(c)(1) (*i.e.*, 500 ppmw) other than to a tank equipped with a carbon canister meeting the requirements of 40 CFR § 61, Subpart FF. The Permittees shall transfer hazardous waste to any such tank in accordance with the requirements of 40 CFR § 264.1084(j). [See 40 CFR § 264.1084(j).]

IV.G.8.b. This Permit Condition IV.G.8.b. applies to any tank equipped with a carbon canister meeting the requirements of 40 CFR Part 61, Subpart FF. The Permittees shall operate and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to the carbon canister in accordance with the following requirements:

IV.G.8.b.i. The fixed-roof shall meet the requirements set forth at 40 CFR § 61.343(a)(1)(i).

IV.G.8.b.ii. The closed-vent system and control device (*i.e.*, carbon canister) shall be designed and operated in accordance with the requirements of 40 CFR § 61.349. [See 40 CFR Part 61, Subpart FF.]

IV.G.9. The Permittees shall change-out the carbon in WS-1, WS-2 and WS-3, respectively, in accordance with the schedule set forth in the Permit Attachment Appendix XXIII, Section 4.5 and the engineering calculations in Appendix C thereto to ensure control of emissions from volatile organic compounds (VOCs)

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into ambient air.

IV.G.10. The Permittees shall comply with the record keeping requirements of 40 CFR §§ 264.1064(m) and 264.1089(j) for any tank or equipment equipped with and operating air emission controls in accordance with CAA requirements set forth in 40 CFR Parts 60, 61, or 63, which are deemed in compliance with 40 CFR Part 264 Subpart BB or Subpart CC, as appropriate. [See 40 CFR §§ 264.1064(m) and 264.1089(j). See also Permit Condition I.K.10.]

IV.H. INSPECTION SCHEDULES AND PROCEDURES

IV.H.1. The Permittees shall inspect the tank systems, in accordance with the Inspection Schedule in Permit Attachment Section F and Permit Attachment Appendix XII. [See 40 CFR § 264.195, Permit Attachment Section F and Permit Attachment Appendix XII.]

IV.H.2. The Permittees shall visually inspect the spent carbon storage tank systems, (T-1, T-2, T-5, T-6 and T-18), daily. This inspection shall include, at a minimum:

IV.H.2.a. A visual inspection of the above-ground portions of the tank systems to detect corrosion or releases of waste in accordance with 40 CFR § 264.195(c)(1);

IV.H.2.b. A visual inspection of the construction materials and the area immediately surrounding the externally accessible portion of each tank system, including the secondary containment systems to detect erosion or signs of releases of hazardous waste in accordance with 40 CFR § 264.195(c)(2);

IV.H.2.c. Ancillary equipment that is not provided with secondary containment, as described in 40 CFR § 264.193(f)(1) through (4), must be inspected at least once each operating day in accordance with 40 CFR § 264.195(f); and

IV.H.2.d. For ancillary equipment not contained or located over secondary containment, a leak test must be conducted annually in accordance with 40 CFR § 264.193(i). [See 40 CFR § 264.193(i).]

IV.H.3. The Permittees shall conduct daily inspections of the overfill/spill control equipment (*e.g.*, waste-feed cutoff systems, bypass systems, and drainage

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systems) to ensure that this equipment is in good working order. [See 40 CFR § 264.195.]

IV.H.3.a. The Permittees shall conduct daily visual inspections of the tank walls and pad for wetness, cracks, holes, or other evidence of malfunction. [See Permit Attachment Section F.]

IV.H.3.b. The Permittees shall, on a daily basis, check for leaks around the valve areas, couplings, and threaded nipples, as applicable. [See Permit Attachment Section F.]

IV.H.3.c. The Permittees shall, on a daily basis, check tank markings for weathering and proper identification of tank contents. [See Permit Attachment Section F.]

IV.H.3.d. The Permittees shall, on a daily basis, check external tank walls for signs of corrosion and pitting. [See Permit Attachment Section F.]

IV.H.4. At least once each operating day, the Permittees shall conduct reviews of the data gathered from monitoring and leak detection equipment (*e.g.*, pressure or temperature gauges, monitoring wells) to ensure that the tank systems are being operated according to their designs. [See 40 CFR § 264.195(b).]

IV.H.5. The Permittees shall visually inspect daily the valve position and level monitoring systems for proper operation. [See Permit Attachment Section F.]

IV.H.6. The Permittees shall perform inspections of each hazardous waste tank to ensure that no cracks or gaps occur and that access doors and other openings are closed and gasketed properly. [See 40 CFR § 264.1084.]

IV.H.7. Ultrasonic Thickness Testing

IV.H.7.a. The Permittees shall conduct annual ultrasonic thickness testing at the bottom of the cylinder wall above the cone-cylinder intersection and at the previous locations of minimum shell thickness readings (as recommended in the tank assessment in the Permit Attachment Appendix IX) for each major component (top head, cylinder wall, bottom cone and support skirt) on each of tanks T-1, T-2, T-5, T-6 and T-18. [See Permit Attachment Section F and Permit Attachment Appendix IX.]

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IV.H.7.b. In addition, the Permittees shall conduct comprehensive ultrasonic thickness testing every five (5) years for each major component (top head, cylinder wall, bottom cone, and support skirt) on each of the and tanks T-1, T-2, T-5, T-6 and T-18 as recommended in the tank assessment in the Permit Attachment Appendix IX. [See Permit Attachment Section F and Permit Attachment Appendix IX.]

IV.H.7.c. The Permittees shall remove from service and repair or replace any tank with cylindrical wall thickness that is less than or equal to 0.157 inches. [See Permit Attachment Section F and Permit Attachment Appendix IX.]

IV.H.7.d. The Permittees shall replace all carbon steel components and fittings of any hazardous waste tank system that are in direct contact with spent carbon and recycle water slurry with 300 series stainless steel components and fittings prior to performing the next set of comprehensive ultrasonic thickness test measurements. [See Permit Attachment Section F and Permit Attachment Appendix IX.]

IV.H.8. The Permittees shall inspect the air emission control equipment in accordance with the following requirements and Permit Attachment Section F and Permit Attachment Appendix XII. The Permittees shall visually inspect the carbon adsorption systems (WS-1, WS-2, and WS-3) and their closed vent systems on a daily basis to ensure there are no leaks from these devices and that they are properly operated. The visual inspection shall include inspection of ductwork and piping and connections to covers and control devices for evidence of visible defects such as holes in ductwork or piping and loose connections. [See Permit Attachment Section F and Permit Attachment Appendix XII.]

IV.H.9. The Permittees shall maintain the paint coating on exterior surfaces of all tank system components that are carbon steel by repainting if visual observation indicates that 20% or greater of the component's paint coating is damaged. [See Permit Attachment Section F and Permit Attachment Appendix IX.]

IV.H.10. If a tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment, the Permittees shall comply with Permit Condition IV.C. of this Permit and notify the Director in accordance with Permit Condition IV.J. of this Permit. [See 40 CFR § 264.193(i)(5).]

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IV.I. RESPONSE TO LEAKS, SPILLS OR DEFECTS

IV.I.1. In the event of: (1) a leak or a spill from a tank system, (2) a leak or spill from a secondary containment system, (3) a system becomes unfit for continued use due to defects or a state of disrepair, or (4) a defect in a carbon adsorber is detected, the Permittees shall remove the system from service immediately and complete the following actions:

IV.I.1.a. Immediately stop the flow of hazardous waste into the system and inspect the system to determine the cause of the release. [See 40 CFR § 264.196(a).]

IV.I.1.b. Remove waste and accumulated precipitation from the system within 24 hours of the detection of the leak to prevent further release and to allow inspection and repair of the system. [See 40 CFR § 264.196(b).]

IV.I.1.b.i. If the Permittees find that it will be impossible to meet this time period, the Permittees shall, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the system to be performed and in as timely a manner as is possible to prevent harm to human health or the environment. In such event, the Permittees shall also provide prompt notification (*i.e.*, within 24 hours of detection of the leak) to the Director regarding any additional time that may be required to complete removal of waste and accumulated precipitation from the system. The Director may approve the additional time required or set another time frame to complete removal of the leaked material in their sole discretion.

IV.I.1.b.ii. If the collected material is a RCRA hazardous waste, it must be managed in accordance with all applicable requirements of this Permit. The Permittees shall note that if the collected material is discharged through a point source to U.S. waters or to a Publicly Owned Treatment Works (POTW), such discharge is subject to requirements of the Clean Water Act. If the collected material is released to the environment, it may be subject to additional reporting requirements pursuant to 40 CFR Part 302.

IV.I.1.c. Contain visible releases to the environment. The Permittees shall immediately

conduct a visual inspection of all releases to the environment and based on that inspection:

IV.I.1.c.i. Prevent further migration of the leak or spill to soils or surface water; and

IV.I.1.c.ii. Remove and properly dispose of any visible contamination of the soil or surface water. [See 40 CFR § 264.196(c).]

IV.I.1.d. Close the system in accordance with the Closure Plan, Permit Attachment I, unless the following actions are taken:

IV.I.1.d.i. For a release caused by a spill that has not damaged the integrity of the system, the Permittees shall remove the released waste and make any necessary repairs to the system before returning the system to service. [See 40 CFR § 264.196(e)(2).]

IV.I.1.d.ii. For a release caused by a leak from a tank system to a secondary containment system, the Permittees shall repair the tank system prior to returning it to service. [See 40 CFR § 264.196(e)(3).]

IV.I.1.d.iii. For a release to the environment caused by a leak from a component of a tank system that does not have secondary containment, the Permittees shall repair the tank system in accordance with 40 CFR § 264.196(e)(4) before returning it to service. [See 40 CFR § 264.196(e)(4).]

IV.I.1.d.iv. For a defect or other problem detected during equipment inspections, repairs must be performed within the time frames outlined in Table 1 of the Permit Attachment Appendix XXIII, Subpart FF Compliance Plan.

IV.I.1.e. For all major repairs to eliminate leaks or restore the integrity of the tank systems, the Permittees must obtain a certification by an independent, qualified, registered Professional Engineer in accordance with 40 CFR § 270.11(d) and notify the Director that the repaired system is capable of handling hazardous wastes without release for the intended life of the system before returning the system to service. Examples of major repairs are: installation of an internal liner, repair of a ruptured tank, or repair or

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replacement of a secondary containment vault. [See 40 CFR § 264.196(f).]

IV.I.2. In the event a defect is detected during any of the inspections required under Permit Condition IV.H.8., the Permittees shall repair each defect detected in accordance with 40 CFR §§ 264.1084(k)(1) and (2). [See 40 CFR §§ 264.1084(k)(1) and (2).]

IV.J. RECORDKEEPING AND REPORTING

IV.J.1. For any existing tank system that does not have secondary containment meeting the requirements of 40 CFR § 264.193, the Permittees must maintain and keep on file at the Facility a written assessment in accordance with 40 CFR § 264.191. [See 40 CFR § 264.191.]

IV.J.2. Unless a leak or spill of hazardous waste is exempted from the reporting requirements in accordance with 40 CFR § 264.196(d)(2), the Permittees shall report to the Director, within 24 hours of detection, regarding any leak or spill of hazardous waste to the environment. [See 40 CFR §§ 264.196(d)(1) and (2).]

IV.J.3. Within 30 days of detecting a release to the environment from a tank system or secondary containment system, the Permittees shall report the following information to the Director:

IV.J.3.a. Likely route of migration of the release;

IV.J.3.b. Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);

IV.J.3.c. Results of any monitoring or sampling conducted in connection with the release, if available. (If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the Director as soon as they become available.);

IV.J.3.d. Proximity of down gradient drinking water, surface water, and populated areas; and

IV.J.3.e. Description of response actions taken or planned. [See 40 CFR § 264.196(d)(3).]

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IV.J.4. If the Permittees have repaired a tank system in accordance with permit condition IV.I.1.e., the Permittees shall maintain the required Professional Engineer certification in the operating record at the Facility until closure of the Facility is completed. [See 40 CFR § 264.196(f).]

IV.J.5. The Permittees shall maintain at the Facility a record of the most recent results of leak tests and integrity tests for each tank system or secondary containment system conducted in accordance with this Permit. [See 40 CFR §§ 264.193(i)(4).]

IV.J.6. The Permittees shall document compliance with Permit Conditions IV.H.1. through IV.H.6 and IV.H.8. and place this documentation in the operating record for the Facility for at least three (3) years from the date such inspection or test occurs. The Permittees shall maintain records of the Ultrasonic Thickness testing for at least 5 years from the date such testing occurs. [See 40 CFR §§ 264.73 and 264.195(h).]

IV.J.7. The Permittees shall maintain a copy of the Permit Attachment Subpart FF Compliance Plan in the Facility's operating record for the operating life of the facility.

IV.J.8. In accordance with 40 CFR § 264.1064, the Permittees shall maintain documentation pertaining to WS-1, WS-2 and WS-3 as required by either 40 CFR § 61.355 or 40 CFR §§ 264.1060 and 264.1064, as elected in the [revised] Subpart BB Compliance Plan, Permit Attachment Appendix XIX, pursuant to Permit Condition I.K.10. [See 40 CFR § 61.355 and 40 CFR §§ 264.1060 and 264.1064. See also Permit Condition I.K.10.]

IV.K. SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

IV.K.1. The Permittees shall not place ignitable waste in a tank or secondary containment system unless one of the following conditions is met:

IV.K.1.i. The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that it meets the requirements of 40 CFR § 264.198(a)(1)(i) and (ii);

IV.K.1.ii. The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite; or

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IV.K.1.iii. The tank system is used solely for emergencies. [See 40 CFR § 264.198(a). See also Permit Condition II.H.1.]

IV.K.2. If ignitable waste is stored or treated in a tank system at the Facility, the Permittees must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon, as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code," (1977 or 1981). [See 40 CFR § 264.198(b). See also Permit Condition II.H.1.]

IV.L. SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTES

IV.L.1. The Permittees shall not place incompatible wastes, or incompatible wastes and materials, in the same tank system or the same secondary containment system, unless they are doing so in compliance with 40 CFR § 264.17(b) and Permit Condition II.H.1. [See 40 CFR §§ 264.17(b) and 264.199(a).]

IV.L.2. The Permittees shall not place hazardous waste in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless they are doing so in compliance with 40 CFR § 264.17(b) and Permit Condition II.H.1. [See 40 CFR §§ 264.17(b) and 264.199(b).]

IV.M. CLOSURE AND POST-CLOSURE CARE

IV.M.1. At closure of each tank system, the Permittees shall follow the procedures in the Closure Plan and in Permit Attachment Section I and Permit Attachment Appendix XV. [See 40 CFR § 264.197(a). See also Permit Attachment Section I and Permit Attachment Appendix XV.]

IV.M.2. If the Permittees demonstrate that not all contaminated soils can be practically removed or decontaminated in accordance with the Closure Plan, then the Permittees shall close such tank system(s) and perform post-closure care following the contingent procedures in the Closure Plan (Permit Attachment Section I and Permit Attachment Appendix XV) and in Permit Condition II.N. [See 40 CFR § 264.197(b). See also Permit Attachment Section I and Permit Attachment Appendix XV.]

IV.M.3. If the secondary containment for Hopper H-1 is not implemented within a year

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from the effective date of this Permit, the contingent closure plan and proof of financial responsibility requirements of 40 CFR § 264.197(c) shall be implemented in accordance with Permit Condition I.K.9. [See also Permit Condition IV.F.6.b.iii. and 40 CFR § 264.197(c).]

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MODULE V

THERMAL TREATMENT UNIT/CARBON REGENERATION FURNACE

V.A. APPLICABILITY

V.A.1. This module contains Permit Conditions for the operating Carbon Regeneration Furnace (RF-2), which consists of a five hearth furnace and the Afterburner (AB-2), and is classified as a miscellaneous unit, as defined in 40 CFR § 260.10. RF-2 and AB-2 are subject to the requirements set forth at 40 CFR Part 264, Subpart X. The RF-2 unit is used to regenerate spent activated carbon via thermal treatment. Process flow diagrams and a description of the carbon reactivation process are included in Permit Attachment Appendix VI. [See 40 CFR §§ 260.10, 264.600 to 264.603, and 270.23.]

V.A.2. This module also includes permit conditions for the Air Pollution Control Equipment (APCE) for RF-2, AB-2, ancillary equipment of RF-2 and AB-2, and the feed system from Tank T-18. The APCEs are the Quench (Gas Cooling)/Venturi Scrubber (SC-11), Caustic Packed Bed Scrubber (SC-12), Wet Electrostatic Precipitator (W-11), Induced Draft Fan, and Stack. The five hearth furnace (RF-2), AB-2, and all their associated components (ancillary equipment [*e.g.*, piping, weigh belt] and the APCEs) are collectively referred to herein as the "RF-2." [See 40 CFR §§ 264.600 to 264.603, and 270.23.]

V.A.3. RF-2 is subject to the conditions and requirements set forth in this Module. Based on the authority contained in the regulations at 40 CFR §§ 264.600 *et seq.*, additional requirements are included in this Module to ensure protection of human health and the environment. These additional requirements are also based on 40 CFR Part 264 Subpart O, (Incinerators) and 40 CFR Part 63, Subpart EEE (Hazardous Waste Combustor, Maximum Achievable Control Technology Standards). [See 40 CFR §§ 63.1200 *et seq.*, 260.10, 264.600 to 264.603, and 270.23.]

V.B. GENERAL REQUIREMENTS FOR RF-2

V.B.1. Waste Processing and Handling Requirements

V.B.1.i. The Permittees receive hazardous wastes, *i.e.*, spent activated carbon from different generators, for treatment in RF-2. The Permittees also generate spent activated carbon onsite that constitutes a hazardous waste. The Permittees shall abide by the requirements established in Permit Condition V.B.2. for all wastes permitted for treatment in RF-2.

V.B.1.ii. The Permittees shall ensure that carbon loading operations are safe for field workers engaged in these operations.

V.B.1.iii. The Permittees shall ensure that the residence time for the solid carbon in the RF-2 is a minimum of 38 minutes at a shaft speed of 1 rotation per minute (rpm).

V.B.2. Permitted Wastes for Treatment in RF-2

V.B.2.i. The Permittees shall only treat in RF-2 spent carbon generated off-site containing hazardous waste identified in waste codes that are listed on Table II-2 in Module II of this permit.

V.B.2.ii. The Permittees may also treat in RF-2 spent activated carbon generated on-site as a result of the Permittees' treatment activities. The sources of on-site generated spent activated carbon shall be limited to the adsorbers that are used for control of gaseous emissions from the hazardous waste storage tanks (Tanks T-1, T-2, T-5, and T-6). [See Permit Attachment Appendix IV.]

V.B.3. Prohibited Wastes for Treatment in RF-2

V.B.3. The Permittees shall not accept, store or treat in RF-2 any hazardous waste other than as set forth in Permit Condition II.H.

V.C. OPERATION OF RF-2

V.C.1. General Operating Conditions

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V.C.1.i. The Permittees shall only feed wastes at or below the feed rates shown in Table V-1. The Permittees are not authorized to treat or feed in the RF-2 spent activated carbon that contains hazardous constituents in concentrations exceeding permissible feed limits. The applicable permissible feed limits are set forth in Permit Condition Table V-1. Periodic Performance Demonstration Tests, performed in accordance with Permit Condition I.K.1., shall also be used to demonstrate compliance with each of the parameters set forth in Table V-1, Performance Limits.

V.C.1.ii. The Permittees are not authorized to treat or feed spent activated carbon that contains hazardous constituents in concentrations that would cause exceedances of permissible emission limits shown in Table V-1. In addition, for each of the parameters listed in Table V-1, the Permittees shall ensure that the permissible emission limit shown in Table V-1 is not exceeded. [See 40 CFR § 63.1209.]

Table V-1 - PERFORMANCE LIMITS

Parameter	**Emission Limits from 40 CFR § 63.1219**	**How to Ensure Emission Limits are Met[1]**
Low Volatile Metals[2]	Emission Limits 92 μg[3]/dscm[4]	Feed Rate Limit: 1.5 lbs/hr[5](12 hour rolling average)
Semi Volatile Metals[6]	Emission Limit: 230 μg/dscm	Feed Rate Limit: 0.1 lbs/hr (12 hour rolling average)
Carbon Monoxide	Emission Limit: 100 ppmdv[7] as corrected to 7% oxygen.	CEMS[8] at the stack.

[1] The Permittees must comply with 40 CFR § 63.1209 for monitoring for all Emission Limits below. See Permit Condition V.C.1.IX.
[2] Low volatile metal feed rate limits apply to arsenic, beryllium, and chromium, combined.
[3] μg – micrograms.
[4] dscm - dry standard cubic meter.
[5] lbs/hr – pounds per hour.
[6] Semi-volatile metal feed rate limits apply to lead and cadmium, combined.
[7] ppmdv - parts per million on a dry volumetric basis.
[8] CEMS – Continuous Emissions Monitoring System.

Parameter	**Emission Limits from 40 CFR § 63.1219**	**How to Ensure Emission Limits are Met[1]**
Total Hydrocarbons	Emission Limit: 10 ppmdv as corrected to 7% oxygen.	Performance Demonstration Tests (PDT).[9]
Chlorine/ Chloride	Emission Limits: 32 ppmdv	Feed Rate Limit: 60 lbs/hr (12 hour rolling average).
Mercury[10]	Emission Limit: 130 µg/dscm	Feed Rate Limit: 1.8E-3 lbs/hr (12 hour rolling average).
Particulate Matter	Emission Limits: 0.013 gr/dscf[11] corrected to 7 percent oxygen.	PDT
Dioxins and Furans	Emission Limit: 0.40 ng TEQ[12]/dscm, corrected to 7 percent oxygen.	PDT
Sulfur Oxides	Emission Limit: 30.01 tpy	Feed Rate Limit as set forth in revised WAP required pursuant to Permit Condition I.K.11.[13]
Nitrogen Oxides	Emission Limit: 22.22 tpy	Monitoring of the Natural Gas usage and PDT.

[9] The rate of emissions below the applicable emission limit will be demonstrated during the PDTs.
[10] The mercury feed rate to be calculated per 40 CFR § 264.1209(l)(1)(i)
[11] gr/dscf - grains per dry standard cubic foot
[12] TEQ – Toxic Equivalency, which means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.
[13] This limit will not be in effect until the WAP has been modified in accordance with Permit Condition I.K.11.

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V.C.1.iii. Throughout operation, the Permittees shall conduct analysis in accordance with the Waste Analysis Plan, Permit Attachment C and Permit Attachment Appendix IV and Permit Condition II.C. to verify that waste fed to RF-2 is within the physical and chemical composition limits specified in this Permit. [See 40 CFR §§ 264.341(b) and 270.23.]

V.C.1.iv. The Permittees are required to inspect, safely operate, and properly monitor RF-2 in accordance with the conditions of this Permit to protect human health and the environment during operation, maintenance, start-up, shut-down and malfunction of RF-2.

V.C.1.v. The Permittees shall maintain RF-2 in accordance with the design plans, design specifications, stack layout drawing, and maintenance procedures contained in Permit Attachment B, Permit Attachment Appendices VI and X.

V.C.1.vi. The operating parameters are grouped into the following categories: Groups A1, A2, B and C; and are categorized as defined in EPA guidance document: Handbook: Guidance on Setting Permit Conditions and Reporting Trial Burn Results, (EPA/625/6-89/019), Table 2-1.

V.C.1.vi.a. Group A1 parameters shall be continuously monitored and recorded, and shall be interlocked with the automatic waste feed cutoff system. Group A1 parameter limits were established from test operating data, and are used to ensure that system operating conditions are equal to or are more rigorous than those demonstrated during the test.

V.C.1.vi.b. Group A2 parameters shall be continuously monitored and recorded, and shall be interlocked with the automatic waste feed cutoff system. Group A2 parameter limits have been established based on regulatory requirements rather than on the test operating conditions, e.g., the maximum stack CO concentration.

V.C.1.vi.c. Group B parameters shall be continuously monitored and recorded, but are not required to be interlocked with the

automatic waste feed cutoff system. Operating records are required to ensure that established limits for these parameters are not exceeded. The Group B parameter limits were established based on the operation of the system during the performance test.

V.C.1.vi.d. Group C parameters shall be continuously monitored and recorded, but are not required to be interlocked with the automatic waste feed cutoff system. Group C parameter limits are based on manufacturer's recommendations, operational safety, and good operating practice considerations rather than on the test operating conditions, e.g., the minimum packed bed scrubber pressure differential.

V.C.1.vii. The following Table V-2 includes critical operating conditions. The term "AWFCO" in the comments column indicates that the operating parameter shall be interlocked with the automatic waste feed cutoff system. The Permittees shall comply with the Operating Limits in Table V-2.

Table V-2 - OPERATING LIMITS AND PARAMETERS

Control Parameters[14]	**Permit Limit**	**Comments**
GROUP A1 PARAMETERS		
Maximum spent carbon feed rate (lbs/hr)	3049	Block hour AWFCO
Minimum afterburner temperature (°F)	1760	Hourly rolling average AWFCO
Minimum hearth #5 temperature (°F)	1350	Hourly rolling average AWFCO
Minimum venturi scrubber pressure differential (in. w.c.)	18	Hourly rolling average AWFCO
Minimum quench/venturi scrubber total liquid flow rate (gpm)	75	Hourly rolling average AWFCO
Minimum packed bed scrubber pH	4.4	Hourly rolling average AWFCO

[14] Groups A1, A2, B, and C Parameters are explained in detail in Permit Condition V.C.1.vi.

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Control Parameters[14]	Permit Limit	Comments
Minimum packed bed scrubber liquid flow rate (gpm)	63	Hourly rolling average AWFCO
Minimum wet scrubber blowdown flow rate (gpm)	58	Hourly rolling average AWFCO
Minimum WESP secondary voltage (kVDC)	22	Hourly rolling average AWFCO
Maximum stack gas flow rate (acfm)	9,550	Hourly rolling average AWFCO
GROUP A2 PARAMETERS		
Maximum stack gas carbon monoxide (ppmdv, @7% oxygen)[15]	100	Hourly rolling average AWFCO
GROUP B PARAMETERS		
Allowable hazardous constituents	All except dioxin wastes and TSCA PCBs	Class 1 POHC demonstrated to meet the 99.99% Destruction Removal Efficiency per Permit Attachment Appendix V
Maximum total chlorine and chloride feed rate (lbs/hr)	60	12-hour rolling average
Maximum mercury feed rate (lbs/hr)	1.8E-3[16]	12-hour rolling average
Maximum semivolatile metal (Cd + Pb) feed rate (lbs/hr)	1.0E-01	12-hour rolling average
Maximum low volatility metal (As + Be + Cr) feed rate (lbs/hr)	1.5E+00	12-hour rolling average
GROUP C PARAMETERS		
Minimum packed bed scrubber pressure differential (in. w.c.)	0.1	Hourly rolling average

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As = Arsenic
AWFCO = Automatic Waste Feed Cutoff
Be = Beryllium
Cd = Cadmium

[15] AWFCO interlock is not active during the daily continuous emission monitor CEM calibration period.
[16] 1.8E-3 = 1.8 x 10-3.

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Cr = Chromium
lbs/hr = pounds per hour
WESP = Wet electrostatic precipitator
Pb = Lead
POHC = Principal organic hazardous constituent
TSCA = Toxic Substances Control Act
PCBs = Polychlorinated Biphenyls
in. w.c. = inches of water column
kVDC = kilovolts Direct Current
gpm = gallons per minute
acfm = actual cubic feet per minute
ppmdv = parts per million on a dry volumetric basis in the stack gas
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V.C.1.viii. Waste shall not be fed to the RF-2 if any of the continuous monitoring instruments malfunction or otherwise fail to operate properly.

V.C.1.ix. All monitoring must be conducted in accordance with the requirements of 40 CFR § 63.1209 applicable to incinerators. [See 40 CFR § 63.1209.]

V.C.1.x. Failure to comply with the operating requirements in this Permit is failure to ensure compliance with the emission standards included in this Permit. [See 40 CFR § 63.1206(c)(1)(iii).]

V.C.2. Start Up, Shutdown, and Malfunction Plan

V.C.2.a. The Permittees shall implement the Start-up, Shutdown, and Malfunction Plan (SSMP) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. The Permittees' SSMP is found in the Application in Appendix XXII and is incorporated into this Permit by this reference as Permit Attachment Appendix XXII.

V.C.2.b. The Permittees shall follow the requirements of the SSMP, whenever RF-2 is in non-compliance with the provisions of this Permit.

V.C.2.c. The Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with an accompanying revised SSMP whenever they determine that one or more changes to the SSMP are appropriate.

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V.C.2.d. The Permittees must maintain a copy of the SSMP in the operating record at the Facility for the operating life of RF-2.

V.C.3. Monitoring Equipment

The Permittees shall maintain, calibrate, and operate monitoring equipment and record the data required by this Permit while processing hazardous waste.

V.C.4. Regulatory Compliance Instrumentation

V.C.4.i. The Permittees shall operate RF-2 and calibrate the RF-2-related instrumentation listed in Table V-3 pursuant to the parameters – including the frequencies -- set forth in Table V-3. Quality assurance and quality control shall be done in accordance with 40 CFR Part 60 QA/QC requirements.

TABLE V-3 - REGULATORY COMPLIANCE INSTRUMENTATION

Parameter	***Identification Number of Sensor/ Transmitter[17]***	***Instru-ment Type***	***Units***	***Range***	***Operating Point or Range***	***Calibration Frequency***	***Averaging***	***AWFCO (Y/N)***
Feed rate of spent activated carbon	WE/WT-427	Weigh cell	lbs/hr	0-6000	Less than or equal to 3049	Semi-annually	1-hr Block	Y
Total feed rate of mercury	Computer	Calcu-lated	lbs/hr	NA	0 – Less than or equal to 1.8E-03	NA	12-hr RA	N
Total feed rate of SVM	Computer	Calcu-lated	lbs/hr	NA	Less than or equal to 0 – 1.0	NA	12-hr RA	N

[17] Instrument identification from P&IDs.

Parameter	***Identification Number of Sensor/ Transmitter[17]***	***Instru-ment Type***	***Units***	***Range***	***Operating Point or Range***	***Calibration Frequency***	***Averaging***	***AWFCO (Y/N)***
Total feed rate of LVM	Computer	Calcu-lated	lbs/hr	NA	Less than or equal to 0 – Less than or equal to 1.5	NA	12-hr RA	N
Afterburner gas temperature	TE-464A/B	Thermo-couple	°F	0-2400	Greater than or equal to 1760	Semi-annually	1-hr RA	Y
Venturi scrubber pressure differential	PDIT-556	Pressure sensor	in. w.c.	0-50	Greater than or equal to 18	Annually	1-hr RA	Y
Venturi / Quench scrubber recycle liquid flow rate (Total Flow)	FI-562 (Total of FE/FIT-553, 554, & 555)	Sum of Magnetic flow meters (Dynac Function)	gpm	0-656	Greater than or equal to 75	Annually	1-hr RA	Y
Packed bed scrubber pH	AE/AIT-590	pH probe	pH	0-14	Greater than or equal to 4.4	Quarterly	1-hr RA	Y
Packed bed scrubber recycle liquid flow rate	FE/FIT-552	Magnetic flow meter	gpm	0-200	Greater than 63	Annually	1-hr RA	Y

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Parameter	***Identification Number of Sensor/ Transmitter[17]***	***Instru-ment Type***	***Units***	***Range***	***Operating Point or Range***	***Calibration Frequency***	***Averaging***	***AWFCO (Y/N)***
Packed bed scrubber pressure differential	PDIT-560	Pressure sensors	in. w.c.	0-10	Greater than 0.1	Annually	1-hr RA	N
Scrubber blowdown flow rate	FE/FIT-605	Magnetic flow meter	gpm	0-691	Greater than 58	Annually	1-hr RA	Y
WESP secondary DC voltage	EI-558	Voltmeter	kV DC	0-80	14-22	NA	1-hr RA	Y
Stack gas flow rate	FE/FIT-700	Ultrasonic meter	acfm	Not avail-able	Less than or equal to 9,550	Semi-annually	1-hr RA	Y
Stack gas carbon monoxide[18]	AE-575	Non-dispersive infrared CEMS	ppmdv @7% O_2	0-100 0-1000	Less than 100	Daily/ Quarterly/ Annually	1-hr RA	Y
Stack gas oxygen[19]	AE-576	Para-magnetic CEMS	vol%, dry	0-25	7	Daily/ Quarterly/ Annually	None	N
Weigh belt						Calibrated Semi-Annually		

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RA = Rolling average as defined in 40 CFR § 63.1209(a)(6).
AWFCO = Automatic Waste Feed Cut Off.

[18] Continuous Emissions Monitoring System (CEMS) calibrations shall include daily zero and span check, quarterly cylinder gas audit, and annual performance specification test.
[19] Continuous Emissions Monitoring System (CEMS) calibrations shall include daily zero and span check, quarterly cylinder gas audit, and annual performance specification test.

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SVM = Semi-Volatile Metals
LVM = Low-Volatile Metals
in. w.c. = inches of water column
kVDC = kilovolts Direct Current
gpm = gallons per minute
acfm = actual cubic feet per minute
ppmdv @ 7% O_2 = parts per million on a dry volumetric basis in the stack gas as corrected to 7% oxygen
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V.C.4.ii. The Permittees must keep the necessary parts for routine repairs of the continuous monitoring system (CMS) equipment, including the CEMS equipment, readily available.

V.C.4.iii. The Permittees shall conduct the CMS performance and test protocols, including all record keeping and reporting, set forth in 40 CFR § 63.8.

V.C.5. Automated Waste Feed Cutoff Requirements

V.C.5.i. The Permittees shall operate RF-2 with a functioning automatic waste feed cutoff system (AWFCO) that immediately and automatically cuts off the hazardous waste feed to RF-2 in accordance with 40 CFR § 63.1206(c)(3). [See 40 CFR § 63.1206(c)(3).]

V.C.5.ii. The Permittees shall automatically cut off the hazardous waste feed to RF-2 if any of the following occur:

V.C.5.ii.a. Operating limits for Groups A1 and A2 parameters listed in Table V-2 or emission limits listed in Table V-4 are not met.

V.C.5.ii.b. When the span value of any CMS detector, except a CEMS, is met or exceeded; [See 40 CFR § 63.1206(c)(3)(i)(B).]

[Note: Parameter CMSs are process instruments that continuously monitor and record parameter data from the operation of the carbon reactivation process. The instruments consist of weigh belts, flow meters, pressure transducers, thermocouples and other devices that collect process information on key regulatory parameters.]

V.C.5.ii.c. Upon malfunction of a CMS; [See 40 CFR § 63.1206(c)(3)(i)(C).] or

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V.C.5.ii.d. When any component of the AWFCO system fails. [See 40 CFR § 63.1206(c)(3) (i)(D).]

V.C.5.iii. During an AWFCO, the Permittees must continue to duct combustion gases to the air pollution control equipment while hazardous waste remains in RF-2 (*i.e.*, if the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated). After an AWFCO, the remainder of the system shall continue to operate until residence time has transpired to ensure all waste remaining in the system has been processed with the APCE still operational. [See 40 CFR § 63.1206(c)(3)(ii).]

V.C.5.iv. In the event of an AWFCO, the Permittees shall implement the SSMP and operate RF-2 under the provisions of the SSMP. [See 40 CFR §§ 63.1206(c)(2) and (c)(3).]

V.C.5.v. During malfunctions, the Permittees shall comply with the AWFCO requirements of the SSMP and 40 CFR § 63.1206(c)(3), except for sections 63.1206(c)(3)(v) and (vi). [See 40 CFR § 63.1206(c)(2)(v)(A)*(1)*.]

V.C.5.v.a. If the Permittees fail to meet an emission standard listed in Table V-4 or a Group A-1 or Group A-2 parameter specified in Table V-2, the AWFCO system must immediately and automatically cut off the hazardous waste feed. If the malfunction itself prevents immediate and automatic cut off of the hazardous waste feed, however, the Permittees must cease feeding hazardous waste as quickly as possible. [See 40 CFR § 63.1206(c)(2)(v)(A)*(1)*.]

V.C.5.v.b.(1). The AWFCO requirements continue to apply during a malfunction. If an exceedance of an emission standard listed in Table V-4 or a Group A-1 or Group A-2 parameter specified in Table V-2 occurs, the Permittees shall undertake the corrective measures prescribed in the SSMP. [See 40 CFR § 63.1206(c)(2)(v)(A)*(2)*.]

V.C.5.v.b.(2). For the purposes of determining the duration of an exceedance as a result of a malfunction (including power outages), the exceedance will begin once an emission standard or operating limit is exceeded

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while spent carbon is in RF-2. The exceedance will end once the spent activated carbon has cleared RF-2 or once the emissions and operating parameters are reestablished within their respective permit limits, whichever occurs sooner. Thus one incident may constitute one exceedance, which may include multiple emissions or operating parameters not being met.

V.C.5.v.c. For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (*i.e.*, when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, the Permittees must comply with the requirements of 40 CFR § 63.1206(c)(2)(v)(A)*(3)* as follows:

V.C.5.v.c.(1). Within 45 days of the 10th exceedance, the Permittees must complete an investigation of the cause of each exceedance and evaluation. The evaluation is to include approaches to minimize the frequency, duration, and severity of each exceedance, and revise the SSMP as warranted by the evaluation to minimize the frequency, duration, and severity of such exceedances. [See 40 CFR § 63.1206(c)(2)(v)(A)*(3)(i).]*

V.C.5.v.c.(2). The Permittees must record the results of the investigation and evaluation in the operating record, and include a summary of the investigation and evaluation, and any changes to the SSMP in an excess emissions report that meets the requirements of 40 CFR § 63.10(e)(3) but need only submitted to the Director for approval in accordance with Permit Condition V.C.5.v.c.(3) after each 10th exceedance as described in Permit Condition V.C.5.v.c.(1). [See 40 CFR § 63.1206(c)(2)(v)(A)*(3)(ii).*]

V.C.5.v.c.(3). The Permittees must submit to the Director for approval in accordance with Permit Condition I.G.5. an excess emissions report that otherwise meets the requirements of 40 CFR § 63.10(e)(3) within 60 days following each 10th exceedance as described in Permit Condition V.C.5.v.c.(1). [See 40 CFR § 63.1206(c)(2)(v)(A)*(3)(ii).*]

V.C.5.v.d. If, after any AWFCO, there is an exceedance of a parameter in Table V-2 required to be interlocked with the AWFCO system, or when an exceedance of a Group A-1 or Group A-2 parameter specified in Table V-2 occurs, irrespective of whether the exceedance occurred while hazardous waste remained in the combustion chamber (*i.e.*, whether the hazardous waste residence time has transpired since the hazardous waste feed cutoff system was activated), the Permittees must investigate the cause of the AWFCO, take appropriate corrective measures to minimize future AWFCOs, and record the findings and corrective measures in the Facility's operating record. [See 40 CFR§ 63.1206(c)(3)(v).]

V.C.5.vi. The Permittees shall not feed waste carbon during startups and shutdowns. [See 40 CFR § 63.1206(c)(2)(v)(B).]

V.C.5.vii. Restarting Waste Feed

The Permittees must not start feeding waste until the operating parameters specified in Table V-2 and the CEMS have returned to within the operating limits. [See 40 CFR § 63.1206(c)(3)(iii).]

V.C.5.viii. Failure of an AWFCO

If the AWFCO system fails to automatically and immediately cut off the flow of hazardous waste upon exceedance of a parameter in Table V-2 required to be interlocked with the AWFCO system, or when an exceedance of a Group A-1 or Group A-2 parameter specified in Table V-2 occurs, the Permittees must cease feeding hazardous waste as quickly as possible. [See 40 CFR § 63.1206(c)(3)(iv).]

V.C.5.ix. Testing AWFCO

The Permittees must test the AWFCO system and associated alarms at least monthly to verify operability. The Permittees must document and record AWFCO operability test procedures and results in the Facility's

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operating record. [See 40 CFR §§ 63.1206(c)(3)(vii) and 264.347(c) and (d).]

V.C.6. Burning of Natural Gas

V.C.6.i. RF-2 (including all its APCE and ancillary equipment) shall be powered by natural gas only. Alternative fuel cannot be used unless this permit is modified. Any such modification request may require additional performance testing and/or an updated risk analysis.

V.C.6.ii. The amount of natural gas burned in RF-2 (including all its APCE and ancillary equipment) shall be recorded monthly in millions of standard cubic feet (MMSCF) and such records shall be maintained in the operating record.

V.C.6.iii. Each month, the Permittees shall calculate and record in the operating record the 12-month rolling sum in tons per year of nitrogen oxides (NOx) emissions from RF-2 (including all its APCE and ancillary equipment), based on: (1) the amount of natural gas burned in MMSCF; and (2) the emission factor in pounds per MMSCF, based on the most recent Performance Demonstration Test.

V.D. AIR POLLUTION CONTROL EQUIPMENT

V.D.1. The Permittees shall not exceed the Performance and Emission Limits specified in Table V-4.

TABLE V-4 - PERFORMANCE AND EMISSION LIMITS FOR RF-2

Parameter	Purpose	Limit[20]
Destruction and Removal Efficiency (DRE)	To limit organic emissions	99.99%

[20] All values except DRE are corrected to 7% oxygen in the stack gas.

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Parameter	Purpose	Limit[20]
Particulate Matter (PM)	To limit particulate matter emissions	0.013 gr/dscf[21]
HCl/Chlorine	To limit HCl/chlorine combined emissions	32 ppmdv[22]
SO_2[23]	To limit SO_2 emissions	30.01 tons per consecutive 12 month period
NO_2[24]	To limit NO_2 emissions	22.22 tons per consecutive 12 month period
Mercury	To limit mercury emissions	130 µg/dscm[25]
Semi volatile metals[26]	To limit Pb and Cd emissions	230 µg/dscm
Low volatile metals[27]	To limit As, Be and Cr emissions	92 µg/dscm
Dioxin and furans	To limit dioxin and furan emissions	0.4 ηg TEQ/dscm[28][29]
Carbon monoxide[30]	To ensure good combustion	100 ppmdv
Total hydrocarbons	To limit organic emissions	10 ppmdv

V.D.2. The Permittees shall continuously operate, and maintain the hearth, afterburner, Quench (Gas Cooling)/Venturi Scrubber (SC-11), Caustic Packed Bed Scrubber (SC-12), Wet Electrostatic Precipitator (W-11), Induced Draft Fan, and Stack.

[21] "gr/dscf" is grains per dry standard cubic foot of stack gas.
[22] "ppmdv" is parts per million on a dry volumetric basis in the stack gas.
[23] Based on the Tribal New Source Rule registration by Evoqua dated Aug 2012.
[24] Based on the Tribal New Source Rule registration by Evoqua dated Aug 2012.
[25] "µg/dscm" is micrograms per dry standard cubic meter of stack gas.
[26] Semi-volatile metals are lead and cadmium.
[27] Low volatile metals are arsenic, beryllium and chromium.
[28] "ηgTEQ/dscm" is nanograms TEQ per dry standard cubic meter.
[29] TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.
[30] 100 ppm by volume on a dry gas basis using a one hour rolling average.

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V.D.3. The Permittees shall perform any necessary operations and air pollution control equipment maintenance to minimize emissions so that emissions are at or below the emission limits specified in this Permit.

V.D.4. The Permittees shall, to the extent practicable, maintain and operate equipment in a manner consistent with good air pollution control practice for minimizing emissions. [See 40 CFR § 61.12(c).]

V.D.5. The Permittees shall maintain the APCE in accordance with the design plans and specifications contained in Permit Attachment Appendices VI and X.

V.E. FUGITIVE EMISSIONS CONTROLS

V.E.1. The Permittees shall control fugitive emissions from the combustion zone in accordance with 40 CFR §§ 61.348(e), 63.1206(c)(5), and 264.345(d). [See 40 CFR §§ 61.348(e), 63.1206(c)(5), and 264.345(d).]

V.E.2. The Permittees shall ensure that fugitive emissions from process units and ancillary components (tanks, furnace, APCEs, and piping) do not exceed 500 ppmv (parts per million by volume) of VOCs above background in accordance with the procedures spelled out in 40 CFR § 61.355(h). [See 40 CFR § 61.355(h), 63.1206(c)(5), and 40 CFR § 264.1082(c)(1).]

V.F. INSPECTION REQUIREMENTS

V.F.1. The Permittees shall inspect RF-2 in accordance with the Inspection Schedule and Checklist, Permit Attachment Section F, Permit Attachment Appendix XII, and Permit Condition II.E.

V.F.2. The Permittees shall thoroughly, visually inspect RF-2 at least daily, for leaks, spills, fugitive emissions, and signs of tampering. [See 40 CFR § 264.347(b).]

V.F.3. The Permittees shall thoroughly, visually inspect the instrumentation for out-of-tolerance monitored and/or recorded operational data.

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V.F.4. Upon request of the Director, the Permittees shall perform sampling and analysis of the waste and exhaust emissions to verify that the operating requirements established in this Permit are being met.

V.G. RECORDKEEPING AND REPORTING

V.G.1. The monitoring and inspection data required by this Module V must be recorded and the records must be placed in the operating record required by Permit Condition II.M.1.i. and maintained in the operating record for five years. [See 40 CFR §§ 63.10, 63.1211, and 264.347(d).]

V.G.2. The Permittees shall record in the operating record for this Permit the date and time of all automatic waste feed shut-offs, including the triggering parameters, reason for the shut-off, and corrective actions taken. The Permitees shall also record all failures of the automatic waste feed shut-offs to function properly and corrective actions taken. [See 40 CFR §§ 63.10 and 63.1211.]

V.G.3. The Permittees shall record in the operating record for this Permit the date and time of all shutdowns or malfunctions, the reason(s) for the shut-down or malfunction, and corrective actions taken. [See 40 CFR §§ 63.10 and 63.1211.]

V.G.4. In addition to the excess emissions report(s) required by Permit Condition V.C.5.v.c., if, despite the requirement to comply with the SSMP, an action taken by the Permittees during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the SSMP and there is an exceedance of any applicable emission limitation in the relevant emission standard, then the Permittees must record the actions taken for that event and must report such actions to the Director within 2 working days after commencing actions inconsistent with the plan, followed by a letter to the Director within 7 working days after the end of the event, in accordance with 40 CFR §63.10(d)(5). [See 40 CFR §§ 63.6(e)(3)(iv) and 63.10(d)(5).]

V.G.5. The Permittees shall maintain in the operating record for the Facility required by Permit Condition II.M.1. the site specific CMS quality control performance

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evaluation test plan procedures in accordance with 40 CFR § 63.8(d). [See 40 CFR § 63.8(d).]

V.H. CLOSURE

V.H.1. At closure the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from RF-2. [See 40 CFR § 264.351.]

V.H.2. The Permittees shall follow the procedures in Permit Attachment Section I and in the RCRA Facility Closure Plan for the Closure of RF-2 in Permit Attachment Appendices XV and XVII.

V.H.3. The Permittees shall follow the procedures in Permit Attachment Section I and in the Closure Plan for the Closure of RF-1 in Permit Attachment Appendices XVI and XVII. The Permittees shall initiate closure of RF-1 in accordance with the Closure Schedule contained in the RF-1 Closure Plan contained in Permit Attachment Appendix XVI and the Compliance Schedule set forth in Permit Condition I.K. [See 40 CFR § 264.112(d).]

V.H.4. The Permittees shall submit a post-closure plan with a schedule to EPA for approval if, after implementation of either the Closure Plan for Closure of RF-1 or the Closure Plan for Closure of RF-2, soil contamination is present and the Permittees are unable to adequately remediate that contamination. Upon approval by EPA, the Permittees shall implement the Post-Closure Plan as approved.

V.I. ADDITIONAL INVESTIGATIONS

Upon request by the Director, sampling and analysis of the waste, soil and/or groundwater at or around the Facility, and exhaust emissions must be conducted to verify that the operating requirements established in this Permit achieve the performance standards set forth in this Permit. A report shall be submitted to the Director for approval in accordance with Permit Condition I.G.5. within the time frame specified in the Director's request. [See, e.g., 40 CFR § 264.347(a)(3).]

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MODULE VI
CORRECTIVE ACTION

VI.A. Standard Conditions

VI.A.1. The Permittees must take corrective action as necessary to protect human health and the environment from all releases of hazardous waste and/or constituents from any Hazardous Waste Management Unit (HWMU), Solid Waste Management Unit (SWMU) and/or Area of Concern (AOC) at the Facility, regardless of the time at which waste was placed in such unit or area, in accordance with §3004(u) of RCRA, 42 USC Section 6924(u), 40 CFR §§ 264.90(a) and 264.101. [See RCRA Section 3004(u) and 40 CFR §§ 264.90(a) and 264.101. See also Permit Attachment Section J and the Final RCRA Facility Assessment (RFA), incorporated herein as Permit Attachment RFA. To the extent that there are any discrepancies between Section J and the RFA, the language in the RFA shall control.]

VI.A.2. The Permittees must take corrective action beyond the facility property boundary where necessary to protect human health and the environment, in accordance with §3004(v) of RCRA, 42 USC Section 6924(v), and 40 CFR §264.101. [See 40 CFR §264.101.]

VI.A.3. Any noncompliance with approved plans, schedules or reports required in accordance with this Permit shall be deemed noncompliance with this Permit.

VI.A.4. If the Director determines that further corrective action beyond the requirements of this Permit is warranted, then the Director may modify this Permit according to the permit modification processes under 40 CFR § 270.41. [See 40 CFR §§ 264.100(e)(2) and 270.41. See also Permit Condition I.B.1.]

VI.A.5. All raw data and reports, including inspection reports, laboratory reports, drilling logs, geological and hydrogeological investigations, bench-scale or pilot-scale data, laboratory data and other supporting information gathered or generated during activities undertaken pursuant to this Permit, including any reissued permits, shall be provided at the request of the Director.

VI.A.6. Failure to timely submit the information required in this Permit, or falsification of any submitted information, is grounds for termination of this permit in accordance with 40 CFR §270.43.

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VI.A.7. All work performed pursuant to this Corrective Action Module shall be under the direction and supervision of qualified personnel. At least forty-five (45) days prior to initiating any work pursuant to this Module, the Permittees shall notify the Director in writing of the following:

VI.A.7.a. The names, titles, and qualifications of the personnel, including contractors, subcontractors, consultants and laboratories, to be used in carrying out such work; and

VI.A.7.b. The name, address, phone number, electronic mail address and qualifications of the Corrective Action Project Coordinator.

VI.A.7.b.i. The Permittees have the right to change their Corrective Action Project Coordinator. Notification of a change in the Permittees' Corrective Action Project Coordinator must be provided to EPA in writing at least ten (10) days prior to the change.

VI.A.7.b.ii. EPA may disapprove of Permittees' Corrective Action Project Coordinator (original or replacement) at any time based upon the person's qualifications and ability to effectively perform the role. The qualifications of the Permittees' Corrective Action Project Coordinator (original or replacement) shall be subject to EPA's review, for verification that such person meets minimum technical background and experience requirements. All persons under the direction and supervision of the Permittees' Corrective Action Project Coordinator must possess all necessary professional licenses required by federal law and any applicable state or tribal law. EPA's disapproval of the Permittees' Corrective Action Project Coordinator is subject to review in accordance with the Informal Dispute Resolution provisions set forth in Permit Condition I.L.

VI.A.7.c. In those circumstances where Permittees must take action in less than the forty-five (45) day period referenced in Permit Condition VI.A.7., the information required by Permit Conditions VI.A.7.a. and VI.A.7.b. must be provided to EPA as soon as practicable. (See, *e.g.*, Permit Condition VI.E.1.)

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VI.A.8. Any activities performed pursuant to this Corrective Action Module shall be conducted in compliance with this Permit, and are subject to EPA approval as set forth herein. The Permittees should perform Corrective Action consistent with good scientific principles. For example, the Permittees should consider taking into account appropriate EPA guidance including, but not limited to, the following:

- "RCRA Corrective Action Plan" (OSWER Directive 9902.3-2A, May 1994);
- "Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action" (EPA, EPA530-R-04-030, April 2004);
- "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA, SW-846), available at http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm;
- Advance Notice of Proposed Rulemaking, "Corrective Action for Releases from Solid Waste Management Units at Hazardous Waste management Facilities" (EPA, 61 FR 19432 dated May 1, 1996), available at http://www.epa.gov/docs/fedrgstr/EPA-WAST/1996/May/Day-01/pr-547.pdf;
- "RCRA Public Participation Manual" (EPA, EPA/530/R-96/007, 1996), available at http://www.epa.gov/epawaste/hazard/tsd/permit/pubpart/manual.htm;
- "A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, Final Project Report" (EPA, EPA/600/R-08/003, January 2008), available at http://www.epa.gov/ada/pbs/reports/600R08003.html; and
- "RCRA Groundwater Monitoring Technical Enforcement Guidance Document" (OSWER Directive 9950.1, September 1986).

VI.B. Reporting Requirements

VI.B.1. When requested by the Director, the Permittees shall submit to the Director for approval in accordance with Permit Condition I.G.5. signed and certified corrective action progress reports on a semi-annual basis in accordance with the deadlines specified in the Director's request. Such corrective action progress reports shall contain:

VI.B.1.a. A discussion and summary of all corrective action-related activities undertaken during the time period;

VI.B.1.b. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify these problems;

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VI.B.1.c. Summaries of all findings made during the time period including summaries of laboratory data; and

VI.B.1.d. Projected work for the next reporting period.

VI.B.2. The Permittees shall maintain copies of other corrective action reports (e.g. inspection reports); geological and hydrogeological investigations; records of groundwater monitoring wells, including boring logs, and associated groundwater surface elevations; and all laboratory data, including raw data, for the active life of the Facility, and shall make them available to the Director upon request.

VI.B.3. The Director may require the Permittees to conduct new or more extensive assessments, investigations, or studies, as needed, based on information provided in these progress reports or other supporting information.

VI.C. Results of the RCRA Facility Assessment (RFA)

VI.C.1. The results and recommendations of the RCRA Facility Assessment can be found in the Final Permit Attachment RFA dated September 2016.

VI.C.2. The HWMUs, SWMUs, and AOCs are identified in Tables VI-1, VI-2, and VI-3.

VI.D. Newly-Identified, Newly-Discovered, or Newly-Created AOCs, SWMUs and/or HWMUs

VI.D.1.a. The Permittees shall notify the Director in writing of any newly-identified, newly-discovered, or newly created AOC(s), SWMU(s) and/or HWMU(s). This initial notice shall be provided no later than fifteen (15) calendar days after discovery of the newly-identified, newly-discovered, or newly-created AOC, SWMU and/or HWMU.

VI.D.1.b. No later than 60 days after identifying, discovering or creating any new AOC(s), SWMU(s), and/or HWMU(s), the Permittees shall initiate a permit modification in accordance with Permit Condition I.G.7. and 40 CFR § 270.42 to update Tables VI-1, VI-2, and/or VI-3 and Permit Attachment Section J, as appropriate, to add the new AOC(s), SWMU(s), and/or HWMU(s) to the table(s).

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VI.D.2. Within ninety (90) days after the after identifying, discovering or creating any new AOC(s), SWMU(s), and/or HWMU(s), the Permittees shall submit an Assessment Report for any newly-identified, newly-discovered or newly created AOC, SWMU and/or HWMU to the Director for approval in accordance with Permit Condition I.G.5. At a minimum, the Report shall provide the following information for each newly-identified, newly-discovered, or newly-created AOC, SWMU and/or HWMU:

VI.D.2.a. The location of each such AOC, SWMU and/or HWMU in relation to other AOCs, SWMUs, HWMUs, building numbers, or other descriptive landmarks;

VI.D.2.b. The type and function of the AOC, SWMU and/or HWMU;

VI.D.2.c. The general dimensions, capacities, and structural description of the AOC, SWMU and/or HWMU (supply all available drawings);

VI.D.2.d. The period during which the AOC, SWMU and/or HWMU was operated;

VI.D.2.e. Waste characterization information for all wastes that have been or are being managed at the AOC, SWMU and/or HWMU;

VI.D.2.f. A description of any release (or suspected release) of hazardous waste and/or constituents originating from the AOC, SWMU, and/or HWMU including planned or unplanned releases to the air and any other media. Include information on the date of release, type of hazardous waste and/or constituents, quantity released, nature of the release, extent of release migration, and cause of release (e.g., overflow, broken pipe, tank leak). Also provide any available data which characterizes the nature and extent of environmental contamination, including the results of air, soil and/or groundwater sampling and analysis efforts. Also submit any existing monitoring information that shows that a release of hazardous waste and/or constituents has not occurred or is not occurring; and

VI.D.2.g. Whether or not any further Permit Modification(s) to incorporate additional information about the newly-discovered AOC, SWMU and/or HWMU(s) into the Permit is appropriate. The Permittees shall submit a Permit Modification request in accordance with Permit Condition I.G.8. if the approved Assessment Report determines that such modification is warranted.

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VI.D.3. Based on the results of the approved Assessment Report, the Director will determine whether there is a need for further investigations at specific unit(s) or areas covered in the Assessment Report. If the Director determines that such investigations are needed, the Director will require the Permittees to prepare a RCRA Facility Investigation (RFI) Work Plan in accordance with Permit Condition VI.F.

VI.E. Newly-Discovered Releases

VI.E.1. The Permittees shall notify the Director, in writing, of any newly-discovered spills or releases of hazardous waste. This notification shall be submitted in two parts as set forth in Permit Conditions VI.E.1.a. and VI.E.1.b. Releases that are less than or equal to a quantity of one (1) pound and immediately contained and cleaned up are not subject to this Permit Condition VI.E.1. The Permittees shall investigate and, if necessary, remediate the discovered spill(s) or release(s). Such spills or releases may be from newly-identified or newly-created AOCs, SWMUs and/or HWMUs, from AOCs, SWMUs and/or HWMUs at which the Director had previously determined that no further investigation was necessary, or from AOCs, SWMUs and/or HWMUs investigated as part of this Permit or otherwise identified in Tables VI-1, VI-2, or VI-3.

VI.E.1.a. First, within fifteen (15) calendar days of discovery of the release, the Permittees shall submit in writing an initial notification of the discovery. This notification shall alert the Director to the magnitude of the threat to human health and/or the environment.

VI.E.1.b. Second, within sixty (60) days of discovery of the release, the Permittees must submit a written report. The report shall discuss the Permittees' efforts to investigate and/or remediate the discovered release and shall specifically include:

- the concentrations and estimated quantities of any hazardous waste and/or constituents released;
- the known, or expected, pathway(s) through which the contamination is migrating (or may migrate), and the extent, rate, and direction of that migration;
- the projected fate and transport of the release;

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- the likely exposure pathway(s) for potential receptors, and the consequences of exposure to these receptors; and
- an outline of proposed Interim Corrective Measures to control the release, as well as a schedule for implementing the Interim Corrective Measures. The schedule must be justified by a discussion of possible consequences arising from any delay in implementing Interim Corrective Measures.

VI.E.2. Within sixty (60) days of discovery of a spill or release, the Permittees shall initiate a permit modification in accordance with Permit Condition I.G.7. and 40 CFR § 270.42 to update Tables VI-1, VI-2 and/or VI-3 and Permit Attachment Section J, as appropriate, to add the spill or release to the table(s). The Permittees shall include the hazardous waste constituents that were released and the actions taken to clean up or mitigate the spill or release in the revised Permit Attachment Section J.

VI.E.3. Within ninety (90) days of discovery of a release, the Permittees shall submit to the Director for approval in accordance with Permit Condition I.G.5. a Report describing the Interim Corrective Measures activities taken to date and whether or not additional investigation or implementation of corrective measures are warranted. This Report shall include the reporting requirements specified in Permit Condition VI.B. If the approved Interim Corrective Measures Report concludes that additional investigation or corrective measures are required, the Permittees shall submit a request for a permit modification to investigate and perform additional Interim Corrective Measures in accordance with Permit Condition I.G.8.

VI.E.4. If the approved Interim Corrective Measures Report concludes that there is a need for further investigations or implementation of corrective measures, the Director will require the Permittees to prepare a RCRA Facility Investigation (RFI) Work Plan in accordance with Permit Condition VI.F.

VI.F. RCRA Facility Investigation (RFI) Work Plan

VI.F.1. If, under Permit Conditions VI.D.3. or VI.E.4., the Director determines that an RFI is necessary for any newly-discovered or newly-created AOC, SWMU or HWMU or for a newly discovered release, or to further investigate an existing AOC, SWMU, or HWMU, the Permittees shall submit an RFI Work Plan, within the time period specified by the Director, to the Director for approval in accordance with Permit Condition I.G.5.

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VI.F.2. The RFI Work Plan must identify the AOCs, SWMUs, and/or HWMUs, releases of hazardous waste and/or constituents, and media of concern which require corrective action. The RFI Work Plan shall describe the objectives of the investigation and the overall technical and analytical approach to completing all actions necessary to characterize the nature, direction, rate, movement, and concentration of releases of hazardous waste and/or constituents from specific AOCs, SWMUs, HWMUs or groups of AOCs, SWMUs, or HWMUs and their actual or potential receptors. The RFI Work Plan shall detail all proposed activities and procedures to be conducted at the area and/or unit, the schedule for implementing and completing such investigations, an outline of the RFI Report required in Permit Condition VI.G.1., and the overall management of the RFI. The RFI Work Plan should be consistent with good scientific principles. For example, the Permittees should consider taking into account screening levels consistent with the EPA's health and ecological based guidance effective at the time of implementation, and EPA's current corrective action guidance, including RCRA Facility Investigation (RFI) Guidance, OSWER Directive 9502.00-6C, dated May 1989.

VI.F.3. The RFI Work Plan shall discuss sampling and data collection quality assurance and data management procedures, including formats for documenting and tracking data and other results of investigations, and health and safety procedures for conducting the field work.

VI.F.4. The Director may review for approval as part of the RFI Work Plan any plans, reports or other material developed pursuant to Permit Conditions VI.D. and/or VI.E.

VI.G. <u>RCRA Facility Investigation (RFI) Final Report</u>

VI.G.1. The Permittees shall develop and submit an RFI Final Report if the Director determines that an RFI is necessary as described in VI.F.1. The Permittees should conduct the RCRA Facility Investigation and prepare the RFI Final Report consistent with good scientific principles. For example, the Permittees should consider taking into account appropriate EPA guidance including, but not limited to, EPA's RCRA Facility Investigation Guidance, OSWER Directive 9502.00-6C, dated May 1989.

VI.G.2. Within the time period specified in the schedule included in the approved RFI Work Plan, the Permittees shall submit an RFI Final Report to the Director for approval in accordance with Permit Condition I.G.5.

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. **VI.G.3.** The RFI Final Report shall describe the procedures, methods, and results of all facility investigations of AOCs, SWMUs and/or HWMUs and their releases, including information on the type and extent of contamination at the Facility, sources and migration pathways, and actual or potential receptors. The RFI Final Report shall present all information necessary to support further corrective action decisions at the area(s) and/or unit(s).

VI.G.4. The RFI Final Report shall also include the Permittees' recommendations, if any, regarding any appropriate modifications to the conditions of this Permit, based on the results of the RFI in accordance with Permit Condition I.G.8. and 40 CFR Part 270.

VI.H. Interim Corrective Measures Implementation at the Direction of EPA

VI.H.1. If, at any time, the Director determines that a release or potential release of hazardous waste and/or constituents at the Facility poses or may present a threat to human health or the environment, the Director will notify the Permittees that they must submit to the Director, for approval in accordance with Permit Condition I.G.5., an Interim Corrective Measures Work Plan, for conducting Interim Corrective Measures designed to minimize the threat to human health and the environment. The Director will provide direction to the Permittees regarding the appropriate time frame for submittal of such Interim Corrective Measures Work Plan. Implementation by the Permittees of treatment or containment activities during "immediate response," as defined in 40 CFR § 264.1(g)(2), to a discharge of hazardous waste and/or constituents, or an imminent and substantial threat of a discharge of hazardous waste and/or constituents, or a discharge of material which, when discharged, becomes a hazardous waste, is not subject to this Permit. Actions taken to address the discharge after the immediate response is completed are subject to this Permit.

VI.H.1.a. The Interim Corrective Measures Work Plan shall include a schedule for implementation of Interim Corrective Measures and the submittal of an Interim Corrective Measures Report.

VI.H.2. Except as set forth in Permit Condition VI.H.5, the Director's decision to require the submittal of an Interim Corrective Measures Work Plan is subject to the dispute resolution procedures set forth in Permit Condition I.L. The following factors may be considered by the Director in determining the need for additional Interim Corrective Measures:

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VI.H.2.a. Time required to develop and implement a final remedy;

VI.H.2.b. Actual and potential exposure of human and environmental receptors;

VI.H.2.c. Actual and potential contamination of drinking water supplies and sensitive ecosystems;

VI.H.2.d. Potential for further degradation of the medium absent the additional Interim Corrective Measures;

VI.H.2.e. Presence of hazardous waste in containers or tanks that may pose a threat of release;

VI.H.2.f. Presence and concentration of hazardous waste and/or constituents in soils, ground water, surface water, or air;

VI.H.2.g. Weather conditions that may affect the current levels of contamination or potential for exposure;

VI.H.2.h. Risks of fire, explosion, or accident; and

VI.H.2.i. Other situations that may pose a threat to human health or the environment.

VI.H.3. Upon the Director's approval of the Interim Corrective Measures Work Plan, the Permittees shall implement the Interim Corrective Measures according to the approved schedule.

VI.H.4. Within the time period set forth in the schedule in the approved Interim Corrective Measures Work Plan, the Permittees shall submit to the Director for approval in accordance with Permit Condition I.G.5. a Report describing the Interim Corrective Measures activities taken to date and whether or not additional investigation or implementation of corrective measures are warranted. This Report shall include the reporting requirements specified in Permit Condition VI.B. If the approved Interim Corrective Measures Report concludes that additional investigation or corrective measures are required, and/or that there is a need for further investigations or implementation of corrective measures, the Director will require the Permittees to prepare a RCRA Facility Investigation (RFI) Work Plan in accordance with Permit Condition VI.F.

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VI.H.5. If, at any time, the Director determines that a release or potential release of hazardous waste and/or constituents at the Facility poses or may present an imminent or emergency threat to human health or the environment, the Director will notify the Permittees that they must conduct Emergency Interim Corrective Measures as instructed by the Director. Such Emergency Interim Corrective Measures shall be limited to that necessary to address or resolve the urgency associated with and/or emergency nature of any such threat to human health or the environment. The Director's decision to require such Emergency Interim Corrective Measures may be subject to the informal dispute resolution procedures of Permit Condition I.L., but the Permittees shall implement such Emergency Interim Corrective Measures, as instructed by the Director, simultaneously during any such invocation of informal dispute resolution under this Permit.

VI.I. Corrective Measures Study

VI.I.1. If the Director has reason to believe that an AOC, SWMU and/or HWMU has released concentrations of hazardous constituents in excess of the EPA's current health- and ecological-based levels, or if the Director determines that contaminants present at levels below the EPA's current health-based levels pose a threat to human health or the environment given site-specific exposure conditions, the Director may require a Corrective Measures Study (CMS) and, if so, will notify the Permittees in writing. This notice will identify the hazardous constituents(s) which have exceeded action levels as well as those which have been determined to present a potential threat to human health or the environment given site-specific exposure conditions.

VI.I.2. No later than sixty (60) calendar days after the Permittees have received notification from the Director, under Permit Condition VI.I.1., of the need for a CMS, the Permittees shall submit to the Director for approval in accordance with Permit Condition I.G.5., a Work Plan, with a schedule, for conducting a CMS. Upon the Director's approval of the CMS Work Plan, the Permittees shall implement the CMS according to the approved schedule. The CMS should be consistent with the EPA's guidance.

VI.I.3. The Permittees shall submit a CMS Final Report to the Director for approval in accordance with Permit Condition I.G.5. and according to the schedule approved by the Director pursuant to Permit Condition VI.I.2. The CMS Final Report shall summarize the results of the investigations for each remedy, and of any bench-scale

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or pilot tests conducted. The CMS Final Report must include an evaluation of each remedial alternative, and a proposal for corrective measures implementation. The CMS Final Report shall contain adequate information to support the Director in the remedy selection decision-making process, described in Permit Condition VI.J.

VI.J. Remedy Selection

If, based on the results contained in the RFI Final Report, CMS Final Report, or any further evaluations of additional remedies, the Director determines that it is appropriate to select a corrective action remedy for the facility, the Director will propose to select a remedy that will: (1) be protective of human health and the environment; (2) meet the concentration levels of hazardous constituents in each medium that the remedy must achieve to be protective of human health and the environment; (3) control the source(s) of release(s) so as to reduce or eliminate, to the maximum extent practicable, further releases that might pose a threat or potential threat to human health and the environment; and (4) meet all applicable waste management requirements.

VI.K. Permit Modification

Based on information the Permittees submit in the RFI Final Report, the CMS Final Report, or other information, the Permittees or the Director may initiate a modification to this Permit for selection and implementation of the remedy, pursuant to 40 CFR §§ 270.41 or 270.42, and/or to create or make changes to a Corrective Action Schedule of Compliance for this Permit. Any modification relating to selection and implementation of a remedy may include conditions that require submittal by the Permittees of corrective measures design, implementation, and monitoring plans.

VI.L. No Further Action

VI.L.1. Based on the results of any investigation, study, assessment, interim measure and/or corrective action and any other relevant information, the Permittees may submit an application to the Director for a permit modification in accordance with 40 CFR § 270.42(c) to terminate all or a portion of a Corrective Action Schedule of Compliance. This permit modification application must contain information demonstrating that there are no releases of hazardous wastes or hazardous constituents from HWMU(s), SWMU(s) and/or AOC(s) at the Facility that pose a threat to human health or the environment, as well as information required in 40 CFR § 270.42(c), which incorporates by reference 40 CFR §§270.13 through 270.22,

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270.62, and 270.63. Relevant information to be included in the application shall include, at a minimum:

- Depth of Released Contamination into Soil.
- Impact on Groundwater or Surface Water
- Constituents Sampled
- Data Quality Objectives
- Sampling Method
- Laboratory Results of Analysis
- Data Quality
- Results of Cleanup Verification Sampling

VI.L.2. If, based on review of the Permittees' request for a permit modification, any investigation, study, assessment, interim measure and/or corrective action and any other relevant information, including comments received during any relevant public comment period, the Director determines that releases or suspected releases which were investigated are either non-existent or do not pose a threat to either human health or the environment, the Director will grant the requested modification.

VI.L.3. A determination of no further action shall not preclude the Director from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates a release or likelihood of a release from a HWMU, SWMU and/or AOC or that the Facility is likely to pose a threat to human health or the environment. In such a case, the Director will initiate a modification according to the procedures set forth in 40 CFR § 270.41, to rescind the determination made in accordance with this Permit Condition VI.L.

VI.M. Corrective Action Beyond the Facility Boundary

If the Director determines that further actions beyond those provided in a Corrective Action Schedule of Compliance, or changes to that which is stated herein, are warranted, the Director will create or modify such Schedule of Compliance and/or other Permit Condition(s) in

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accordance with the permit modification processes set forth in 40 CFR § 270.41. [See 40 CFR § 270.41.]

VI.N. Financial Assurance for Corrective Action

VI.N.1. A proposal for establishing a financial assurance mechanism for either performance of any of the work described in a Corrective Action Schedule of Compliance or implementation of any other remedy in accordance with this Permit, including construction of such corrective action or remedy, shall be submitted to the Director for approval in accordance with Permit Condition I.G.5., simultaneously with the request for a permit modification required under Permit Condition VI.K. The proposal shall contain, at a minimum:

- A cost estimate for construction, operation, maintenance, and monitoring of the selected corrective action or remedy for a period of 20 years including assumptions used to make the cost estimate;
- A description of the financial assurance mechanism that will be used; and
- A schedule for establishing the mechanism.

VI.N.3. The mechanism by which financial assurance is secured -- for either performance of any of the work described in a Corrective Action Schedule of Compliance or implementation of any other remedy in accordance with this Permit -- may include surety bonds, insurance policies (issued by an independent commercial insurer), letters of credit, or any other mechanism acceptable to the Director as described in any permit modification undertaken in accordance with Permit Condition VI.K. The mechanism shall be established to allow the U.S. Environmental Protection Agency to direct the funds to ensure construction, operation, maintenance and/or monitoring occur as required by this Permit.

VI.O. Quality Assurance and Quality Control

VI.O.1. As part of any work plan(s) required by this Module, the Permittees shall include a Quality Assurance Project Plan ("QAPP"), for the Director's review and approval in accordance with Permit Condition I.G.5. The QAPP shall address quality assurance, quality control, and chain of custody procedures for any sampling, monitoring and analytical activities. The Permittees shall follow "EPA Requirements for Quality

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Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001 (Reissued May 2006)), "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/b-01/002, March 2001) as well as other applicable documents identified by the Director.

VI.O.2. As part of any work plan(s), the Permittees shall include Data Quality Objectives for any data collection activity to ensure that data of known and appropriate quality are obtained and that data are sufficient to support their intended use as required by this Module.

VI.O.3. The Permittees shall ensure that laboratories used by the Permittees for analysis perform such analysis according to the latest approved edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (also known as SW-846) or other methods approved by EPA. If methods other than EPA methods are to be used, the Permittees shall specify all such protocols in the appropriate work plan(s). In accordance with the procedures set forth in Permit Condition I.G.5., the Director may reject any data that does not meet the requirements of the approved work plan(s) and EPA analytical methods and may require resampling and additional analysis.

VI.O.4. The Permittees shall ensure that all laboratories employed for analyses participate in a quality assurance/quality control ("QA/QC") program equivalent to the program that EPA follows. The Permittees shall, on the Director's request, make arrangements for EPA to conduct a performance and QA/QC audit of the laboratories chosen by the Permittees, whether before, during, or after sample analyses. Upon the Director's request, the Permittees shall have the laboratories perform analyses of samples provided by EPA to demonstrate laboratory QA/QC and performance. If the audit reveals deficiencies in a laboratory's performance or QA/QC, the Permittees shall submit a plan to address the deficiencies and the Director may require resampling and additional analysis. Requests by the Director in accordance with this Permit Condition VI.O.4. are subject to the informal dispute resolution provisions of Permit Condition I.L.

VI.O.5. The Director may require the Permittees to change laboratories for reasons including, but not limited to: QA/QC, performance, conflict of interest, or confidential agency audit information. In the event the Director requires a laboratory change, the Permittees shall propose two alternative laboratories within thirty (30)

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calendar days. Once the Director approves of the laboratory change, the Permittees shall ensure that laboratory service shall be made available within fifteen (15) calendar days. The Director's requirement(s) and approval(s) pursuant to this Permit Condition VI.O.5. are subject to the informal dispute resolution provisions of Permit Condition I.L.

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
1	Spent carbon reactivation furnace - RF-1 and Associated Equipment (Dewater screw)	South of RF-2	Furnace shell – carbon steel; internal firebrick lining and block insulation; hearths and furnace roof constructed with firebrick; furnace roof is comprised of firebrick backed with block insulation and castable insulation; bottom hearth is insulated with block insulation and castable insulation	August 1992; Shut down in 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
2	Spent carbon reactivation furnace RF-2 and Associated Equipment (Dewater Screw, Weigh Belt)	East of warehouse	Furnace shell – carbon steel; internally lined with firebrick and block insulation; hearths and furnace roof constructed with firebrick; furnace roof is comprised of firebrick backed with block insulation and castable insulation; bottom hearth is insulated with block insulation and castable insulation; Continuously seal welded internally to assure an air-tight assembly. Dewatering screw length 17 ft; diameter 8 in.	July 1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
3	3 RF–1 Air pollution control equipment					
	Afterburner	RF-1 structure	Refractory lined steel	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Venturi scrubber	RF-1 structure	Hastelloy C	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Packed bed scrubber	RF-1 structure	Fiberglass	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Emissions stack	RF-1 structure	Mild steel	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None
4	RF–2 Air pollution control equipment					

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
	Afterburner	RF-2 structure	Refractory lined steel cylinder chamber	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Venturi scrubber	RF-2 structure	Hastelloy C	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Packed bed scrubber	RF-2 structure	Fiberglass	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Wet electrostatic precipitator	RF-2 structure	Fiberglass/AL6XN	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Induced draft fan	RF-2 structure	300-series SS	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
	Emissions stack	RF-2 structure	Fiberglass surrounded by a mild steel shell	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
5	Spent carbon unloading hopper H-1	North end of facility on containment	5000 lb capacity; mild steel	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
6	Spent carbon unloading hopper H-2	Inside warehouse facing east wall	500 lb capacity; mild steel	August 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
7	Hopper air pollution control equipment piping and baghouse	North end of facility on containment	Ducting, baghouse and fan are mild steel	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
8	Spent carbon slurry and recycle water transfer system	Inside warehouse on containment	4” pipes hopper to tank; 3” pipes T-tank to furnace feed tank; 300-series SS	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
9	Spent carbon storage warehouse	Inside warehouse	80 ft by 80 ft concrete/ metal	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
10	Spent carbon slurry storage tank, T–1	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
11	Spent carbon slurry storage tank, T–2	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
12	Spent carbon slurry storage tank, T–5	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
13	Spent carbon slurry storage tank, T–6	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
14	Furnace Feed System Tank T-8 and Ancillary Equipment	RF–1 Structure	905 gal 300 series SS	August 1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None
15	T-18 and Ancillary Equipment	RF-2 structure	6500 gal 300-series SS	July 1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
16	Wastewater conveyance piping to wastewater treatment tank	East of RF-2 structure	3” PVC piping	August 1992	Spent activated carbon. See Part B Application for list of applicable waste codes	None
17	Spent carbon storage warehouse barrel washer	Next to H-2 in warehouse	2 ft by 3 ft 300 series stainless steel	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
18	Carbon adsorber - PV1000	North of Containment Pad for Storage Tanks	1000 lb carbon capacity; mild steel.	August 1992	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
19	Carbon adsorber WS-1	Beside spent carbon storage tank	2 x 2000 lb carbon capacity. Mild steel	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
20	Carbon adsorber WS-2	Beside H-1	5000 lb carbon capacity Fiberglass	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
21	Carbon adsorber WS-3	Beside RF–2	1000 lb carbon capacity Mild steel	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	See Section J.2 of the Part B Application
22	Slurry transfer inclined plate settler tank	Adjacent to the venturi scrubber	Mild steel	1992 to 1994	Spent activated carbon. See Part B Application for list of applicable waste codes	See Section J.2 of the Part B Application
23	Scrubber recycle tank T-17	Beside RF-1	Mild steel	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
24	Filter press	Next to scrubber system for RF-1	Mild steel with polypropylene plates	1992 to 1994	Spent activated carbon. See Part B Application for list of applicable waste codes	None
25	New Facility Discharge Piping System	New piping bypasses Lift Station to POTW	6" PVC	February 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
1	Bermed containment area	East of Warehouse	Approx 180' x 55'; concrete	August 1992	Spent activated carbon. See Part A Application for list of applicable waste codes	None
2	Sump by H-1	South of H-1	3'-4" square; concrete	July 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
3	Sump by storage tank, T–9	East of warehouse in between T-9 and RF-2	3'-4" square sump; U-drain 30' long x 16"wide; concrete	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
4	Recycled motive water storage tank, T–9	East of warehouse on containment	10,500 gal 316 series stainless steel	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
5	Rainwater and motive water storage tank, T–12	East of warehouse on containment	25,080 gal Mild steel	1992. Removed from service in 2002.	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE VI-2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
6	Wastewater storage tank, T–11 System	East of the warehouse and south of RF -2	10' Dia x 20' H; Approx 12,000 gal fiberglass	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
7	Sump by cooling screw under Venturi scrubber tank	East of warehouse beside RF-2	3'-4" square; concrete	July 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
8	RF–2 scrubber water equalization tank, T-19	Under RF-2 Structure	Approx. 1000 gal Fiberglass	July 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
9	Hazardous waste debris bin	North of warehouse on asphalt pavement	20 - 40 cubic yards Mild steel	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
10	Spent carbon storage warehouse grated trenches and sump	Warehouse in containment area	Trench 3 ft, 4 in square sump U-drain 50 ft long, 16 in wide; cross drain sections 40 ft long 16 in wide Concrete	1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE VI-2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
11	Hopper concrete pad	Outside H-1 structure	Approx 60' x 44'; concrete	July 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
12	WWTP	Inside warehouse	Fiberglass, mild steel modular water treatment system. Separate containment.	October 2003 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
13	Wastewater lift station and piping system (old)	At the end of access road to plant. Old piping from Tank T-11 to the Lift Station	Approx. height 15 ft; outside diameter 5 ft Lift Station: mild steel/concrete/fiberglass Old piping system PVC.	1992 to 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
14	Spent carbon unloading and transfer area asphalt pad	North area of facility	Approx. 44 ft by 80 ft	August 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
15	Satellite Accumulation Area	North side of warehouse	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None
16	Satellite Accumulation Area	South side of drum containment	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None
17	Satellite Accumulation Area	East of Control Room	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None

TABLE VI-2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
18	Satellite Accumulation Area	Laboratory in Admin Building	≤ 55 gallons (metal or plastic)	August 1996 to present	Laboratory Debris and laboratory Testing	None
19	Satellite Accumulation Area	Underneath Spent Carbon Baghouse	≤ 55 gallons (metal or plastic)	August 1992 to present	Spent Carbon Dust from Baghouse	

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TABLE VI-3 - AREAS OF CONCERN (AOC) IDENTIFICATION TABLE, NEW UNIT NAME

No.	Description of AOC	Location	Management Requirements at Closure
1	Spent carbon unloading and transfer area.	AOC 1 is entirely contained within SWMU14.	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 5 & 7.
2	Tank area concrete containment pad	AOC 2 is entirely contained within SWMU 1.	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 3.
3	Receiving area/pad	AOC 3 is entirely contained within SWMU14.	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 8.
4	Hopper H-1 loading/unloading area	See HWMU 5 for more detail on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 4 & 5.
5	Hopper H-2 loading/unloading area	See HWMU 6 for more detail on this unit	Sampling. See Closure Plan Container Area Sample Locations 1 & 2.
6	Spent carbon storage warehouse	See HWMU 9 for more detail on this unit	Sampling. See Closure Plan Container Area Sample Locations 1, 2, & 3.
7	Furnace feed systems	See HWMUs 14 and 15 for more details on these units	Sampling. See Closure Plan RF-1 and RF-2 Process Area Sample Locations 1 & 2
8	Recycled motive water tank T-9	See SWMU 4 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 6.
9	Rainwater, Dewatering Screw, and Motive Water Storage Tank T-12	See SWMU 5 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 2.

TABLE VI-3 - AREAS OF CONCERN (AOC) IDENTIFICATION TABLE, NEW UNIT NAME

No.	Description of AOC	Location	Management Requirements at Closure
10	Spent carbon storage warehouse barrel washer	See HWMU 17 for more details on this unit	Sampling. See Closure Plan Container Area Sample Locations 1, 2, & 3.
11	Bermed concrete pad in process area	AOC 2 is entirely contained within SWMU 1. See SWMU 1 for more detail on this unit	Sampling. See Closure Plan RF-1 and RF-2 Process Area Sample Locations 1, 2, & 3.
12	Sump by unloading hopper H-1	See SWMU 2 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 4.
13	Sump by storage tank T-9	See SWMU 3 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 6.
14	Spent carbon storage tanks and carbon adsorbers	Please see HWMUs 10, 11, 12, & 13 and HWMUs 19, 20, & 21 for more details on these units	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 1, 2, & 3.

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APPENDIX B
CHECKLISTS

Checklists for the applicable regulatory provisions from the following regulations are included in this Appendix B to the Statement of Basis. These checklists cover regulations referenced in the draft permit from the following Parts of Title 40 of the Code of Federal Regulations (40 CFR): Parts 61, 63, 124, 264, and 270.

The checklists do not repeat the regulations verbatim. They are merely excerpts, designed to assist the public in understanding the basis for specific, proposed permit conditions in the draft permit.

40 CFR Part 264 includes the Resource Conservation and Recovery Act (RCRA) regulations applicable to permitted treatment, storage and disposal facilities (TSDs) and these include the basic requirements for TSD facilities and the units in which hazardous waste is managed at such facilities.

40 CFR Part 270 includes the regulations applicable to RCRA permits generally. 40 CFR Part 124 includes the regulations generally applicable to all EPA permits, including those permits issued under the authority of RCRA.

The carbon regeneration furnace at the Evoqua Water Technologies, LLC facility in Parker, AZ is considered a "miscellaneous unit" as defined at 40 CFR §260.10. As such, the proposed permit terms and provisions of the draft permit include those requirements of Part 264, Subparts I through O and Subparts AA through CC, Part 270, and Part 63, Subpart EEE, that are appropriate for this particular type of miscellaneous unit. In addition, some of the requirements under Part 264, Subparts AA through CC are inapplicable where units or equipment are equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act (CAA) regulation codified under 40 CFR Parts 60, 61, or 63.

As a result, checklists for 40 CFR Part 61, primarily for Subpart FF (National Emission Standard for Benzene Waste Operations), and Part 63, primarily for Subpart EEE (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors) are included in this Appendix to help guide the public in understanding how specific requirements from Part 61 and Part 63 were included in the draft permit.

The draft permit also includes references to regulatory requirements from other parts of Title 40 of the Code of Federal Regulations that are not reflected in these checklists. For example, draft Permit Condition II.A.2. references 40 CFR Part 262, and draft Permit Condition II.A.3. references 40 CFR Part 268. For the full text of all regulatory requirements, whether or not they are referenced in a checklist here, the public is advised to review the regulatory language, which may be found online at http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

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40 CFR Section	Requirement	Permit Condition(s)
Part 61		IV.G.1.
Subpart A	**GENERAL PROVISIONS**	Table IV-2
61.01	(a) The following list presents the substances that, pursuant to section 112 of the Act, have been designated as hazardous air pollutants. The Federal Register citations and dates refer to the publication in which the listing decision was originally published. *** Benzene (42 FR 29332; June 8, 1977) *** [The full text of this regulation is not included in this checklist for the sake of brevity.]	
61.12	**Compliance with standards and maintenance requirements.** [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) The owner or operator of each stationary source shall maintain and operate the source, including associated equipment for air pollution control, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of the source. [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c) –V.D.4.
Subpart FF	**National Emission Standard For Benzene Waste Operations**	IV.G.2.b. IV.G.2.c. Table IV-2 IV.G.8. IV.G.8.a.i. IV.G.8.a.ii. IV.G.8.a.iii. IV.G.8.a.iv. IV.G.8.b. IV.G.8.b.ii.
61.343	**Standards: Tanks.** (a) Except as provided in paragraph (b) of this section and in § 61.351, the owner or operator must meet the standards	(a)(1)(i) - IV.G.8.b.i.

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	in paragraph (a)(1) or (2) of this section for each tank in which the waste stream is placed in accordance with § 61.342 (c)(1)(ii). The standards in this section apply to the treatment and storage of the waste stream in a tank, including dewatering. (1) The owner or operator shall install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to a control device. (i) The fixed-roof shall meet the following requirements: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
61.346	**Standards: Individual drain systems.** (a) Except as provided in paragraph (b) of this section, the owner or operator shall meet the following standards for each individual drain system in which waste is placed in accordance with § 61.342(c)(1)(ii) of this subpart: (1) The owner or operator shall install, operate, and maintain on each drain system opening a cover and closed-vent system that routes all organic vapors vented from the drain system to a control device. (i) The cover shall meet the following requirements: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	TABLE IV-2
61.348	**Standards: Treatment processes.** [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (e) Except as specified in paragraph (e)(3) of this section, if the treatment process or wastewater treatment system unit has any openings (e.g., access doors, hatches, etc.), all such openings shall be sealed (e.g., gasketed, latched, etc.) and kept closed at all times when waste is being treated, except during inspection and maintenance. (1) Each seal, access door, and all other openings shall . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(e) - V.E.1.
61.349	**Standards: Closed-vent systems and control devices.** (a) For each closed-vent system and control device used to comply with standards in accordance with §§ 61.343 through 61.348 of this subpart, the owner or operator shall properly design, install, operate, and maintain the closed-	TABLE IV-2 IV.G.8.b.ii.

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	vent system and control device in accordance with the following requirements: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
61.355	**Test methods, procedures, and compliance provisions.** (a) An owner or operator shall determine the total annual benzene quantity from facility waste by the following procedure: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) For the purposes of the calculation required by §§ 61.355(a) of this subpart, an owner or operator shall determine the flow-weighted annual average benzene concentration in a manner that meets the requirements given in paragraph (c)(1) of this section using either of the methods given in paragraphs (c)(2) and (c)(3) of this section. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (h) An owner or operator shall test equipment for compliance with no detectable emissions as required in §§ 61.343 through 61.347, and § 61.349 of this subpart in accordance with the following requirements: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	IV.J.8. (h) V.E.2. and Permit Attachment Appendix XXIII (Subpart FF Compliance Plan) at Section 3.7.3.and Table 1.
61.357	**Reporting requirements.** (a) Each owner or operator of a chemical plant, petroleum refinery, coke by-product recovery plant, and any facility managing wastes from these industries shall . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.2.

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40 CFR Section	Requirement	Permit Condition(s)
PART 63—National Emission Standards For Hazardous Air Pollutants For Source Categories		
Subpart A – General		
63.6	[The full text of this regulation is not included in this checklist for the sake of brevity.]	
	(3) *Startup, shutdown, and malfunction plan.* [The full text of this regulation is not included in this checklist for the sake of brevity.]	
	(iii) When actions taken by the owner or operator during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
	(iv) If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the owner or operator must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with §63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator). [The full text of this regulation is not included in this checklist for the sake of brevity.]	(e)(3)(iv) – V.G.4.
63.7	**Performance testing requirements.**	I.K.1.c.

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	[The full text of this regulation is not included in this checklist for the sake of brevity.]	
63.8	**Monitoring requirements.** [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.K.1.c. V.C.4.iii.
63.8(c)(3)	All CMS shall be installed, operational, and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests under §63.7. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration o ref the system.	II.M.1.c.
63.8(d)	(d) *Quality control program.* (1) The results of the quality control program required in this paragraph will be considered by the Administrator when he/she determines the validity of monitoring data. [The full text of this regulation is not included in this checklist for the sake of brevity.]	(d) – I.K.1.b. II.M.1.d. (d)(1) – V.G.5.
63.9(e)	Notification of performance test. The owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the Administrator to review and approve the site-specific test plan required under §63.7(c), if requested by the Administrator, and to have an observer present during the test.	I.K.1.c.
63.9(f)	Notification of opacity and visible emission observations. The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting the opacity or visible emission observations specified in §63.6(h)(5), if such observations are required for the source by a relevant standard. The notification shall be submitted with the notification of the performance test date, as specified in paragraph (e) of this section, or if no performance test is required or visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under §63.7, the owner or operator shall deliver or postmark the notification not less than 30 days before the opacity or visible emission observations are scheduled to take place.	I.K.1.c.
63.9(g)	(g) *Additional notification requirements for sources with continuous monitoring systems.* The owner or operator of an affected source required to use a CMS by a relevant	I.K.1.b. I.K.1.c.

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	standard shall furnish the Administrator written notification as follows: [The full text of this regulation is not included in this checklist for the sake of brevity.]	
63.9(h)(2)	(2)(i) Before a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit to the Administrator a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list— [The full text of this regulation is not included in this checklist for the sake of brevity.]	(h)(2) - I.K.3.c.
63.9(j)	Change in information already provided. Any change in the information already provided under this section shall be provided to the Administrator in writing within 15 calendar days after the change.	I.K.1.c.
63.10	Recordkeeping and reporting requirements. (a) Applicability and general information. (1) The applicability of this section is set out in §63.1(a)(4). [The full text of this regulation is not included in this checklist for the sake of brevity.]	V.G.1. V.G.2. V.G.3.
63.10(d)	[The full text of this regulation is not included in this checklist for the sake of brevity.] (5)(i) *Periodic startup, shutdown, and malfunction reports.* If actions taken by an owner or operator during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan (see §63.6(e)(3)), the owner or operator shall state such information in a startup, shutdown, and malfunction report. Actions taken to minimize emissions during such startups, shutdowns, and malfunctions shall be summarized in the report and may be done in checklist form; if actions taken are the same for each event, only one checklist is necessary. Such a report shall also include . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(d)(5) – V.G.4.

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63.10(e)	(3) *Excess emissions and continuous monitoring system performance report and summary report.* (i) Excess emissions and parameter monitoring exceedances are defined in relevant standards. The owner or operator of an affected source required to install a CMS by a relevant standard shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to the Administrator semiannually, except when— [The full text of this regulation is not included in this checklist for the sake of brevity.]	(e)(3) - V.C.5.v.c.(2). V.C.5.v.c.(3).
Subpart EEE — National Emission Standards For Hazardous Air Pollutants From Hazardous Waste Combustors		V.A.3.
General		
63.1200	**Who is subject to these regulations?** [The full text of this regulation is not included in this checklist for the sake of brevity.]	
Monitoring and Compliance Provisions		
63.1206	[The full text of this regulation is not included in this checklist for the sake of brevity.] (b) Compliance with standards- [The full text of this regulation is not included in this checklist for the sake of brevity.] (5) Changes in design, operation, or maintenance—(i) Changes that may adversely affect compliance. If you plan to change (as defined in paragraph (b)(5)(iii) of this section) the design, operation, or maintenance practices of the source in a manner that may adversely affect compliance with any emission standard that is not monitored with a CEMS: (A) Notification. You must notify the Administrator at least 60 days prior to the change, unless you document	(b)(5) – I.E.10., I.G.4.

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	circumstances that dictate that such prior notice is not reasonably feasible. The notification must include: (1) A description of the changes and which emission standards may be affected; and (2) A comprehensive performance test schedule and test plan under the requirements of §63.1207(f) that will document compliance with the affected emission standard(s); (B) Performance test. You must conduct a comprehensive performance test under the requirements of §§63.1207(f)(1) and (g)(1) to document compliance with the affected emission standard(s) and establish operating parameter limits as required under §63.1209, and submit to the Administrator a Notification of Compliance under §§63.1207(j) and 63.1210(d); and (C) Restriction on waste burning. (1) Except as provided by paragraph (b)(5)(i)(C)(2) of this section, after the change and prior to submitting the notification of compliance, you must not burn hazardous waste for more than a total of 720 hours (renewable at the discretion of the Administrator) and only for the purposes of pretesting or comprehensive performance testing. Pretesting is defined at §63.1207(h)(2)(i) and (ii). (2) You may petition the Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. You must specify operating requirements, including limits on operating parameters, that you determine will ensure compliance with the emission standards of this subpart based on available information. The Administrator will review, modify as necessary, and approve if warranted the interim operating requirements. (ii) Changes that will not affect compliance. If you determine that a change will not adversely affect compliance with the emission standards or operating requirements, you must document the change in the operating record upon making such change. You must revise as necessary the performance test plan, Documentation of Compliance, Notification of Compliance, and start-up, shutdown, and malfunction plan to reflect these changes.	

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	(iii) Definition of "change." For purposes of paragraph (b)(5) of this section, "change" means any change in design, operation, or maintenance practices that were documented in the comprehensive performance test plan, Notification of Compliance, or startup, shutdown, and malfunction plan. [The full text of this regulation is not included in this checklist for the sake of brevity.]	
	(c) Operating requirements. —(1) General . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (iii) Failure to comply with the operating requirements is failure to ensure compliance with the emission standards of this subpart . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) Startup, shutdown, and malfunction plan. [The full text of this regulation is not included in this checklist for the sake of brevity.] (v) *Operating under the startup, shutdown, and malfunction plan*—(A) *Compliance with AWFCO requirements during malfunctions.* (*1*) During malfunctions, the automatic waste feed cutoff requirements of §63.1206(c)(3) continue to apply, except for paragraphs (c)(3)(v) and (c)(3)(vi) of this section. If you exceed a part 63, subpart EEE, of this chapter emission standard monitored by a CEMS or COMs or operating limit specified under §63.1209, the automatic waste feed cutoff system must immediately and automatically cutoff the hazardous waste feed, except as provided by paragraph (c)(3)(viii) of this section. If the malfunction itself prevents immediate and automatic cutoff of the hazardous waste feed, however, you must cease feeding hazardous waste as quickly as possible. (*2*) Although the automatic waste feed cutoff requirements continue to apply during a malfunction, an exceedance of an emission standard monitored by a CEMS or COMS or operating limit specified under §63.1209 is not a violation of this subpart if you take the	(c)(1)(iii) – V.C.1.x. (c)(2) – V.C.5.iv. (c)(2)(v)(A)(1) - V.C.5.v. V.C.5.v.a.. (c)(2)(v)(A)(2) - V.C.5.v.b.(1). (c)(2)(v)(A)(3) - V.C.5.v.c. (c)(2)(v)(A)(3)(i) – V.C.4.v.c.(1). (c)(2)(v)(A)(3)(ii) – V.C.4.v.c.(2). V.C.4.v.c.(3).

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	corrective measures prescribed in the startup, shutdown, and malfunction plan. (*3*) *Excessive exceedances during malfunctions.* For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, you must: (*i*) Within 45 days of the 10th exceedance, complete an investigation of the cause of each exceedance and evaluation of approaches to minimize the frequency, duration, and severity of each exceedance, and revise the startup, shutdown, and malfunction plan as warranted by the evaluation to minimize the frequency, duration, and severity of each exceedance; and (*ii*) Record the results of the investigation and evaluation in the operating record, and include a summary of the investigation and evaluation, and any changes to the startup, shutdown, and malfunction plan, in the excess emissions report required under §63.10(e)(3).	
	(B) *Compliance with AWFCO requirements when burning hazardous waste during startup and shutdown.* (*1*) If you feed hazardous waste during startup or shutdown, you must include waste feed restrictions (e.g., type and quantity), and other appropriate operating conditions and limits in the startup, shutdown, and malfunction plan. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c)(2)(v)(B) - V.C.5.vi.
	(c)(3) *Automatic waste feed cutoff (AWFCO)*—(i) *General.* Upon the compliance date, you must operate the hazardous waste combustor with a functioning system that immediately and automatically cuts off the hazardous waste feed, except as provided by paragraph (c)(3)(viii) of this section: [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c)(3) - V.C.5.i. V.C.5.iv. V.C.5.v. (c)(3)(i)(B) – V.C.5.ii.b. (c)(3)(i)(C) – V.C.5.ii.c. (c)(3)(i)(D) – V.C.5.ii.d. (c)(3)(ii) – V.C.5.iii.

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		(c)(3)(iii) – V.C.5.vii. (c)(3)(iv) – V.C.5.viii. (c)(3)(v) – V.C.5.v.d. (c)(3)(vii) – V.C.5.ix.
	(c)(5) *Combustion system leaks.* (i) Combustion system leaks of hazardous air pollutants must be controlled by: [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c)(5) –V.E.1. V.E.2. (c)(5)(ii) – I.K.1.b. and I.K.1.c.
	(c)(6) Operator training and certification. (i) You must establish training programs for all categories of personnel whose activities may reasonably be expected to directly affect emissions of hazardous air pollutants from the source. [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c)(6) – I.K.13.
63.1207	**What are the performance testing requirements?** (a) *General.* The provisions of §63.7 apply, except as noted below. (b) *Types of performance tests*—(1) *Comprehensive performance test.* You must conduct comprehensive performance tests to demonstrate compliance with the emission standards provided by this subpart, establish limits for the operating parameters provided by §63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) Frequency of testing. Except as otherwise specified in paragraph (d)(4) of this section, you must conduct testing periodically as prescribed in paragraphs (d)(1) through (d)(3) of this section. The date of commencement of the initial comprehensive performance test is the basis for establishing the deadline to commence the initial confirmatory performance test and the next comprehensive performance test. You may conduct	I.K.1.b. (b)(1) – I.K.1.c. (d)(3) – I.K.2. (e)(2) – I.K.1.f. (j) – I.E.10., I.G.4. (l)(1)(i) and (ii) – I.K.4.b. (l)(1)(ii)(A) or (C) – I.K.4.c. (l)(2)(i) – I.K.4.b. (l)(2)(ii) and (iii) – I.K.4.b., I.K.4.c.

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	performance testing at any time prior to the required date. The deadline for commencing subsequent confirmatory and comprehensive performance testing is based on the date of commencement of the previous comprehensive performance test. Unless the Administrator grants a time extension under paragraph (i) of this section, you must conduct testing as follows . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (e) Notification of performance test and CMS performance evaluation, and approval of test plan and CMS performance evaluation plan. [The full text of this regulation is not included in this checklist for the sake of brevity.] (j) Notification of compliance—(1) Comprehensive performance test. (i) Except as provided by paragraphs (j)(4) and (j)(5) of this section, within 90 days of completion of a comprehensive performance test, you must postmark a Notification of Compliance documenting compliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under §63.1209. (ii) Upon postmark of the Notification of Compliance, you must comply with all operating requirements specified in the Notification of Compliance in lieu of the limits specified in the Documentation of Compliance required under §63.1211(c). [The full text of this regulation is not included in this checklist for the sake of brevity.] (l) Failure of performance test—(1) Comprehensive performance test. The provisions of this paragraph do not apply to the initial comprehensive performance test if you conduct the test prior to your compliance date. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
63.1208	**What are the test methods?** (a) [Reserved]	I.K.1.b.

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	(b) *Test methods.* You must use the following test methods to determine compliance with the emissions standards of this subpart: [The full text of this regulation is not included in this checklist for the sake of brevity.]	
63.1209	**What are the monitoring requirements?** (a) *Continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS).* (1)(i) You must use either a carbon monoxide or hydrocarbon CEMS to demonstrate and monitor compliance with the carbon monoxide and hydrocarbon standard under this subpart. You must also use an oxygen CEMS to continuously correct the carbon monoxide or hydrocarbon level to 7 percent oxygen. [The full text of this regulation is not included in this checklist for the sake of brevity.] (6) *Calculation of rolling averages.* [The full text of this regulation is not included in this checklist for the sake of brevity.]	V.C.1.ii. Table V-2 V.C.1.ix. (a)(6) – Table V-3.
	(b) *Other continuous monitoring systems (CMS).* [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) Except as specified in paragraphs (b)(2)(i) and (ii) of this section, you must install and operate continuous monitoring systems other than CEMS in conformance with §63.8(c)(3) that requires you, at a minimum, to comply with the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(b)(2) – II.M.1.c.
	(l) Mercury. You must comply with the mercury emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications. (1) Feedrate of mercury. (i) For incinerators and solid fuel boilers, when complying with the mercury emission standards under §§63.1203, 63.1216 and 63.1219, you	(l)(1)(i) – Table V-1

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	must establish a 12-hour rolling average limit for the total feedrate of mercury in all feedstreams as the average of the test run averages. [The full text of this regulation is not included in this checklist for the sake of brevity.]	
Notification, Reporting and Recordkeeping		
63.1210	(a) Summary of requirements. (1) You must submit the following notifications to the Administrator . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . .(d) Notification of compliance. (1) The Notification of Compliance status requirements of §63.9(h) apply, except that: (i) The notification is a Notification of Compliance, rather than compliance status . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.G.4. (d) - I.E.10.
63.1211	**What are the recordkeeping and reporting requirements?** *(a) Summary of reporting requirements.* You must submit the following reports to the Administrator: [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.1.b. II.M.2. V.G.1. V.G.2. V.G.3.
Replacement Emissions Standards and Operating Limits for Incinerators, Cement Kilns, and Lightweight Aggregate Kilns		
63.1219	**What are the replacement standards for hazardous waste incinerators?**	See, generally, Table V-1 in Module V.

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	(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain: [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.K.1.c.

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40 CFR Section	Requirement	Permit Condition(s)
Part 124		
Subpart A	General Program Requirements	
124.16	**Stays of contested permit conditions.** (a) *Stays.* (1) If a request for review of a RCRA . . . permit under § 124.19 of this part is filed, the effect of the contested permit conditions shall be stayed and shall not be subject to judicial review pending final agency action. Uncontested permit conditions shall be stayed only until the date specified in paragraph (a)(2)(i) of this section . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.C.
124.20	**Computation of Time.** (a) Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event. (b) Any time period scheduled to begin before the occurrence of an act or event shall be computed so that the period ends on the day before the act or event. (c) If the final day of any time period falls on a weekend or legal holiday, the time period shall be extended to the next working day. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.G.3.
Subpart B	Specific Procedures Applicable to RCRA Permits	
124.33	(a) Applicability. The requirements of this section apply to all applications seeking RCRA permits for hazardous waste management units over which EPA has permit issuance authority. For the purposes of this section only, "hazardous waste management units over which EPA has permit issuance authority" refers to hazardous waste management units for which the State where the units are located has not been authorized to issue RCRA permits pursuant to 40 CFR part 271.	I.J.1. I.K.12.

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	(b) The Director may assess the need, on a case-by-case basis, for an information repository. When assessing the need for an information repository, the Director shall consider a variety of factors, including: the level of public interest; the type of facility; the presence of an existing repository; and the proximity to the nearest copy of the administrative record. If the Director determines, at any time after submittal of a permit application, that there is a need for a repository, then the Director shall notify the facility that it must establish and maintain an information repository. (See 40 CFR 270.30(m) for similar provisions relating to the information repository during the life of a permit). . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
	(e) The Director shall specify requirements for informing the public about the information repository. At a minimum, the Director shall require the facility to provide a written notice about the information repository to all individuals on the facility mailing list.	I.J.3.
	(f) The facility owner/operator shall be responsible for maintaining and updating the repository with appropriate information throughout a time period specified by the Director. The Director may close the repository at his or her discretion, based on the factors in paragraph (b) of this section.	I.J.2.

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CHECKLIST FOR SIEMENS PARKER, AZ PERMIT (JULY 2016)

40 CFR Section	Requirement	Permit Condition(s)
Part 264	STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES	
Subpart B	General Facility Standards	
264.1	(a) The purpose of this part is to establish minimum national standards which define the acceptable management of hazardous waste. (b) The standards in this part apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste, except as specifically provided otherwise in this part or part 261 of this chapter. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (g) The requirements of this part do not apply to: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) The owner or operator of a facility managing recyclable materials described in §261.6 (a)(2), (3), and (4) of this chapter (except to the extent they are referred to in part 279 or subparts C, F, G, or H of part 266 of this chapter). . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(g)(2) – VI.H.1.
264.10	Applicability. (a) The regulations in this subpart apply to owners and operators of all hazardous waste facilities, except as provided in § 264.1 and in paragraph (b) of this section. (b) Section 264.18(b) applies only to facilities subject to regulation under subparts I through O and subpart X of this part.	I.
264.11	Identification number. Every facility owner or operator must apply to EPA for an EPA identification number in accordance with the EPA notification procedures (45 FR 12746).	I.
264.12(a)	Required notices.	(1): II.B.1.

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40 CFR Section	Requirement	Permit Condition(s)
	(1) The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source must notify the Regional Administrator in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.12(b)	The owner or operator of a facility that receives hazardous waste from an off-site source (except where the owner or operator is also the generator) must inform the generator in writing that he has the appropriate permit(s) for, and will accept, the waste the generator is shipping. The owner or operator must keep a copy of this written notice as part of the operating record.	II.B.2.
264.12(c)	Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the owner or operator must notify the new owner or operator in writing of the requirements of this part and part 270 of this chapter. [*Comment:* An owner's or operator's failure to notify the new owner or operator of the requirements of this part in no way relieves the new owner or operator of his obligation to comply with all applicable requirements.]	I.E.12.
264.13	General waste analysis. (a)(1) Before an owner or operator treats, stores, or disposes of any hazardous wastes, or nonhazardous wastes if applicable under §264.113(d), he must obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, the analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with this part and part 268 of this chapter. (2) The analysis may include data developed under part 261 of this chapter, and existing published or documented data on the hazardous	II.C.1. II.C.4. III.A. (b)(8) – Table IV-2.

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40 CFR Section	Requirement	Permit Condition(s)
	waste or on hazardous waste generated from similar processes. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.14	Security	II.D.1.
264.14(a)	(a) The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility, *unless* he can demonstrate to the Regional Administrator that: (1) Physical contact with the waste, structures, or equipment within the active portion of the facility will not injure unknowing or unauthorized persons or livestock which may enter the active portion of a facility; and (2) Disturbance of the waste or equipment, by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility, will not cause a violation of the requirements of this part. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.D.2.
264.14(c)	Unless the owner or operator has made a successful demonstration under paragraphs (a) (1) and (2) of this section, a sign with the legend, "Danger—Unauthorized Personnel Keep Out", must be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion. The legend must be written in English and in any other language predominant in the area surrounding the facility (e.g., facilities in counties bordering the Canadian province of Quebec must post signs in French; facilities in counties bordering Mexico must post signs in Spanish), and must be legible from a distance of at least 25 feet. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.D.3.
264.15	General inspection requirements.	II.E.1. II.F.1.
264.15(a)	(a) The owner or operator must inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing—or may lead to—(1) release of hazardous waste constituents to the	II.E.2.

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	environment or (2) a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.	
264.15(b)	(1) The owner or operator must develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards. (2) He must keep this schedule at the facility. (3) The schedule must identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, etc.). (4) The frequency of inspection may vary for the items on the schedule. However, the frequency should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use, except for Performance Track member facilities, that must inspect at least once each month, upon approval by the Director, as described in paragraph (b)(5) of this section. At a minimum, the inspection schedule must include the items and frequencies called for in §§264.174, 264.193, 264.195, 264.226, 264.254, 264.278, 264.303, 264.347, 264.602, 264.1033, 264.1052, 264.1053, 264.1058, and 264.1083 through 264.1089 of this part, where applicable . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.E.3.
264.15(c)	The owner or operator must remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has	II.E.4. III.F.2.d.

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	already occurred, remedial action must be taken immediately.	
264.15(d)	The owner or operator must record inspections in an inspection log or summary. He must keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.	II.E.5.
264.16	Personnel Training	I.K.13. II.G.1.
264.16(a)	(1) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this part. The owner or operator must ensure that this program includes all the elements described in the document required under paragraph (d)(3) of this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.16(d)	The owner or operator must maintain the following documents and records at the facility – [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.G.2.
264.16(e)	Training records on current personnel must be kept until closure of the facility; training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.	II.G.2.
264.17	General requirements for ignitable, reactive, or incompatible wastes. (a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-	II.H.2. III.J.3. (b) – III.K.1. IV.L.1. IV.L.2. (c) – III.I.6.

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	producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No Smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.18	Location standards. [The full text of this regulation is not included in this checklist for the sake of brevity.] (b) *Floodplains.* (1) A facility located in a 100-year floodplain must be designed, constructed, operated, and maintained to prevent washout or any hazardous waste by a 100-year flood, *unless* the owner or operator can demonstrate to the Regional Administrator's satisfaction that – . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(b) - II.I.
Subpart C	Preparedness and Prevention	
264.31	Design and operation of facility. Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.	II.A.1. IV.G.5.
264.32	Required equipment. All facilities must be equipped with the following, *unless* it can be demonstrated to the Regional Administrator that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below: (a) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel; (b) A device, such as a telephone (immediately available at the scene of operations) or a hand-	II.J.1.

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	held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams; (c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and (d) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.	
264.33	Testing and maintenance of equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.	II.J.2.
264.34	Access to communications or alarm system. (a) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, *unless* the Regional Administrator has ruled that such a device is not required under § 264.32. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.J.3.
264.35	Required aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, *unless* it can be demonstrated to the Regional Administrator that aisle space is not needed for any of these purposes.	II.J.4. III.E.3.a.
264.37	Arrangements with local authorities. (a) The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations:	II.J.5.

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	(1) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes; (2) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority; (3) Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and (4) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
Subpart D	Contingency Plan and Emergency Procedures	
264.50	The regulations in this subpart apply to owners and operators of all hazardous waste facilities, except as §264.1 provides otherwise.	II.K.1.
264.51	Purpose and implementation of contingency plan. (a) Each owner or operator must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water. [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.K.1.
264.52	Content of contingency plan. (a) The contingency plan must describe the actions facility personnel must take to comply with §§ 264.51 and 264.56 in response to fires, explosions, or any unplanned sudden or non-	II.K.1. (d) - II.K.4.

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	sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see § 264.55), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.53	Copies of contingency plan. A copy of the contingency plan and all revisions to the plan must be: (a) Maintained at the facility; and (b) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services. [*Comment:* The contingency plan must be submitted to the Regional Administrator with Part B of the permit application under part 270, of this chapter and, after modification or approval, will become a condition of any permit issued.]	II.K.1. II.K.2.
264.54	Amendment of contingency plan. The contingency plan must be reviewed, and immediately amended, if necessary, whenever: (a) The facility permit is revised; (b) The plan fails in an emergency; (c) The facility changes—in its design, construction, operation, maintenance, or other circumstances—in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency; (d) The list of emergency coordinators changes; or (e) The list of emergency equipment changes.	II.K.1. II.K.3.
264.55	Emergency coordinator.	II.K.1.

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	At all times, there must be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan. [*Comment:* The emergency coordinator's responsibilities are more fully spelled out in § 264.56. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of waste(s) handled by the facility, and type and complexity of the facility.]	II.K.4.
264.56	Emergency procedures. (a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately: (1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and (2) Notify appropriate State or local agencies with designated response roles if their help is needed. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.K.1.
Subpart E	Manifest System, Recordkeeping, and Reporting	
264.70	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (b) The revised Manifest form and procedures in 40 CFR 260.10, 261.7, 264.70, 264.71. 264.72, and 264.76, shall not apply until September 5, 2006. The Manifest form and procedures in 40 CFR 260.10, 261.7, 264.70, 264.71. 264.72, and 264.76, contained	II.L.1.

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	in the 40 CFR, parts 260 to 265, edition revised as of July 1, 2004, shall be applicable until September 5, 2006.	
264.71	(a)(1) If a facility receives hazardous waste accompanied by a manifest, the owner, operator or his/her agent must sign and date the manifest as indicated in paragraph (a)(2) of this section to certify that the hazardous waste covered by the manifest was received, that the hazardous waste was received except as noted in the discrepancy space of the manifest, or that the hazardous waste was rejected as noted in the manifest discrepancy space. (2) If a facility receives a hazardous waste shipment accompanied by a manifest, the owner, operator or his agent must – . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (f) Legal equivalence to paper manifests. Electronic manifests that are obtained, completed, and transmitted in accordance with § 262.20(a)(3) of this chapter, and used in accordance with this section in lieu of the paper manifest form are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement in these regulations to obtain, complete, sign, provide, use, or retain a manifest. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.L.1. II.L.1.c.
264.72	Manifest discrepancies. (a) Manifest discrepancies are: (1) Significant differences (as defined by paragraph (b) of this section) between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity and type of hazardous waste a facility actually receives; (2) Rejected wastes, which may be a full or partial shipment of hazardous waste that the TSDF cannot accept; or (3) Container residues, which are residues that exceed the quantity limits for "empty" containers set forth in 40 CFR 261.7(b). . .	II.L. II.L.1.a.

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	[The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.73	Operating record. (a) The owner or operator must keep a written operating record at his facility. (b) The following information must be recorded, as it becomes available, and maintained in the operating record for three years unless noted as follows – . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.B.2. II.M.1.i.a. II.M.1.i.b. IV.J.6. (b)(9) – I.E.9.b. II.A.6.
264.74	Availability, retention, and disposition of records. (a) All records, including plans, required under this part must be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of EPA who is duly designated by the Administrator. (b) The retention period for all records required under this part is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Administrator. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - I.I.2. (b) - I.E.9.b.
264.75	Biennial report. The owner or operator must prepare and submit a single copy of a biennial report to the Regional Administrator by March 1 of each even numbered year. The biennial report must be submitted on EPA form 8700-13B. The report must cover facility activities during the previous calendar year and must include – . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.3.
264.76	Unmanifested waste report. (a) If a facility accepts for treatment, storage, or disposal any hazardous waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper as described by § 263.20(e) of this chapter, and if the waste is not excluded from the manifest requirement by this chapter, then the owner or operator must prepare and submit a letter to the Regional Administrator within 15 days after	II.L. II.L.1.b.

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	receiving the waste. The unmanifested waste report must contain the following information – [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.77	Additional reports. In addition to submitting the biennial reports and unmanifested waste reports described in §§ 264.75 and 264.76, the owner or operator must also report to the Regional Administrator: (a) Releases, fires, and explosions as specified in § 264.56(j); (b) Facility closures specified in § 264.115; and (c) As otherwise required by subparts F, K through N, AA, BB, and CC of this part.	II.M.2.
Subpart F	Releases from Solid Waste Management Units	
264.90	Applicability. (a)(1) Except as provided in paragraph (b) of this section, the regulations in this subpart apply to owners or operators of facilities that treat, store or dispose of hazardous waste. The owner or operator must satisfy the requirements identified in paragraph (a)(2) of this section for all wastes (or constituents thereof) contained in solid waste management units at the facility, regardless of the time at which waste was placed in such units. (2) All solid waste management units must comply with the requirements in § 264.101. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) Regulations in this subpart may apply to miscellaneous units when necessary to comply with §§ 264.601 through 264.603. [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - VI.A.1.
264.100	Corrective action program. An owner or operator required to establish a corrective action program under this subpart must, at a minimum, discharge the following responsibilities: . . .	(e)(2) - VI.A.4

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	[The full text of this regulation is not included in this checklist for the sake of brevity.] (e) In addition to the other requirements of this section, the owner or operator must conduct a corrective action program to remove or treat in place any hazardous constituents under §264.93 that exceed concentration limits under §264.94 in groundwater: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (2) Beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the Regional Administrator that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.101	Corrective action for solid waste management units. (a) The owner or operator of a facility seeking a permit for the treatment, storage or disposal of hazardous waste must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.A.1. VI.A.2.
Subpart G	Closure and Post Closure	II.N.1.a. II.N.1.b. II.N.2.
264.110	Applicability.	

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	Except as § 264.1 provides otherwise: (a) Sections 264.111 through 264.115 (which concern closure) apply to the owners and operators of all hazardous waste management facilities; and . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.111	Closure performance standard. The owner or operator must close the facility in a manner that: (a) Minimizes the need for further maintenance; and (b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and (c) Complies with the closure requirements of this part, including, but not limited to, the requirements of §§ 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351, 264.601 through 264.603, and 264.1102.	III.B.4.
264.112	Closure plan; amendment of plan. (a) *Written plan.* (1) The owner or operator of a hazardous waste management facility must have a written closure plan. In addition, certain surface impoundments and waste piles . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (c) *Amendment of plan.* The owner or operator must submit a written notification of or request for a permit modification to authorize a change in operating plans, facility design, or the approved closure plan in accordance with the applicable procedures in parts 124 and 270. The written notification or request must include a copy of the amended closure plan for review or approval by the Regional Administrator. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.N.3.a. (c)(2) - II.N.3.b. (d) - II.N.4. V.H.3.

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	(d) *Notification of partial closure and final closure.* (1) . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.113	Closure; time allowed for closure. (a) Within 90 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator complies with all applicable requirements in paragraphs (d) and (e) of this section, at a hazardous waste management unit or facility, the owner or operator must treat, remove from the unit or facility, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan. The Regional Administrator may approve a longer period if the owner or operator . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.N.5.
264.114	Disposal or decontamination of equipment, structures and soils. During the partial and final closure periods, all contaminated equipment, structures and soils must be properly disposed of or decontaminated unless otherwise specified in §§ 264.197, 264.228, 264.258, 264.280 or § 264.310. By removing any hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and must handle that waste in accordance with all applicable requirements of part 262 of this chapter.	II.N.6.
264.115	Certification of closure. Within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within 60 days of the completion of final closure, the owner or operator must submit to the Regional Administrator, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by a qualified Professional Engineer. Documentation supporting the Professional Engineer's certification must be	II.N.7.

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	furnished to the Regional Administrator upon request until he releases the owner or operator from the financial assurance requirements for closure under §264.143(i).	
264.117	Post-closure care and use of property. (a)(1) Post-closure care for each hazardous waste management unit subject to the requirements of §§ 264.117 through 264.120 must begin after completion of closure of the unit and continue for 30 years after that date and must consist of at least the following:. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.O.
264.118	Post-closure plan; amendment of plan. (a) *Written Plan.* The owner or operator of a hazardous waste disposal unit must have a written post-closure plan . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.O.
264.119	Post-closure notices. (a) No later than 60 days after certification of closure of each hazardous waste disposal unit. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.O.
264.120	Certification of completion of post-closure care. No later than 60 days after completion of the established post-closure care period for each hazardous waste disposal unit . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.O.
Subpart H	Financial Requirements	
264.142	Cost estimate for closure. (a) The owner or operator must have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (b) During the active life of the facility, the owner or operator must adjust the closure cost	II.P.1. II.P.5. (b) - II.P.2.a. II.P.2.b. (c) - II.P.3. (d) - II.P.4.

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	estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with § 264.143. For owners and operators using the financial test or corporate guarantee, the closure cost estimate must be updated for inflation within 30 days after the close of the firm's fiscal year and before submission of updated information to the Regional Administrator as specified in § 264.143(f)(3). The adjustment may be made by . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (c) During the active life of the facility, the owner or operator must revise the closure cost estimate no later than 30 days after the Regional Administrator has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate must be adjusted for inflation as specified in § 264.142(b). (d) The owner or operator must keep the following at the facility during the operating life of the facility: The latest closure cost estimate prepared in accordance with § 264.142 (a) and (c) and, when this estimate has been adjusted in accordance with § 264.142(b), the latest adjusted closure cost estimate.	
264.143	Financial assurance for closure. An owner or operator of each facility must establish financial assurance for closure of the facility. He must choose from the options as specified in paragraphs (a) through (f) of this section. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.P.5. II.Q.
264.144	Cost estimate for post-closure care. (a) The owner or operator of a disposal surface impoundment, disposal miscellaneous unit, land treatment unit, or landfill unit, or of a surface impoundment or waste pile required under §§264.228 and 264.258 to prepare a contingent closure and post-closure plan, must	II.P.1.

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	have a detailed written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure regulations in §§264.117 through 264.120, 264.228, 264.258, 264.280, 264.310, and 264.603. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.147	Liability requirements. (a) *Coverage for sudden accidental occurrences.* An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - II.R.
264.148	Incapacity of owners or operators, guarantors, or financial institutions. (a) An owner or operator must notify the Regional Administrator by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.S.
264.151	Wording of the instruments. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.Q.
Subpart I	Use and Management of Containers	III.B.3.
264.170	Applicability. The regulations in this subpart apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as § 264.1 provides otherwise. [*Comment:* Under § 261.7 and § 261.33(c), if a hazardous waste is emptied from a container the residue remaining in the container is not	III.B.1.

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	considered a hazardous waste if the container is "empty" as defined in § 261.7. In that event, management of the container is exempt from the requirements of this subpart.]	
264.171	Condition of containers. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the requirements of this part.	II.E.4. III.C. III.F.2.d. III.H.1. IV.C.1.
264.172	Compatibility of waste with containers. The owner or operator must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.	III.D.1. III.D.2. III.D.4.
264.173	Management of containers. (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak. [*Comment:* Reuse of containers in transportation is governed by U.S. Department of Transportation regulations including those set forth in 49 CFR 173.28.]	III.E.3.c. (a) - III.E.1. (b) - III.E.2. III.E.3.b.
264.174	Inspections. At least weekly, the owner or operator must inspect areas where containers are stored, except for Performance Track member facilities, . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	III.H.3.
264.175	Containment. (a) Container storage areas must have a containment system that is designed and operated in accordance with paragraph (b) of this section, except as otherwise provided by paragraph (c) of this section. (b) A containment system must be designed and operated as follows: . . .	III.I.5.a. III.K.4. (b) III.F.1. III.F.2.c. (b)(3) - III.B.2. (b)(5) - III.F.2.a.

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	[The full text of this regulation is not included in this checklist for the sake of brevity.]	(c) - III.F.1. III.I.5.b.
264.176	Special requirements for ignitable or reactive waste. Containers holding ignitable or reactive waste must be located at least 15 meters (50 feet) from the facility's property line. [*Comment:* See § 264.17(a) for additional requirements.]	III.D.4. III.I.3. III.J.1. III.J.2.
264.177	Special requirements for incompatible wastes. (a) Incompatible wastes, or incompatible wastes and materials (see appendix V for examples), must not be placed in the same container, unless § 264.17(b) is complied with. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	III.D.4. III.I.4. (a) – III.J.2. III.K.1. (c) – III.K.3.
264.178	Closure. At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. [*Comment:* At closure, as throughout the operating period, unless the owner or operator can demonstrate in accordance with § 261.3(d) of this chapter that the solid waste removed from the containment system is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of parts 262 through 266 of this chapter].	III.B.4. III.L.1. III.L.2.
264.179	Air emission standards. The owner or operator shall manage all hazardous waste placed in a container in accordance with the applicable requirements of subparts AA, BB, and CC of this part.	III.G.1.
Subpart J	Tank Systems	IV.B.3.
264.191	Assessment of existing tank system's integrity. (a) For each existing tank system that does not have secondary containment meeting the requirements of §264.193, the owner or	I.K.8.a. I.K.8.b. IV.A.1. IV.J.1.

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	operator must determine that the tank system is not leaking or is unfit for use. Except as provided in paragraph (c) of this section, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by a qualified Professional Engineer, in accordance with §270.11(d) of this chapter, that attests to the tank system's integrity by January 12, 1988. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.192	Design and installation of new tank systems or components. (a) Owners or operators of new tank systems or components must obtain and submit to the Regional Administrator, at time of submittal of part B information, a written assessment, reviewed and certified by a qualified Professional Engineer, in accordance with § 270.11(d) of this chapter, attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment must show . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	IV.A.1. IV.B.2. IV.B.4.a. IV.B.4.b. (a) – IV.B.4.
264.193	Containment and detection of releases. (a) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided (except as provided in paragraphs (f) and (g) of this section): . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.K.7. IV.F.1. IV.F.6.a. (b)(1) – IV.F.3. (e) - IV.F.4. (e)(1) - IV.F.7. (e)(1)(i), (ii), (iii) and (iv) - IV.F.2. (e)(1)(iii) – IV.F.3. (e)(3) - IV.F.5. (i) - I.K.8.a. I.K.8.b. IV.F.6.b.i. IV.H.2.d.

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		(i)(4) – IV.J.5. (i)(5) – IV.H.10.
264.194	General operating requirements. (a) Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail. (b) The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - IV.D.1. (b) - IV.E.1. IV.E.2.
264.195	Inspections. (a) The owner or operator must develop and follow a schedule and procedure for inspecting overfill controls. (b) The owner or operator must inspect at least once each operating day data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	IV.H.3. (b) - IV.H.4. (c)(1) - IV.H.2.a. (c)(2) - IV.H.2.b. (f) – IV.F.6.b.ii. (f)(1)-(4) – IV.H.2.c. (h) - IV.J.6.
264.196	Response to leaks or spills and disposition of leaking or unfit-for-use tank systems. A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the owner or operator must satisfy the following requirements: (a) *Cessation of use; prevent flow or addition of wastes.* . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - IV.I.1.a. (b) - IV.I.1.b. (c) - IV.I.1.c.ii. (d)(1) - IV.J.2. (d)(2) – IV.J.2. (d)(3) – IV.J.3.e. (e)(2) - IV.I.1.d.i. (e)(3) – IV.I.1.d.ii.

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		(e)(4) – IV.I.1.d.iii. (f) – IV.I.1.e. IV.J.4.
264.197	Closure and post-closure care. (a) At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless § 261.3(d) of this chapter applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in subparts G and H of this part. (b) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph (a) of this section, then . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - IV.M.1. (b) - IV.M.2. (c) – I.K.9. IV.F.6.b.iii. IV.M.3. (c)(3) – II.P.1. (c)(5) – II.P.1.
264.198	Special requirements for ignitable or reactive wastes. (a) Ignitable or reactive waste must not be placed in tank systems, unless: (1) The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - IV.K.1.iii. (a)(1)(i) & (ii) – IV.K.1.i. (b) - IV.K.2.
264.199	Special requirements for incompatible wastes. (a) Incompatible wastes, or incompatible wastes and materials, must not be placed in the same tank system, unless § 264.17(b) is complied with. (b) Hazardous waste must not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless § 264.17(b) is complied with.	(a) - IV.L.1. (b) - IV.L.2.
264.228	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (c) . . .	(c)(2) – II.P.1.

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	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (2) The cost estimates calculated under §§264.142 and 264.144 for closure and post-closure care of an impoundment subject to this paragraph must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under paragraph (a)(1) of this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.258	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (c). . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) The cost estimates calculated under §§264.142 and 264.144 for closure and post-closure care of a pile subject to this paragraph must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under paragraph (a) of this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.P.1.
Subpart O	Incinerators	V.A.3.
264.341	Waste analysis. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (b) Throughout normal operation the owner or operator must conduct sufficient waste analysis to verify that waste feed to the incinerator is within the physical and chemical composition limits specified in his permit (under § 264.345(b)).	(b) - V.C.1.iii.

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264.344	Hazardous waste incinerator permits. (a) The owner or operator of a hazardous waste incinerator may burn only wastes specified in his permit and only under operating conditions specified for those wastes under §264.345, except: (1) In approved trial burns under §270.62 of this chapter . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a)(1) – I.K.1.b.
264.345	Operating requirements. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) Fugitive emissions from the combustion zone must be controlled by: (1) Keeping the combustion zone totally sealed against fugitive emissions; or (2) Maintaining a combustion zone pressure lower than atmospheric pressure; or (3) An alternate means of control demonstrated (with part B of the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(d) – V.E.1.
264.347	Monitoring and inspections. (a) The owner or operator must conduct, as a minimum, the following monitoring while incinerating hazardous waste: (1) Combustion temperature, waste feed rate, and the indicator of combustion gas velocity specified in the facility permit must be monitored on a continuous basis. (2) CO must be monitored on a continuous basis at a point in the incinerator downstream of the combustion zone and prior to release to the atmosphere. (3) Upon request by the Regional Administrator, sampling and analysis of the waste and exhaust emissions must be	(a)(3) – V.I. (b) – V.F.2. (c) – V.C.5.ix. (d) – V.C.5.ix. V.G.1

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	conducted to verify that the operating requirements established in the permit achieve the performance standards of §264.343. (b) The incinerator and associated equipment (pumps, valves, conveyors, pipes, etc.) must be subjected to thorough visual inspection, at least daily, for leaks, spills, fugitive emissions, and signs of tampering. (c) The emergency waste feed cutoff system and associated alarms must be tested at least weekly to verify operability, unless the applicant demonstrates to the Regional Administrator that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, operational testing must be conducted at least monthly. (d) This monitoring and inspection data must be recorded and the records must be placed in the operating record required by § 264.73 of this part and maintained in the operating record for five years.	
264.351	Closure. At closure the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the incinerator site. . . [The comment accompanying this regulation is not included in this checklist for the sake of brevity.]	V.H.1.
Subpart X	Miscellaneous Units	
264.600	Applicability. The requirements in this subpart apply to owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units, except as § 264.1 provide[s] otherwise.	V.A.1. V.A.2. V.A.3.
264.601	Environmental performance standards. A miscellaneous unit must be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment. Permits for miscellaneous units are to contain such terms and provisions as necessary to protect human health and the environment, including, but not limited to, as	V.A.1. V.A.2. V.A.3.

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	appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit. Permit terms and provisions must include those requirements of subparts I through O and subparts AA through CC of this part, part 270, part 63 subpart EEE, and part 146 of this chapter that are appropriate for the miscellaneous unit being permitted. Protection of human health and the environment includes, but is not limited to: (a) Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in the ground water or subsurface environment, considering: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (b) Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in surface water, or wetlands or on the soil surface considering: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) Prevention of any release that may have adverse effects on human health or the environment due to migration of waste constituents in the air, considering: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.602	Monitoring, analysis, inspection, response, reporting, and corrective action. Monitoring, testing, analytical data, inspections, response, and reporting procedures and frequencies must ensure compliance with §§ 264.601, 264.15, 264.33, 264.75, 264.76, 264.77, and 264.101 as well as meet any additional requirements needed to protect human health and the environment as specified in the permit.	V.A.1. V.A.2. V.A.3.
264.603	Post-closure care.	V.A.1. V.A.2.

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	A miscellaneous unit that is a disposal unit must be maintained in a manner that complies with § 264.601 during the post-closure care period. In addition, if a treatment or storage unit has contaminated soils or ground water that cannot be completely removed or decontaminated during closure, then that unit must also meet the requirements of § 264.601 during post-closure care. The post-closure plan under § 264.118 must specify the procedures that will be used to satisfy this requirement.	V.A.3.
Subpart AA	Air Emissions Standards for Process Vents	
264.1031	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . Equipment means each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange or other connector, and any control devices or systems required by this subpart. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.4.
Subpart BB	Air Emissions Standards for Equipment Leaks.	I.K.10.a. II.H.4. IV.G.1. IV.G.2.b. IV.G.2.c. IV.G.3. Table IV-2.
264.1050	[The full text of this regulation is not included in this checklist for the sake of brevity.] (b) Except as provided in §264.1064(k), this subpart applies to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight that are managed in one of the following: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	III.G.6.
264.1060	Standards: Closed-vent systems and control devices. (a) Owners and operators of closed-vent systems and control devices subject to this subpart shall comply with the provisions of § 264.1033 of this part.	IV.J.8.

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	. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.1063	Test methods and procedures. (a) Each owner or operator subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section. [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (d) In accordance with the waste analysis plan required by § 264.13(b), an owner or operator of a facility must determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds 10 percent by weight using the following: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (f) When an owner or operator and the Regional Administrator do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the procedures in paragraph (d)(1) or (d)(2) of this section can be used to resolve the dispute. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.C.8. (d) – I.K.10.b. I.K.10.c. III.G.6. (d)(1) – I.K.10.e. (d)(2) – I.K.10.e. (f) II.H.4.
264.1064	Recordkeeping requirements. (a)(1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (k) The following information shall be recorded in a log that is kept in the facility operating record for use in determining exemptions as provided in the applicability section of this subpart and other specific subparts: . . .	II.M.1.b. II.M.4. IV.J.8. (k) – III.G.6. (m) - I.K.10.d. IV.G.10. Table IV-2.

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	[The full text of this regulation is not included in this checklist for the sake of brevity.] (m) The owner or operator of a facility with equipment that is subject to this subpart and to regulations at 40 CFR part 60, part 61, or part 63 may elect to determine compliance with this subpart either by documentation pursuant to § 264.1064 of this subpart, or by documentation of compliance with the regulations at 40 CFR part 60, part 61, or part 63 pursuant to the relevant provisions of the regulations at 40 part 60, part 61, or part 63. The documentation of compliance under regulations at 40 CFR part 60, part 61, or part 63 shall be kept with or made readily available with the facility operating record.	
264.1065	Reporting requirements. (a) A semiannual report shall be submitted by owners and operators subject to the requirements of this subpart to the Regional Administrator by dates specified by the Regional Administrator. The report shall include the following information: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.4.
Subpart CC	Air Emissions Standards for Tanks, Surface Impoundments and Containers	III.G.1. IV.G.8. Table IV-2.
264.1080	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (b) The requirements of this subpart do not apply to the following waste management units at the facility: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (7) A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63. For the purpose of complying with this paragraph, a tank for which the air emission control	(b)(7) – IV.G.6.

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	includes an enclosure, as opposed to a cover, must be in compliance with the enclosure and control device requirements of §264.1084(i), except as provided in §264.1082(c)(5). . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.1082	Standards: General. [The full text of this regulation is not included in this checklist for the sake of brevity.] (b) The owner or operator shall control air pollutant emissions from each hazardous waste management unit in accordance with standards specified in §§ 264.1084 through 264.1087 of this subpart, as applicable to the hazardous waste management unit, except as provided for in paragraph (c) of this section. (c) A tank, surface impoundment, or container is exempt from standards specified in § 264.1084 through § 264.1087 of this subpart, as applicable, provided that the waste management unit is one of the following: (1) A tank, surface impoundment, or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than 500 parts per million by weight (ppmw). . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) A tank, surface impoundment, or container for which the organic content of all the hazardous waste entering the waste management unit has been reduced by an organic destruction or removal process that achieves any one of the following conditions: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) The Regional Administrator may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface impoundment, or container exempted from	III.G.3. IV.G.6. Table IV-2. (c) – III.G.2. IV.G.8. (c)(1) – IV.G.6. IV.G.8.a.iv. Table IV-2. V.E.2. (c)(2) – III.G.4. (c)(2)(i)-(vi) – IV.G.7. (d) – II.C.9.

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	using air emission controls under the provisions of this section as follows: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.1083	Waste determination procedures. (a) Waste determination procedure to determine average volatile organic (VO) concentration of a hazardous waste at the point of waste origination. [The full text of this regulation is not included in this checklist for the sake of brevity.] (b) Waste determination procedures for treated hazardous waste. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	III.G.3. III.G.4. IV.G.6. (a) - III.G.2. IV.G.6. (b) - IV.G.7.
264.1084	Standards: Tanks. (a) The provisions of this section apply to the control of air pollutant emissions from tanks for which §264.1082(b) of this subpart references the use of this section for such air emission control. (b) The owner or operator shall control air pollutant emissions from each tank subject to this section in accordance with the following requirements as applicable: (1) For a tank that manages hazardous waste that meets all of the conditions specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section, the owner or operator shall . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) For a tank that manages hazardous waste that does not meet all of the conditions specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section, the owner or operator shall . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) Owners and operators controlling air pollutant emissions from a tank using Tank Level 1 controls shall meet the requirements	IV.H.6. Table IV-2. (b)(1)(i) – (iii) – IV.G.8.a.i. IV.G.8.a.ii. (b)(2) – IV.G.8.a.ii. (c) – IV.G.8.a.i. (d) - IV.G.8.a.i. IV.G.8.a.ii. (g) - IV.G.8.a.iii. (j) - IV.G.8.a.iv. (k) - IV.I.2.

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	specified in paragraphs (c)(1) through (c)(4) of this section: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) Owners and operators controlling air pollutant emissions from a tank using Tank Level 2 controls shall use one of the following tanks: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (g) The owner or operator who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in paragraphs (g)(1) through (g)(3) of this section. [The full text of this regulation is not included in this checklist for the sake of brevity.] (j) The owner or operator shall transfer hazardous waste to a tank subject to this section in accordance with the following requirements: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (k) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of paragraph (c)(4), (e)(3), (f)(3), or (g)(3) of this section as follows: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.1086	Standards: Containers. (a) The provisions of this section apply to the control of air pollutant emissions from containers for which §264.1082(b) of this subpart references the use of this section for such air emission control. (b) *General requirements.* (1) The owner or operator shall control air pollutant emissions from each container subject to this section in accordance with the following requirements, as	III.I.1. (b) - III.G.5.b. III.G.5.c. III.G.5.d. (c) - III.G.5.b. (c)(4) – III.H.5.a.iii.

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	applicable to the container, except when the special provisions for waste stabilization processes specified in paragraph (b)(2) of this section apply to the container. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) *Container Level 1 standards.* (1) A container using Container Level 1 controls is one of the following: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) *Container Level 2 standards.* (1) A container using Container Level 2 controls is one of the following: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (e) *Container Level 3 standards.* (1) A container using Container Level 3 controls is one of the following: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c)(4)(iii) – III.H.5.a.ii. (d) - III.G.5.c. (d)(4) – III.H.5.b. (e) - III.G.5.d. (e)(4) – III.H.5.c.
264.1087	Standards: Closed-vent systems and control devices. (a) This section applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of this subpart. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	IV.G.1. Table IV-2.
264.1088	Inspection and monitoring requirements. (a) The owner or operator shall inspect and monitor air emission control equipment used to comply with this subpart in accordance with the applicable requirements specified in § 264.1084 through § 264.1087 of this subpart. (b) The owner or operator shall develop and implement a written plan and schedule to perform the inspections and monitoring required by paragraph (a) of this section. The owner or operator shall incorporate this plan	III.H.4. IV.G.1.

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	and schedule into the facility inspection plan required under 40 CFR 264.15.	
264.1089	Recordkeeping requirements. (a) Each owner or operator of a facility subject to requirements of this subpart shall record and maintain the information specified in paragraphs (b) through (j) of this section, as applicable to the facility. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.2. III.I.1. IV.G.1. (f)(1) – IV.G.4. Table IV-2. (j) – IV.G.10. Table IV-2.
264.1090	Reporting requirements. (a) Each owner or operator managing hazardous waste in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of § 264.1082(c) of this subpart shall report to the Regional Administrator each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions specified in § 264.1082 (c)(1) or (c)(2) of this subpart, as applicable. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.2. III.I.2. IV.G.1. (a) – IV.G.4. Table IV-2.

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40 CFR Section	Requirement	Permit Condition(s)
Part 270		VI.G.4.
Subpart A		
270.1	Purpose and scope of these regulations. (a) Coverage. (1) These permit regulations establish provisions for the Hazardous Waste Permit Program under Subtitle C of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (RCRA), (Pub. L. 94-580, as amended by Pub. L. 95-609 and by Pub. L. 96-482; 42 U.S.C. 6091 et seq.). They apply to EPA and to approved States to the extent provided in part 271. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) *Scope of the RCRA permit requirement.* RCRA requires a permit for the "treatment," "storage," and "disposal" of any "hazardous waste" as identified or listed in 40 CFR part 261. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c) - I.A.1 II.A.2. II.A.5.
270.3	Considerations under Federal law. The following is a list of Federal laws that may apply to the issuance of permits under these rules. When any of these laws is applicable, its procedures must be followed. When the applicable law requires consideration or adoption of particular permit conditions or requires the denial of a permit, those requirements also must be followed. (a) *The Wild and Scenic Rivers Act.* 16 U.S.C. 1273 *et seq.* Section 7 of the Act prohibits the Regional Administrator from assisting by license or otherwise the construction of any water resources project that would have a direct, adverse effect on the values for which a national wild and scenic river was established. (b) *The National Historic Preservation Act of 1966.* 16 U.S.C. 470 *et seq.* Section 106 of the Act and implementing regulations (36 CFR part 800) require the Regional Administrator, before issuing a license, to adopt measures when feasible to mitigate potential adverse effects of the licensed activity and properties listed or eligible for listing in the National Register of Historic Places. The Act's requirements are to be implemented in cooperation with State Historic Preservation Officers and upon notice to, and	(a) EPA's analysis of the Wild and Scenic Rivers Act is described in Section 5.4.3. of this Statement of Basis. (b) EPA's National Historic Preservation Act (NHPA) Determination is described in Section 5.4.1. of this Statement of Basis, and included at Appendix C, hereto.

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	when appropriate, in consultation with the Advisory Council on Historic Preservation. (c) *The Endangered Species Act.* 16 U.S.C. 1531 *et seq.* Section 7 of the Act and implementing regulations (50 CFR part 402) require the Regional Administrator to ensure, in consultation with the Secretary of the Interior or Commerce, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat. (d) *The Coastal Zone Management Act.* 16 U.S.C. 1451 *et seq.* Section 307(c) of the Act and implementing regulations (15 CFR part 930) prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State Coastal Zone Management program, and the State or its designated agency concurs with the certification (or the Secretary of Commerce overrides the State's nonconcurrence). (e) *The Fish and Wildlife Coordination Act.* 16 U.S.C. 661 *et seq.* requires that the Regional Administrator, before issuing a permit proposing or authorizing the impoundment (with certain exemptions), diversion, or other control or modification of any body of water, consult with the appropriate State agency exercising jurisdiction over wildlife resources to conserve those resources. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c) EPA's Endangered Species Act (ESA) Determination is described in Section 5.4.2. of this Statement of Basis, and included at Appendix D. (d) EPA's analysis of the Coastal Zone Management Act is described in Section 5.4.4. of this Statement of Basis. (e) EPA's analysis of the Fish and Wildlife Coordination Act is described in Section 5.4.5. of this Statement of Basis.
270.4	Effect of a permit. (a)(1) Compliance with a RCRA permit during its term constitutes compliance, for purposes of enforcement, with subtitle C of RCRA except for those requirements *not included* in the permit which: (i) Become effective by statute; (ii) Are promulgated under part 268 of this chapter restricting the placement of hazardous wastes in or on the land; (iii) . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . or (iv) Are promulgated under subparts AA, BB, or CC of part 265 of this chapter limiting air emissions. . .	I.A.1. (a)(1) – I.A.8. (a)(1)(i)-(iv) – I.A.4. II.A.2. II.A.5.

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	[The full text of this regulation is not included in this checklist for the sake of brevity.] (2) A permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in §§ 270.41 and 270.43, or the permit may be modified upon the request of the permittee as set forth in § 270.42. (b) The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege. (c) The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.	(a)(2) - I.B.1. (b) - I.A.2. (c) - I.A.3.
270.10	General application requirements. (a) Applying for a permit. Below is information on how to obtain a permit and where to find requirements for specific permits . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (h) Reapplying for a permit. If you have an effective permit and you want to reapply for a new one, you have two options: (1) You may submit a new application at least 180 days before the expiration date of the effective permit, unless the Director allows a later date; or . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.E.3. (h) - I.E.2.
270.10(i)	*Recordkeeping.* Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under §§ 270.10(d), 270.13, 270.14 through 270.21 for a period of at least 3 years from the date the application is signed. [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.5. Date application signed: April 8, 2016.
270.11	**Signatories to permit applications and reports.** (a) *Applications* . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.F. (d) – I.K.8.a. I.K.8.b. IV.I.1.e.

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40 CFR Section	Requirement	Permit Condition(s)
	(b) Reports. All reports required by permits and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d)(1) Any person signing a document under paragraph (a) or (b) of this section must make the following certification . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
270.12	Confidentiality of Information [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.H.
270.13	Contents of part A of the permit application. Part A of the RCRA application shall include the following information. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.E.3. VI.L.1.
270.14	Contents of part B: General requirements. (a) Part B of the permit application consists of the general information requirements of this section, and the specific information requirements in §§0.14 through 270.29 applicable to the facility. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.E.3. VI.L.1.
270.15	Specific part B information requirements for containers. Except as otherwise provided in §264.170, owners or operators of facilities that store containers of hazardous waste must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.16	Specific part B information requirements for tank systems. Except as otherwise provided in §264.190, owners and operators of facilities that use tanks to store or treat	VI.L.1.

40 CFR Section	Requirement	Permit Condition(s)
	hazardous waste must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
270.17	Specific part B information requirements for surface impoundments. Except as otherwise provided in §264.1, owners and operators of facilities that store, treat or dispose of hazardous waste in surface impoundments must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.18	Specific part B information requirements for waste piles. Except as otherwise provided in §264.1, owners and operators of facilities that store or treat hazardous waste in waste piles must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.19	Specific part B information requirements for incinerators. Except as §264.340 of this Chapter and §270.19(e) provide otherwise, owners and operators of facilities that incinerate hazardous waste must fulfill the requirements of paragraphs (a), (b), or (c) of this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.20	Specific part B information requirements for land treatment facilities. Except as otherwise provided in §264.1, owners and operators of facilities that use land treatment to dispose of hazardous waste must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.21	Specific part B information requirements for landfills. Except as otherwise provided in §264.1, owners and operators of facilities that dispose of hazardous waste in	VI.L.1.

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	landfills must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
270.22	Specific part B information requirements for boilers and industrial furnaces burning hazardous waste. When an owner or operator of a cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace becomes subject to RCRA permit requirements after October 12, 2005, or when an owner or operator of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in part 63, subpart EEE, of this chapter (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance under §§63.1207(j) and 63.1210(d) of this chapter documenting compliance with all applicable requirements of part 63, subpart EEE, of this chapter), the requirements of this section do not apply. The requirements of this section do apply, however, if the Director determines certain provisions are necessary to ensure compliance with §§266.102(e)(1) and 266.102(e)(2)(iii) of this chapter if you elect to comply with §270.235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events; or if you are an area source and elect to comply with the §§266.105, 266.106, and 266.107 standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals; or the Director determines certain provisions apply, on a case-by-case basis, for purposes of information collection in accordance with §§270.10(k), 270.10(l), 270.32(b)(2), and 270.32(b)(3) . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.23	Specific part B information requirements for miscellaneous units. Except as otherwise provided in §264.600, owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	V.A.1. V.A.2. V.A.3. V.C.1.iii.

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40 CFR Section	Requirement	Permit Condition(s)
Subpart C	**PERMIT CONDITIONS**	
270.30(a)	*Duty to comply.* The permittee must comply with all conditions of this permit, except that the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit. (See § 270.61). Any permit noncompliance, except under the terms of an emergency permit, constitutes a violation of the appropriate Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.	I.E.1.
270.30(b)	*Duty to reapply.* If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.	I.B.2. I.E.2.
270.30(c)	*Need to halt or reduce activity not a defense.* It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.	I.E.4.
270.30(d)	In the event of noncompliance with the permit, the permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.	I.E.5.
270.30(e)	*Proper operation and maintenance.* The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.	I.E.6.
270.30(f)	*Permit actions.* This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.	I.B.1.
270.30(g)	*Property rights.* The permit does not convey any property rights of any sort, or any exclusive privilege.	I.A.2.

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40 CFR Section	Requirement	Permit Condition(s)
270.30(h)	*Duty to provide information.* The permittee shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.	I.E.7.
270.30(i)	*Inspection and entry.* The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to: (1) Enter at reasonable times upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and (4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.	I.E.8.
270.30(j)	*Monitoring and records.* (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, the certification required by § 264.73(b)(9) of this chapter, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, certification, or application. This period may be extended by request of the Director at any time. The permittee shall maintain records from all ground-water monitoring wells and associated ground-water surface elevations, for the active life of the facility, and for disposal facilities for the post-closure care period as well. (3) Records for monitoring information shall include . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(j)(1) I.E.9.a. (j)(2) I.E.9.b. (j)(3) I.E.9.c.

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40 CFR Section	Requirement	Permit Condition(s)
270.30(k)	*Signatory requirements.* All applications, reports, or information submitted to the Director shall be signed and certified (See § 270.11.)	I.F.
270.30(l)	*Reporting requirements* —(1) *Planned changes.* The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. (2) *Anticipated noncompliance.* The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. For a new facility, the permittee may not treat, store, or dispose of hazardous waste; and for a facility being modified, the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in § 270.42, until: (i) The permittee has submitted to the Director by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and (ii)(A) The Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or (B) Within 15 days of the date of submission of the letter in paragraph (l)(2)(i) of this section, the permittee has not received notice from the Director of his or her intent to inspect, prior inspection is waived and the permittee may commence treatment, storage, or disposal of hazardous waste. (3) *Transfers.* This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under RCRA. (See § 270.40) (4) *Monitoring reports.* Monitoring results shall be reported at the intervals specified elsewhere in this permit. (5) *Compliance schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. (6) *Twenty-four hour reporting.* (i) The permittee shall report any noncompliance which may endanger health or the environment orally within 24 hours from the time the permittee becomes aware of the circumstances, including:	(l)(1) I.E.10. (l)(2) I.E.11. (l)(3) I.E.12. (l)(5) I.E.14. (l)(6)(i) I.E.13.a. (l)(6)(ii) I.E.13.b. (l)(6)(iii) I.E.13.c. (l)(7) II.L.1., II.L.1.a. (l)(8) II.L.1., II.L.1.b. (l)(9) II.M.3. (l)(10) I.E.15. (l)(11) I.E.16.

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40 CFR Section	Requirement	Permit Condition(s)
	(A) Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies. (B) Any information of a release or discharge of hazardous waste or of a fire or explosion from the HWM facility, which could threaten the environment or human health outside the facility. (ii) The description of the occurrence and its cause shall include: (A) Name, address, and telephone number of the owner or operator; (B) Name, address, and telephone number of the facility; (C) Date, time, and type of incident; (D) Name and quantity of material(s) involved; (E) The extent of injuries, if any; (F) An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and (G) Estimated quantity and disposition of recovered material that resulted from the incident. (iii) A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Director may waive the five day written notice requirement in favor of a written report within fifteen days. (7) *Manifest discrepancy report:* If a significant discrepancy in a manifest is discovered, the permittee must attempt to reconcile the discrepancy. If not resolved within fifteen days, the permittee must submit a letter report, including a copy of the manifest, to the Director. (See 40 CFR 264.72.) (8) *Unmanifested waste report:* This report must be submitted to the Director within 15 days of receipt of unmanifested waste. (See 40 CFR 264.76.) (9) *Biennial report:* A biennial report must be submitted covering facility activities during odd numbered calendar years. (See 40 CFR 264.75.) (10) *Other noncompliance.* The permittee shall report all instances of noncompliance not reported under paragraphs (l)(4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (l)(6) of this section. (11) *Other information.* Where the permittee becomes aware that it failed to submit any relevant facts in a permit	

40 CFR Section	Requirement	Permit Condition(s)
	application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.	
270.30(m)	*Information repository.* The Director may require the permittee to establish and maintain an information repository at any time, based on the factors set forth in 40 CFR 124.33(b). The information repository will be governed by the provisions in 40 CFR 124.33(c) through (f).	I.J.1. I.J.2. I.J.3. I.K.12.
270.31	**Requirements for recording and reporting of monitoring results.** All permits shall specify: (a) Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate); (b) Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring; (c) Applicable reporting requirements based upon the impact of the regulated activity and as specified in parts 264, 266 and 267. Reporting shall be no less frequent than specified in the above regulations.	II.M See, also, Modules III through VI for more detail.
270.32	Establishing permit conditions. [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (c) For a State issued permit, an applicable requirement is a State statutory or regulatory requirement which takes effect prior to final administrative disposition of a permit. For a permit issued by EPA, an applicable requirement is a statutory or regulatory requirement (including any interim final regulation) which takes effect prior to the issuance of the permit. Section 124.14 (reopening of comment period) provides a means for reopening EPA permit proceedings at the discretion of the Director where new requirements become effective during the permitting process and are of sufficient magnitude to make additional proceedings desirable. For State and EPA administered programs, an applicable requirement is also any requirement which takes effect prior to the modification or revocation and reissuance of a permit, to the extent allowed in §270.41. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.A.8.

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40 CFR Section	Requirement	Permit Condition(s)
270.33(a)	The permit may, when appropriate, specify a schedule of compliance leading to compliance with the Act and regulations. [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.K.
Subpart D	**Changes to Permits**	
270.40	Transfer of permits. [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.E.12.
270.41	Modification or revocation and reissuance of permits [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.B.1. VI.A.4. VI.K. VI.L.3. VI.M.
270.42	Permit modification at the request of the permittee. (a) Class 1 modifications. (1) Except as provided in paragraph (a)(2) of this section, the permittee may put into effect Class 1 modifications listed in appendix I of this section under the following conditions . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (b) Class 2 modifications. (1) For Class 2 modifications, listed in appendix I of this section, the permittee must submit a modification request to the Director that . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) Class 3 modifications. (1) For Class 3 modifications listed in appendix I of this section, the permittee must submit a modification request to the Director that . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) Other modifications. (1) In the case of modifications not explicitly listed in appendix I of this section, the permittee may submit a Class 3 modification request to the Agency, or he or she may request a determination by the Director that the modification should be reviewed and approved as a Class 1 or Class 2 modification. If the permittee requests that the	I.B.1. I.E.10. I.G.6.a. I.G.6.b. I.G.6.c. I.G.7.a. I.K.5.c. II.A.4. II.K.3.b. II.N.3.b II.N.3.c. II.N.5. IV.B.2. VI.E.2. VI.K. (c) – VI.L.1. (d) – I.G.7.b. Appendix I – I.G.7.a.

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40 CFR Section	Requirement	Permit Condition(s)
	modification be classified as a Class 1 or 2 modification, he or she must provide the Agency with the necessary information to support the requested classification. (2) The Director shall make the determination described in paragraph (d)(1) of this section as promptly as practicable. In determining the appropriate class for a specific modification, the Director shall consider the similarity of the modification to other modifications codified in appendix I and the following criteria . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] Appendix I to §270.42—Classification of Permit Modification [The full text of this regulation is not included in this checklist for the sake of brevity.]	
270.43	Termination of permits. [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.B.1. VI.A.6.
Subpart E	**Expiration and Continuation of Permits**	
270.50	Duration of permits. (a) RCRA permits shall be effective for a fixed term not to exceed 10 years. (b) Except as provided in § 270.51, the term of a permit shall not be extended by modification beyond the maximum duration specified in this section. (c) The Director may issue any permit for a duration that is less than the full allowable term under this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.E.3.
270.51	Continuation of expiring permits. (a) *EPA permits.* When EPA is the permit-issuing authority, the conditions of an expired permit continue in force under 5 U.S.C. 558(c) until the effective date of a new permit (see § 124.15) if: (1) The permittee has submitted a timely application under § 270.14 and the applicable sections in §§ 270.15 through 270.29 which is a complete (under § 270.10(c)) application for a new permit; and (2) The Regional Administrator through no fault of the permittee, does not issue a new permit with an effective date	I.E.3.

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40 CFR Section	Requirement	Permit Condition(s)
	under § 124.15 on or before the expiration date of the previous permit (for example, when issuance is impracticable due to time or resource constraints). . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
Subpart F	**SPECIAL FORMS OF PERMITS**	
270.62	Hazardous waste incinerator permits. When an owner or operator of a hazardous waste incineration unit becomes subject to RCRA permit requirements after October 12, 2005, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in part 63, subpart EEE, of this chapter (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance under §§63.1207(j) and 63.1210(d) of this chapter documenting compliance with all applicable requirements of part 63, subpart EEE, of this chapter), the requirements of this section do not apply, except those provisions the Director determines are necessary to ensure compliance with §§264.345(a) and 264.345(c) of this chapter if you elect to comply with §270.235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in accordance with §§270.10(k), 270.10(l), 270.32(b)(2), and 270.32(b)(3). (a) For the purposes of determining operational readiness following completion of physical construction, the Director must establish permit conditions, including but not limited to allowable waste feeds and operating conditions, in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to bring the incinerator to a point of operational readiness to conduct a trial burn, not to exceed 720 hours operating time for treatment of hazardous waste. The Director may extend the duration of this operational period once, for up to 720 additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to §270.42 of this chapter. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.K.1.b. VI.L.1. (b)(2) – I.K.1.c.

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40 CFR Section	Requirement	Permit Condition(s)
	(b) For the purposes of determining feasibility of compliance with the performance standards of §264.343 of this chapter and of determining adequate operating conditions under §264.345 of this chapter, the Director must establish conditions in the permit for a new hazardous waste incinerator to be effective during the trial burn. (1) Applicants must propose a trial burn plan, prepared under paragraph (b)(2) of this section with a part B of the permit application. (2) The trial burn plan must include the following information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
270.63	Permits for land treatment demonstrations using field test or laboratory analyses. (a) For the purpose of allowing an owner or operator to meet the treatment demonstration requirements of §264.272 of this chapter, the Director may issue a treatment demonstration permit. The permit must contain only those requirements necessary to meet the standards in §264.272(c). The permit may be issued either as a treatment or disposal permit covering only the field test or laboratory analyses, or as a two-phase facility permit covering the field tests, or laboratory analyses, and design, construction operation and maintenance of the land treatment unit. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.

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U.S. Environmental Protection Agency
Resource Conservation & Recovery Act Draft Permit
EPA RCRA I.D. Number: AZD982441263

BENEFICIAL LANDOWNER:	COLORADO RIVER INDIAN TRIBES	OPERATOR:	EVOQUA WATER TECHNOLOGIES, LLC
	26600 Mohave Road Parker, Arizona 85344		2523 Mutahar Street Parker, Arizona 85344

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, 42 USC Sections 6901 *et seq.*, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, P.L. 98-616 (collectively, hereafter, "RCRA"), and regulations promulgated thereunder by the U.S. Environmental Protection Agency (EPA) (codified and to be codified in Title 40 of the Code of Federal Regulations), this Permit is issued to Evoqua Water Technologies, LLC and the Colorado River Indian Tribes (collectively, hereafter, the "Permittees"), for the facility located at 2523 Mutahar Street, Parker, Arizona 85344 with the EPA RCRA ID # AZD982441263.

This Permit, with all its attachments, constitutes the full RCRA Permit for this Facility. The Permittees, pursuant to this Permit, are required to investigate any releases of hazardous waste or hazardous constituents at the Facility, regardless of the time at which waste was placed in a unit. The Permittees are required to take appropriate corrective action for any such releases.

The Permittees must comply with all the terms and conditions of this Permit. This Permit consists of the conditions contained herein (including those in any appendices) and the applicable regulations contained in 40 CFR Parts 61, 63, 124, and 260 through 270, as specified in this Permit, and the statutory requirements of RCRA. Nothing in this Permit shall preclude the Regional Administrator from reviewing and modifying the Permit at any time during its term in accordance with 40 CFR § 270.41.

This Permit is based on the premise that information and reports submitted by the Permittees prior to issuance of this Permit are complete and accurate, unless otherwise indicated in this Permit. Any inaccuracies found in this information or information submitted as required by this Permit may be grounds for termination or modification of this Permit in accordance with 40 CFR §§ 270.41, 270.42, or 270.43 and/or potential enforcement. The Permittees must inform the EPA of any deviation from or changes in the information in the application which would affect the Permittees' ability to comply with the applicable regulations or Permit conditions.

This Permit is effective _____, and shall remain in effect for ten (10) years until _____, unless revoked and reissued, or terminated under 40 CFR §§ 270.41 and/or 270.43 or continued in accordance with 40 CFR § 270.51(a). All obligations for performance of the conditions of this Permit are in effect until deemed complete by the Director of the Land Division for the U.S. Environmental Protection Agency, Region 9 (the "Director").

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If any conditions of this Permit are appealed in accordance with 40 CFR § 124.19, the effective date of the conditions determined to be stayed in accordance with 40 CFR § 124.16 shall be determined by final agency action as specified under 40 CFR § 124.19.

_____
Date Issued

_____
Jeff Scott
Director
Land Division

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MODULE I - GENERAL PERMIT CONDITIONS

I. INTRODUCTION

This document, consisting of Modules I through VI and the Permit Attachments, Permit Exhibits, and any other documents incorporated herein, constitutes a hazardous waste permit under Subtitle C of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, (RCRA), and the applicable regulations at Title 40 of the Code of Federal Regulations (40 CFR) Parts 260 through 270 for hazardous waste storage and treatment at a carbon regeneration facility (EPA ID Number - AZD982441263) (Permit) located on the Colorado River Indian Tribes (CRIT) Reservation near Parker, Arizona. At the Evoqua Water Technologies LLC Facility (defined below), spent carbon is treated in a regeneration furnace to purify it and make it suitable as a commercial product. [See 40 CFR §§ 264.10 and 264.11.]

I.A. EFFECT OF PERMIT

I.A.1. The Permittees Evoqua Water Technologies LLC and CRIT are allowed to store and treat hazardous waste in accordance with the conditions of this Permit. Any storage or treatment of hazardous waste at the Facility not authorized in this Permit is prohibited. Pursuant to 40 CFR §270.4, compliance with this Permit generally constitutes compliance, for purposes of enforcement with RCRA, with some exceptions (42 U.S.C. §§6901 et seq.). [See also Permit Conditions II.A.2. and II.A.5. and 40 CFR Part 262, §§270.1(c), and 270.4.]

I.A.2. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege. [See 40 CFR §§270.4(b) and 270.30(g).]

I.A.3. Issuance of this Permit does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of Tribal, state or local law or regulations. [See 40 CFR §270.4(c).]

I.A.4. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3008(h), 3013, or

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This draft permit has been created in accordance with 40 CFR § 124.6 as part of US EPA's proposed RCRA hazardous waste permit decision for the hazardous waste facility (EPA ID # AZD982441263) located on trust land of the Colorado River Indian Tribes at 2523 Mutahar Street, Parker, Arizona, 85344, and operated by Evoqua Water Technologies LLC.

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7003 of RCRA, Sections 104, 106(a) or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. §§9601 et seq.), or any other law providing for protection of public health or the environment. In addition, compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3008(a), solely with respect to those requirements set forth at 40 CFR § 270.4(a)(1)(i)-(iv).

I.A.5. This Permit supersedes any and all requirements included in the attachments, sections, and appendices of the permit application. However, to the extent that any attachments, sections or appendices of the permit application are incorporated into and made a part of this Permit, and to the extent that any such attachments, sections or appendices contradict or conflict with the requirements of the Permit set forth in Modules I through VI, inclusive, the conditions set forth in Modules I through VI shall control. In addition, references to RCRA's interim status requirements (40 CFR Part 265) contained in such attachments, sections or appendices are superseded by the standards applicable to RCRA permitted facilities (40 CFR Part 264), as appropriate, upon the effective date of this Permit.

I.A.6. Unless set forth specifically otherwise herein, requirements of this Permit apply to both the tribal trust landowner and the operator of the Facility, who are referred to herein collectively as the "Permittees." However, compliance with such requirements of this Permit by either the Tribe, as beneficial landowner, or the operator is regarded as sufficient for both. [See 45 Federal Register (FR) 33295/col. 3, (May 19, 1980).]

I.A.7. Where citations to regulatory authority are included at the end of a permit condition -- for example "[See 40 CFR §264.XXX.]" -- such references are solely to assist those reading the Permit with identifying the source of the requirement to which the citation applies. Such citations do not, in and of themselves, incorporate the regulatory requirement into the permit condition. However, where regulations are referenced in the body of a permit condition – for example "Pursuant to 40 CFR § 264.XXX" or "In accordance with 40 CFR § 264.XXX," the requirements of the regulation so cited are incorporated into the permit condition.

This draft permit has been created in accordance with 40 CFR § 124.6 as part of US EPA's proposed RCRA hazardous waste permit decision for the hazardous waste facility (EPA ID # AZD982441263) located on trust land of the Colorado River Indian Tribes at 2523 Mutahar Street, Parker, Arizona, 85344, and operated by Evoqua Water Technologies LLC.

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I.A.8. For the purposes of this Permit, any reference to a regulatory requirement (including any interim final regulation) shall refer to the version of such regulatory requirement which is in effect at the time of issuance of the permit. With some exceptions as set forth in 40 CFR § 270.4(a)(1), where regulatory authorities affecting conditions of this Permit are issued, revised or amended after the issuance of this Permit, such new, revised or amended provisions shall only be applicable to the operations of the Facility after a permit modification incorporates such requirements or after a renewal of the Permit, incorporating or referencing such new, revised or amended regulations, is issued. [See 40 CFR 270.32(c) and 40 CFR § 270.4(a)(1).]

I.B. PERMIT ACTIONS

I.B.1. This Permit may be modified, revoked and reissued, or terminated for cause, in accordance with 40 CFR §§ 270.41, 270.42, and 270.43. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittees, does not stay the applicability or enforceability of any permit condition. [See 40 CFR §§ 270.4(a)(2), 270.30(f), 270.41, 270.42, and 270.43.]

I.B.2. This Permit may be renewed in accordance with 40 CFR § 270.30(b) and Permit Condition I.E.2. Review of any application for a Permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations. [See 40 CFR § 270.30(b), RCRA Section 3005(c)(3).]

I.C. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. [See 40 CFR §124.16.]

I.D. DEFINITIONS

For purposes of this Permit, terms used herein shall have the same meaning as

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This draft permit has been created in accordance with 40 CFR § 124.6 as part of US EPA's proposed RCRA hazardous waste permit decision for the hazardous waste facility (EPA ID # AZD982441263) located on trust land of the Colorado River Indian Tribes at 2523 Mutahar Street, Parker, Arizona, 85344, and operated by Evoqua Water Technologies LLC.

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those in 40 CFR Parts 61, 63, 124, 260, 264, 266, 268, and 270, as appropriate, unless this Permit specifically provides otherwise. Where terms are not defined in the regulations or this Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

AOC means Area of Concern.

CEMS means continuous emissions monitoring system.

CERCLA means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, (42 U.S.C. §§9601 et seq.,) as amended.

CFR means Code of Federal Regulations, latest edition.

CMS means continuous monitoring system.

CRIT or Tribe means the beneficial landowner of the land on which the Facility is located, the Colorado River Indian Tribes.

Day or days means a calendar day or days, even if the word "calendar" is absent, unless otherwise specified.

Director means the Director of the EPA Region 9 Land Division, or his or her designee or authorized representative.

Enforcement Director means the Director of the EPA Region 9 Enforcement Division, or his or her designee or authorized representative.

EPA means the United States Environmental Protection Agency.

Facility means the carbon regeneration facility located at 2523 Mutahar Street, Parker, Arizona, 85344, on land of the Colorado River Indian Tribes and all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating or storing, of spent carbon as allowed by this Permit.

Facility mailing list means the most recent version of the interested parties mailing

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list provided by the EPA Region 9 Land Division to the Permittee(s).

HWMU means Hazardous Waste Management Unit.

Method 21 means Method 21 from Appendix A-7 of 40 CFR Part 60.

PDT means Performance Demonstration Test.

Permit Attachment(s), Permit Attachment Section(s) and Permit Attachment Appendix or Appendices mean the attachments, sections and appendices to this Permit, which were transmitted to EPA by the Permittees in their Part B Permit Application dated April 2016.

Permittee, Permittees or Permit Applicants means either Evoqua Water Technologies, LLC, the operator of the Facility, or the Colorado River Indian Tribes, the beneficial landowner of the tribal land on which the Facility is located, or both.

Product means the carbon that has been thermally treated and regenerated at the Facility.

RCRA means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 and the Hazardous and Solid Waste Amendments of 1984, as amended, 42 U.S.C. §§ 6901 et seq.

Site means the land where the Facility is physically located down to and including the groundwater zone.

SWMU means Solid Waste Management Unit.

I.E. DUTIES AND REQUIREMENTS

I.E.1. Duty to Comply

The Permittees shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any Permit noncompliance, other than noncompliance

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authorized by an emergency permit, constitutes a violation of RCRA and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [See 40 CFR §270.30(a).]

I.E.2. Duty to Reapply

If the Permittees wish to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittees shall submit a complete application for a new permit at least 180 days prior to the Permit's expiration. [See 40 CFR §§270.10(h) and 270.30(b).]

I.E.3. Permit Expiration

This Permit shall be effective for a fixed term not to exceed ten years. This Permit and all conditions herein will remain in effect and enforceable beyond the Permit's expiration date, if the Permittees have submitted a timely, complete application and, through no fault of the Permittees, the Director has not issued a new permit. [See 40 CFR §§270.10, 270.13, 270.14, 270.50, and 270.51.]

I.E.4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittees in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit. [See 40 CFR §270.30(c).]

I.E.5. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittees shall take all reasonable steps to minimize releases to the environment and shall carry out such measures, as are reasonable, to prevent significant adverse impacts on human health or the environment. [See 40 CFR §270.30(d).]

I.E.6. Proper Operation and Maintenance

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The Permittees shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), which are installed or used by the Permittees to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit. [See 40 CFR §270.30(e).]

I.E.7. Duty to Provide Information

The Permittees shall furnish to the Director or the Enforcement Director, as appropriate, within a reasonable time, any relevant information which the Director or the Enforcement Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittees shall also furnish to the Director or the Enforcement Director, as appropriate, upon request, copies of records required to be kept by this Permit. [See 40 CFR §270.30(h).]

I.E.8. Inspection and Entry

The Permittees shall allow the Director or the Enforcement Director, as appropriate, or an authorized representative, upon presenting credentials and other documents, as may be required by law, to:

I.E.8.a. Enter during business hours or at a reasonable time upon the Facility and/or either Permittees' premises where a regulated activity is located or conducted, or where records must be kept under the conditions of this Permit;

I.E.8.b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;

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I.E.8.c. Inspect at reasonable times any equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and

I.E.8.d. Sample or monitor, at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location at the Facility. [See 40 CFR §270.30(i).]

I.E.9. Monitoring and Records

I.E.9.a. Samples and measurements taken by the Permittees for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste must be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Director. Laboratory analytic methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Standard Methods of Wastewater Analysis, or an equivalent method, as specified in the Waste Analysis Plan (See Permit Condition II.C, Permit Attachment Section C and Permit Attachment Appendix IV). [See 40 CFR §270.30(j)(1).]

I.E.9.b. The Permittees shall retain records of all monitoring information (including all calibration and maintenance records and all digital and original strip chart recordings for continuous monitoring instrumentation), copies of all reports and records required by this Permit, the certification required by 40 CFR § 264.73(b)(9) and Permit Condition II.A.6., and records of all data used to complete the application for this Permit for a period of at least 3 years from the date of the sample, measurement, report, record, certification, or application. These periods may be extended by request of the Director at any time and are automatically extended during the course of any unresolved enforcement action

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regarding this Facility. The Permittees shall maintain records for all ground-water monitoring wells and associated ground-water surface elevations for the active life of the Facility. This provision does not apply to any records required to be maintained in accordance with Permit Condition V.G, which shall instead be subject to that requirement. [See 40 CFR §§ 264.73(b)(9), 264.74(b) and 270.30(j)(2). See also Permit Condition V.G.]

I.E.9.c. Records of monitoring information shall specify:

I.E.9.c.i. The dates, exact place, and time of sampling or measurements;

I.E.9.c.ii. The individual(s) who performed the sampling or measurements;

I.E.9.c.iii. The date(s) analyses were performed;

I.E.9.c.iv. The individual(s) who performed the analyses;

I.E.9.c.v. The analytical technique(s) or method(s) used; and

I.E.9.c.vi. The results of such analyses. [See 40 CFR §270.30(j)(3).]

I.E.10. Reporting Planned Changes

The Permittees shall give notice to the Director, as soon as possible, of any planned physical alterations or additions to the Facility. If any planned "changes" (as defined at 40 CFR § 63.1206(b)(5)(iii)), to the design, operation, or maintenance practices of the source may adversely affect compliance with any emission standard that is not monitored with a CEMS, the Permittees shall follow the procedures set forth at 40 CFR § 63.1206(b)(5)(i) for notification, performance testing and restrictions on

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waste burning, or otherwise shall comply with the requirements of 40 CFR § 63.1206(b)(5)(ii). Any notice provided under this section shall include any necessary request for a permit modification pursuant to Permit Condition I.G.7. and 40 CFR § 270.42. [See 40 CFR §§ 63.1206(b)(5), 63.1207(j), 63.1210(d), 270.30(l)(1) and 270.42.]

I.E.11. Reporting Anticipated Noncompliance

The Permittees shall give advance notice to the Director of any planned changes in the Facility or activity which may result in noncompliance with Permit requirements. [See 40 CFR §270.30(l)(2).]

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I.E.12. Transfer of Permits

This Permit is not transferable to any person, except after notice to the Director. The Director may require modification or revocation and reissuance of the Permit to change the name of a Permittee and incorporate such other requirements as may be necessary in accordance with 40 CFR §270.40. Before transferring ownership or operation of the Facility, the Permittees shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270 and this Permit. [See 40 CFR §§264.12(c), 270.30(l)(3) and 270.40.]

I.E.13. Twenty-Four Hour Reporting

I.E.13.a. The Permittees shall report to the Director any noncompliance which may endanger human health or the environment. Any such information shall be reported orally within 24 hours from the time whichever Permittee first becomes aware of the circumstances. The report shall include the following:

I.E.13.a.i. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies; and

I.E.13.a.ii. Any information of a release or discharge of hazardous waste, or of a fire or explosion from the Facility which could threaten the environment or human health inside or outside the Facility. [See 40 CFR §270.30(l)(6)(i).];

I.E.13.b. The description of the noncompliance and its cause shall include:

I.E.13.b.i. Names, addresses, and telephone numbers of the Permittees;

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I.E.13.b.ii. Name, address, and telephone number of the Facility;

I.E.13.b.iii. Date, time, and type of incident;

I.E.13.b.iv. Name and quantity of materials involved;

I.E.13.b.v. The extent of injuries, if any;

I.E.13.b.vi. An assessment of actual or potential hazards to the environment and/or human health outside the Facility, where this is applicable; and

I.E.13.b.vii. Estimated quantity and disposition of recovered material that resulted from the incident. [See 40 CFR §270.30(l)(6)(ii).]

I.E.13.c. A written submission shall also be provided within five days of the time that whichever Permittee first becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected, and, if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Director may waive the five-day written notice requirement in favor of a written report within 15 days. [See 40 CFR §270.30(l)(6)(iii).]

I.E.14. Compliance Schedule Reporting

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 14 days following each schedule date. [See 40 CFR §270.30(l)(5).]

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I.E.15. Other Noncompliance

The Permittees shall report all other instances of noncompliance not otherwise required to be reported in Permit Conditions I.E.10 through I.E.14, at the time monitoring reports are submitted. The reports of noncompliance shall contain the information listed in Permit Condition I.E.13. [See 40 CFR §270.30(l)(10).]

I.E.16. Other Information

Whenever either Permittee becomes aware that either Permittee failed to submit any relevant facts, or submitted incorrect information, in a Permit application or in any report to the Director, the Permittees shall promptly submit such facts or information. [See 40 CFR § 270.30(l)(11).]

I.F. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to or requested by the Director, the Enforcement Director, or a designee or authorized representative of the Director or the Enforcement Director, shall be signed and certified in accordance with 40 CFR §§ 270.11 and 270.30(k). [See 40 CFR §§ 270.11 and 270.30(k).]

I.G. REPORTS, NOTIFICATIONS, AND DELIVERABLES

I.G.1. All reports, correspondence, notices or other deliverables required by this Permit, or required to be submitted to EPA or the Regional Administrator under regulatory provisions cited in this Permit, shall be delivered by U.S. Postal Service or private courier service to:

Director, Land Division
US Environmental Protection Agency, Region IX
75 Hawthorne St. (LND-1)
San Francisco, CA 94105

I.G.2. All deliverables submitted pursuant to this Permit shall be printed on recycled paper and shall be copied double-sided, whenever practicable. Additionally, all deliverables submitted pursuant to this Permit shall also be submitted in electronic format (*e.g.*,

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CD ROM, flash drive). Permittees may submit such deliverables by electronic mail where the Permittees and the Director have agreed in writing as to the appropriate email address for such electronic mail submissions.

I.G.3. For the computation of time periods set forth in this Permit, the Permittees shall conduct the following:

I.G.3.a. Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event.

I.G.3.b. Any time period scheduled to begin before the occurrence of an act or event shall be computed so that the period ends on the day before the act or event.

I.G.3.c. If the final day of any time period falls on a weekend or legal holiday, the time period shall be extended to the next working day. [See, *e.g.,* 40 CFR § 124.20.]

I.G.4. Where this permit references or incorporates any standard from 40 CFR Part 63 for which a notice or notification is required to be submitted to EPA, including any notice or notification required under 40 CFR §§ 63.1206(b)(5), 63.1207(j) or 63.1210, the Permittees shall submit such notice or notification with reference to the specific provision of this Permit requiring the notice or notification. [See 40 CFR §§ 63.1206(b)(5), 63.1207(j) and 63.1210.]

I.G.5. Deliverables Submitted for the Director's Review and Approval

I.G.5.a. Deliverables that are explicitly required by this Permit to be submitted to the Director for review and approval must be post-marked by the due date specified in this Permit or by the specific schedules developed pursuant to the requirements of this Permit that apply to such deliverables. The Director shall review and respond to the deliverable in accordance with Permit Condition I.G.5.b.

I.G.5.b. Subject to the provisions of I.G.5.c., after review of any deliverable that is required to be approved by the Director pursuant to this Permit, the Director will either:

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(i) approve, in whole or in part, the submission;
(ii) approve the submission on specified conditions;
(iii) modify the submission to cure the deficiencies;
(iv) disapprove, in whole or in part, the submission, directing that Permittee modify the submission; or
(v) any combination of the above.

I.G.5.c. The Director will not modify a deliverable under Permit Condition I.G.5.b. without first providing the Permittees at least one notice of deficiency and an opportunity to cure within ten (10) days, except:

(i) where the Director determines that to do so would cause serious disruption to the work required by this Permit or could present an unacceptable risk to human health or the environment; or

(ii) where the Director has disapproved previous submission(s) due to material defects and the Director determines that the deficiencies in the submission under consideration indicate a bad faith lack of effort to submit an acceptable deliverable.

I.G.5.d. Upon approval of any deliverable pursuant to this Permit, including approval on conditions or modification by the Director, the Permittees shall maintain a copy of the approved deliverable in the Operating Record and proceed to take any action required by and in accordance with the approved deliverable.

I.G.5.e. Resubmission of Deliverable: Upon receipt of a notice of disapproval, in whole or in part, pursuant to this Permit Condition I.G.5., the Permittees shall, within twenty-one (21) days or such longer time as specified by the Director in such notice, correct the deficiencies and resubmit the deliverable for approval.

I.G.5.f. Notwithstanding the receipt of a notice of disapproval pursuant to this Permit Condition I.G.5., the Permittees shall proceed, at the direction of the Director, to take any action required by any non-deficient portion of the submission. Implementation of any non-deficient portion of a submission shall not relieve the Permittees of the obligation to address any deficient portion of the submission.

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I.G.5.g. In the event that a resubmitted deliverable, or portion thereof, is disapproved by the Director, the Director may again require the Permittees to correct the deficiencies, in accordance with this Permit Condition I.G.5.

I.G.5.h. If upon resubmission, a deliverable is disapproved or modified by the Director due to a material defect, the Permittees shall be deemed to have failed to submit such deliverable in a timely or adequate manner.

I.G.5.i. The disapproval or modification of a deliverable by the Director pursuant to this Permit Condition I.G.5. is subject to the informal dispute resolution procedures set forth in Permit Condition I.L.

I.G.6. Modifications to Previously Approved Deliverables

I.G.6.a. If at any time during the life of this Permit, the Permittees identify a need for a modification of any previously approved deliverable required by this Permit or of any deadline required by this Permit, the Permittees shall submit a memorandum documenting the need for the modification to the Director. Where appropriate, such memorandum shall be accompanied by a request for a Permit Modification pursuant to 40 CFR § 270.42. [See 40 CFR § 270.42.]

I.G.6.b. Where a Permit Modification is not requested by the Permittees, the Director will determine if the requested modification to the previously approved deliverable or to the deadline is warranted as soon as practicable after receipt of any memorandum submitted pursuant to Permit Condition I.G.6.a. and so inform the Permittees in writing that the proposed modification to the deliverable or deadline has been approved, modified or disapproved as provided in Permit Condition I.G.5.b. and subject to Permit Condition I.G.5.c. Where the memorandum is accompanied by a request for a Permit Modification under 40 CFR § 270.42, RCRA's permit modification procedures shall apply. [See 40 CFR § 270.42.]

I.G.6.c. Requests for extensions of the due dates for deliverables may be granted by the Director in accordance with either the procedures in Permit Condition I.G.6.a. of this Permit or RCRA's permit modification processes. [See 40 CFR § 270.42.]

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I.G.7. Deliverables that Require a Permit Modification

I.G.7.a. Deliverables that are explicitly required by this Permit to be submitted with an accompanying request for a permit modification in accordance with this Permit Condition I.G.7., must specify the class of permit modification for which the request is being submitted in accordance with 40 CFR § 270.42 and Appendix 1 to that section. Or, if the request is for a permit modification not explicitly identified in Appendix 1 to 40 CFR § 270.42, the Permittees may submit a Class 3 modification request to the Director, or may request a determination by the Director that the modification should be reviewed and approved as a Class 1 with no prior Director approval, Class 1 with prior Director approval, or Class 2 modification. [See 40 CFR § 270.42 and Appendix 1 to 40 CFR § 270.42.]

I.G.7.b. For any permit modification not explicitly identified in Appendix 1 to 40 CFR § 270.42, if the Permittees request that the modification be classified as a Class 1 with no prior Director approval, Class 1 with prior Director approval, or Class 2 modification, the request must include the necessary information to support the requested classification in accordance with 40 CFR §270.42. [See 40 CFR § 270.42(d).]

I.G.7.c. The Director's determination that the modification should or should not be treated as a Class 1 with no prior Director approval, Class 1 with prior Director approval, or Class 2 modification shall be subject to the Informal Dispute Resolution provisions of Permit Condition I.L., but any other decisions made by the Director as part of the permit modification process shall only be reviewable in accordance with 40 CFR Part 124. [See 40 CFR Part 124.]

I.G.8. Deliverables That May Trigger a Permit Modification

Where a report or other deliverable required by this Permit includes a recommendation that the Permit be modified, and the report or other deliverable is subject to approval by the Director under Permit Condition I.G.5., the request for the permit modification should only be submitted after the report or other deliverable recommending the modification has been approved by the Director.

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I.H. CONFIDENTIAL INFORMATION

In accordance with 40 CFR §270.12, either Permittee may claim any information required to be submitted by this Permit as confidential. If no claim is made at the time of submission, the information may be made available to the public without further notice. [See 40 CFR Part 2, Subpart B, and § 270.12.]

I.I. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

I.I.1. The Permittees shall maintain at the Facility, until closure is completed and certified by an independent, registered professional engineer, the following documents and all amendments, revisions, and modifications to these documents:

1. Waste Analysis Plan, as required by 40 CFR §264.13 and this Permit;
2. Inspection schedules, as required by 40 CFR §264.15(b)(2) and this Permit;
3. Personnel training documents and records, as required by 40 CFR §264.16(d) and this Permit;
4. Contingency Plan, as required by 40 CFR §264.53(a) and this Permit;
5. Operating record, as required by 40 CFR §264.73 and this Permit;
6. Closure Plan, as required by 40 CFR §264.112(a) and this Permit;
7. Annually-adjusted cost estimates for Facility closure, as required by 40 CFR §264.142(d) and this Permit;
8. The Startup Shutdown and Malfunction Plan (SSMP), as required by this Permit;
9. The Subpart FF Compliance Plan; and
10. All other documents required to be maintained for the life of the Facility in accordance with the requirements of this Permit.

I.I.2. All records, including plans, required under this Permit must be furnished upon request, and made available at all reasonable times for inspection by any officer, employee, or representative of EPA who is duly designated by the Director. [See 40 CFR § 264.74(a).]

I.J. INFORMATION REPOSITORY

I.J.1. The Permittees must establish and maintain an information repository that meets the requirements of 40 CFR § 124.33 and includes the records identified in Permit Exhibit

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I. [See 40 CFR §§124.33 and 270.30(m).]

I.J.2. The Permittees must update the information repository with appropriate information at least every five (5) years throughout the life of this Permit. [See 40 CFR §§ 124.33(f) and 270.30(m).]

I.J.3 Permittees shall send notice of the location of the information repository to all persons on the facility's mailing list. [See 40 CFR §§ 124.33(e) and 270.30(m).]

I.K. COMPLIANCE SCHEDULE

I.K.1. Performance Demonstration Test. The Permittees shall perform periodic trial burns or "Performance Demonstration Tests" in accordance with the following requirements. (The Performance Demonstration Test is a combination of the Comprehensive Performance Tests and traditional RCRA "Trial Burn" to address site specific risk assessments. Unless otherwise specified, references in this Permit to 40 CFR Part 63 testing and related requirements applicable to incinerators should be interpreted as applicable to the operating reactivation furnace (RF-2) and its associated equipment.)

I.K.1.a. The Permittees shall submit a Performance Demonstration Test (PDT) Work Plan meeting the requirements of Permit Condition I.K.1.c. to the Director for approval in accordance with Permit Condition I.G.5. ***within 120 days after the final Permit is made effective***.

I.K.1.b. As for future PDTs, the Permittees shall conduct testing periodically in accordance with this Permit Condition I.K. and 40 CFR §§ 63.1207 and 63.1208. The date of commencement of each PDT is the basis for establishing the deadline to commence the subsequent PDT. The Permittees shall submit PDT Work Plans to the Director for approval ***at least one year before the start date of each subsequent PDT***. The Permittees shall commence testing no later than 61 months after the date of commencing the previous PDT. Except as provided in Permit Condition I.K.1.c., the Permittees may conduct performance testing at any time prior to the required date. [See 40 CFR Part 60 and §§ 63.8(d) and (e), 63.9(g), 63.1206(c)(5)(ii), 63.1207, 63.1208, 264.344(a)(1) and 270.62.]

I.K.1.c. The Permittees shall submit PDT Work Plans to the Director for approval in accordance with Permit Condition I.G.5. PDT Work Plans must include a

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proposed schedule for performance of the PDT. The Permittees shall not undertake the performance of the PDT less than 60 days after the public notice required under Permit Condition I.K.1.f. Nor shall the Permittees undertake the performance of the PDT prior to the time the PDT Work Plan is approved by the Director. The PDT Work Plans shall be done in accordance with and must include the information listed at 40 CFR §§ 63.7, 63.8, 63.9(e), (f), (g) and (j), 63.1206(c)(5)(ii), 63.1207(b)(1), 63.1219 and 270.62(b)(2). The information provided in these regulatory provisions that are applicable to incinerators must be included in the PDT Work Plans, and address each performance parameter and emission limit set forth in Table V-4 of this permit. [See 40 CFR §§ 63.7, 63.8, 63.9(e), (f), (g) and (j), 63.1206(c)(5)(ii), 63.1207(b)(1), 63.1219, and 270.62(b)(2).]

I.K.1.d. The portions of the PDT Work Plans addressing provisions for testing for SOx and NOx emissions during the PDT, shall reference EPA Test Method 6 for SOx (as SO2) and EPA Test Method 7 for NOx as provided in Appendix A of 40 CFR Part 60. [See Appendix A of 40 CFR Part 60.]

I.K.1.e. Where appropriate, the Permittees shall incorporate into PDT Work Plans appropriate methods and/or performance specifications, as set forth in specifically applicable requirements and/or in the Appendices in 40 CFR Part 60. [See 40 CFR Part 60.]

I.K.1.f. The Permittees shall make the PDT Work Plans available to the public for review no later than 60 calendar days before initiation of the test. The Permittees must also provide a public notice to all persons on the facility's mailing list announcing the availability of the PDT Work Plan and the location where the PDT Work Plan is available for review. The PDT Work Plans must be accessible to the public for 60 calendar days, beginning on the date of the public notice. The location must be unrestricted and provide access to the public during reasonable hours and provide a means for the public to obtain copies. The notification must, at a minimum, include the information identified at 40 CFR § 63.1207(e)(2). [See 40 CFR § 63.1207(e).]

I.K.2. The Permittees shall complete performance testing ***within 60 days*** after the date of commencement of each of the PDTs in accordance with the approved PDT Work Plans. [See 40 CFR § 63.1207(d)(3).]

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I.K.3. The Permittees shall submit to the Director for review and approval, in accordance with Permit Condition I.G.5., a PDT Report regarding the performance of the PDT ***within 90 days*** of the completion of each PDT.

I.K.3.a. The PDT Reports shall also include the results of the required CMS and CEMS Performance Tests, and the analysis of the parameters evaluated in accordance with Permit Condition I.K.1.

I.K.3.b. The PDT Reports shall also include the Permittees' recommendations, if any, regarding any appropriate modifications to permit conditions based on the results of one or more PDTs in accordance with Permit Condition I.G.8. and 40 CFR Part 270.

I.K.3.c. The PDT Reports shall also include the CMS and CEMS Performance Test results, and any other information that is required in notifications of compliance status and certifications for incinerators under 40 CFR § 63.9(h)(2).

I.K.4. PDT Reports must include an assessment as to whether the operating parameters and emission limits set forth in Module V are being met with specific reference to the Group A1, Group A2, Group B and Group C parameters set forth in Module V of this Permit at Table V-2 – Operating Limits and Parameters.

I.K.4.a. If a PDT Report concludes that such parameters or limits are not being met, the Permittees must comply with the AWFCO requirements of the SSMP and otherwise comply with Permit Condition V.C.5.v., as appropriate for the particular parameter or limit not being met.

I.K.4.b. When a PDT Report concludes that such operating parameters or emission limits are not being met, the Permittees shall cease processing hazardous waste except in accordance with the provisions of 40 CFR §§ 63.1207(l)(1)(i) and (ii) and 63.1207(l)(2)(i),(ii) and (iii), as appropriate. [See 40 CFR § 63.1207(l).]

I.K.4.c. Where 40 CFR §§ 63.1207(l)(1)(ii)(A) or (C), and/or 63.1207(l)(2)(ii) and (iii) require the submittal of a revised Notification of Compliance, the Permittees shall submit Supplemental PDT Report(s) to the Director for review and approval in accordance with Permit Condition I.G.5. within 90 days of any subsequent test(s). [See 40 CFR § 63.1207(l).]

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I.K.5. Human Health and Ecological Risk Assessment

I.K.5.a. Within 90 days after the approval of a PDT Report, the Permittees shall submit a Human Health and Ecological Risk Assessment Work Plan to the Director for review and approval in accordance with Permit Condition I.G.5. The Work Plan should be consistent with good scientific principles. For example, the Permittees should consider EPA's current risk assessment guidance for combustion facilities and proposing the use of the latest air dispersion modeling software. The Risk Assessment Work Plans must include a proposed schedule for performance and completion of the Human Health and Ecological Risk Assessment.

I.K.5.b. In accordance with the schedule set forth in the approved Human Health and Ecological Risk Assessment Work Plan, the Permittees shall submit a Draft Human Health and Ecological Risk Assessment to the Director for approval in accordance with Permit Condition I.G.5.

I.K.5.c. Where an approved Human Health and Ecological Risk Assessment includes a recommendation for a modification of this Permit, the Permittees shall submit a request for such modification in accordance with Permit Condition I.G.8. and 40 CFR § 270.42. [See 40 CFR § 270.42.]

I.K.6. RF-1 Closure. ***Within 90 days after the final permit is effective***, the Permittees shall submit to EPA a closure activity notification designating the start date for the implementation of the schedule as specified in Section 9.0 of the Permit Attachment Appendix XVI. This closure activity notification, which will trigger the closure and dismantling of the non-operational reactivation furnace (RF-1) in accordance with the schedule set forth in Section 8.0 of the Permit Attachment Appendix XVI, shall include a start date that allows for completion of RF-1's closure no later than one (1) year from the effective date of this Permit. [See Sections 8.0 and 9.0 in Permit Attachment Appendix XVI.]

I.K.7. Hopper H-1 Containment. The Permittees shall submit a work plan for implementation of the requirements for the secondary containment for Hopper H-1 (H-1 Work Plan) to the Director for approval in accordance with Permit Condition I.G.5. ***within 90 days after the final Permit is effective***. The H-1 Work Plan shall include a schedule for implementation of the requirements for the secondary containment for Hopper H-1 and otherwise conform

to the requirements of Permit Condition IV.F.6. This schedule shall provide for completion of implementation of the requirements for the secondary containment for Hopper H-1 no later than one (1) year from the effective date of this Permit. [See 40 CFR § 264.193.]

I.K.8. Integrity Assessment/Leak Test

I.K.8.a. The Permittees shall have the integrity of Hopper H-1 assessed by a professional engineer ***within 60 days after the final Permit is effective*** in accordance with 40 CFR § 264.191. This assessment must include a leak test, as described in 40 CFR § 264.191, or other integrity examination that is certified by a qualified Professional Engineer in accordance with 40 CFR § 270.11(d), that addresses cracks, leaks, corrosion, and erosion. [See 40 CFR §§ 264.191, 264.193(i), and 270.11(d).]

I.K.8.b. Until such time as the secondary containment for Hopper H-1 is implemented in accordance with Permit Conditions I.K.7, and IV.F.6.a., the Permittees must conduct a leak test, (or other integrity examination that meets the requirements of 40 CFR § 264.191), in accordance with 40 CFR § 264.193(i) and Permit Condition IV.F.6.b. to ensure the integrity of Hopper H-1. [See 40 CFR §§ 264.191, 264.193(i), and 270.11(d).]

I.K.9. If the secondary containment for Hopper H-1 is not implemented within a year from the effective date of this Permit, as provided in accordance with Permit Conditions I.K.7., the Permittees shall submit to the Director a contingent closure plan and proof of financial responsibility meeting the requirements of 40 CFR § 264.197(c), incorporated herein by this reference. [See also Permit Conditions IV.F.6.b.iii. and IV.M.3., and 40 CFR § 264.197(c).]

I.K.10. 40 CFR Part 264, Subpart BB Compliance

I.K.10.a. The Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with an accompanying revised Permit Attachment Section N and Subpart BB Compliance Plan (Permit Attachment Appendix XIX) within ***120 days after the final permit is effective.*** The revised Permit Attachment Section N and Subpart BB Compliance Plan shall identify the equipment subject to 40 CFR Part 264, Subpart BB at the facility and, for each piece of equipment so identified, whether the Permittees elect to determine compliance with this Permit either by documentation pursuant to 40 CFR Part 264,

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Subpart BB, or by documentation of compliance with the regulations at 40 CFR Part 60, Part 61, or Part 63, pursuant to the relevant provisions of the regulations at 40 CFR Parts 60, 61, 63 and 264. [See 40 CFR Part 264, Subpart BB.]

I.K.10.b. The revised Subpart BB compliance plan shall identify each piece of equipment that contains or contacts a hazardous waste with organic concentration that equals or exceeds 10% by weight using one of the methods described in 40 CFR § 264.1063(d). [See 40 CFR § 264.1063(d).]

I.K.10.c. If revisions to Permit Attachment Section N and the Subpart BB Compliance Plan also necessitate any changes to the Waste Analysis Plan in order to comply with 40 CFR § 264.1063(d), the Permittees shall include a revised Waste Analysis Plan (WAP) with the Permit Modification request. [See 40 CFR § 264.1063(d).]

I.K.10.d. The documentation of compliance elected by the Permittees in accordance with 40 CFR § 264.1064(m) shall be included in the facility operating record in accordance with Permit Condition II.M.1.ii. [See 40 CFR § 264.1064(m).]

I.K.10.e. If the Permittees and EPA do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the procedures in 40 CFR § 264.1063(d)(1) or (d)(2) shall be used to resolve the disagreement. [40 CFR § 264.1063(d)(1) or (d)(2) and Permit Attachment Appendix XIX.]

I.K.11. Waste Carbon Feed Monitoring for Sulfur. The Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with an accompanying revised Permit Attachment Section C, if necessary, and a revised Permit Attachment Appendix IV (Waste Analysis Plan) within ***60 days after the final Permit is effective.***

I.K.11. a. The revised Waste Analysis Plan shall include sampling for sulfur at the waste carbon feed every 6 hours to be composited and sent to the lab for analysis every 14 days.

I.K.11.b. The revised Waste Analysis Plan shall include a feed limit for sulfur oxides with reference to the limit expressed in Table V-1 of Module V of this Permit.

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I.K.11.c. Once the revised Waste Analysis Plan is incorporated into the Permit, the Permittees are not authorized to feed in the RF-2 spent activated carbon that contains sulfur in concentrations exceeding permissible feed limits set forth in the revised Waste Analysis Plan in accordance with Module V, Table V-1.

I.K.12. Information Repository. ***Within 120 days of the effective date of this Permit***, the Permittees must establish an information repository that meets the requirements of 40 CFR § 124.33 and includes the records identified in Permit Exhibit I. ***Within 150 days of the effective date of this Permit***, the Permittees shall send notice of the location of the information repository to all persons on the facility's mailing list. [See 40 CFR §§ 124.33, 270.30(m), Permit Condition I.J. and Permit Exhibit I.]

I.K.13. Training Outline. ***Within 120 days of the effective date of this Permit***, the Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with an accompanying revised and updated Permit Attachment Section H (Personnel Training Program) and Permit Attachment Appendix XIV (Training Syllabus Outline and Training Summary) that, in addition to addressing the requirements of 40 CFR § 264.16, specifically address the requirements of 40 CFR § 63.1206(c)(6). [See 40 CFR §§ 63.1206(c)(6) and 264.16.]

I.L. INFORMAL DISPUTE RESOLUTION (IDR)

I.L.1. Where the informal dispute resolution procedures of this Permit Condition I.L. are expressly identified as applicable, the following procedures shall apply:

I.L.1.a. The Permittee(s) may invoke the dispute resolution procedures by sending an Informal Dispute Resolution ("IDR") Notice to the Director in writing in accordance with Permit Conditions I.G.1. and I.G.2. Within the first fourteen (14) days after receipt of any such Notice, (the "informal dispute resolution period"), the Permittee(s) and the EPA staff person(s) responsible for the matter under dispute (the "permitting staff") will attempt to resolve any disputes informally. If requested by either of the Permittees, a meeting should be held between the permitting staff and the Permittee(s) and/or their representative(s) to discuss the matter. Unless otherwise agreed to by the permitting staff, the meeting will be held at the EPA Region 9's office in San Francisco, California, or by video or teleconference.

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I.L.1.b. If agreement is not reached between the permitting staff and the Permittee(s) within the fourteen (14) day informal dispute resolution period, and the Permittee(s) wish to continue the IDR process, the Permittee(s) must submit written arguments and evidence to the Director. The written arguments and evidence shall be submitted to the Director within thirty (30) days of the end of the informal dispute resolution period (*i.e.*, within 44 days after EPA's receipt of the IDR Notice) at the address identified in Permit Condition I.G.1.

I.L.1.c. If written arguments and evidence are submitted by the Permittee(s) to the Director, the Director will resolve the dispute within a reasonably prompt time period. The Director's resolution of the dispute shall include a written response to the evidence and arguments submitted by the Permittee(s). The Permittee(s) shall comply with the Director's decision regardless of whether the Permittee(s) agree with the decision. The Director's resolution of the dispute is not subject to administrative or judicial appeal.

I.L.2. Unless otherwise agreed to by the Director, invocation of IDR by the Permittee(s) shall not extend, postpone, or affect in any way any obligation of the Permittee(s) under this Permit not directly in dispute.

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MODULE II - GENERAL FACILITY CONDITIONS

II. GENERAL FACILITY DESCRIPTION

Spent carbon is trucked to the Facility in several kinds of containers (*e.g.*, drums, vessels, supersacks, roll-off bins, *etc.*) or in tanker trucks. The spent carbon typically contains benzene or other volatile organic compounds (VOCs). The spent carbon is either introduced to the carbon regeneration system at the Facility upon receipt via one of two hoppers (H-1 or H-2) or it is moved to the Container Storage Area to be put in the hoppers later. The spent carbon is transferred from the hoppers to one of four Spent Carbon Storage Tanks (T-1, T-2, T-5, or T-6). During the transfer, water is added to the spent carbon, creating a slurry, to help in pumping the spent carbon from the hoppers to the storage tanks. From the storage tanks, the spent carbon is transferred in slurry form to the furnace Feed Tank (T-18). The spent carbon in its slurry form then gets sent from T-18 through a dewatering screw where the carbon slurry gets dewatered. The dewatered carbon then gets on the weigh belt where it is weighted and sampled, before it is fed to the operating Carbon Regeneration Furnace (RF-2).. The regenerated carbon is cooled in a cooling screw and is then sent to the product storage area for commercial packaging. Wastewater is processed through the waste water treatment system and is discharged to the local publically owned treatment works pursuant to a Clean Water Act discharge permit.

II.A. DESIGN AND OPERATION OF FACILITY

II.A.1. The Permittees shall maintain and operate the Facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment. [See 40 CFR § 264.31.]

II.A.2. Except for those requirements set forth in 40 CFR §§270.4(a)(1)(i) – (iv), the Permittees are prohibited from any storage or treatment activity not specifically described in this Permit except insofar as the Permittees' hazardous waste generation, accumulation or less than 90 day storage activities are governed by 40 CFR Part 262. [See 40 CFR Part 262 and §§ 270.1(c) and 270.4(a)(1)(i) – (iv).]

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II.A.3. The Permittees shall not store on land or land dispose of any hazardous waste on or at the Facility, whether temporarily or permanently. The Permittees shall comply with all applicable land disposal restriction requirements, including the prohibition on storage of restricted waste for over a year. [See 40 CFR Part 268].

II.A.4. Any Permittee-initiated modifications to the units designated in this Permit shall first be the subject of a Permit Modification request in accordance with Permit Condition I.G.7. and the permit modification procedures of 40 CFR § 270.42. [See 40 CFR § 270.42.]

II.A.5. The Permittees may store hazardous waste generated on-site in accordance with the provisions of 40 CFR Part 262. Any hazardous waste generated on-site that is to be treated on-site, or disposed of or transported off-site must be stored, handled, treated, transported and otherwise managed in accordance with the regulations applicable to hazardous waste generators at 40 CFR Part 262 and any other applicable requirements, such as 40 CFR Part 265 Subpart BB or requirements listed under 40 CFR §§ 270.4(a)(1)(i)-(iv), or this Permit. [See 40 CFR Part 262, 40 CFR Part 265, Subpart BB and §§ 270.1(c) and 270.4(a)(1)(i)-(iv).]

II.A.6. No less often than annually, the Permittees must certify, in accordance with 40 CFR § 264.73(b)(9), that there is a program in place to reduce the volume and toxicity of hazardous waste that is generated on-site to the degree economically practicable and that the proposed method of treatment, storage or disposal is that practicable method currently available to the Permittees which minimizes the present and future threat to human health and the environment. A copy of the certification must be maintained in the operating record in accordance with Permit Conditions I.E.9.b and II.M.1. [See 40 CFR § 264.73(b)(9) and Permit Conditions I.E.9.b., and II.M.1.]

II.B. REQUIRED NOTICES

II.B.1. If the Permittees expect to receive hazardous waste from a foreign source, the Permittees shall notify the Regional Administrator in writing at the address below

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at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source in the same calendar year is not required. [See 40 CFR § 264.12(a)(1).]

Regional Administrator
US EPA, Region 9
Mail Code: ORA-1
75 Hawthorne St.
San Francisco, CA 94105

II.B.2. When the Permittees are to receive hazardous waste from an off-site source (except where either Permittee is also the generator), they must inform the generator in writing that they have the appropriate hazardous waste Permit, and will accept the waste the generator is shipping. The Permittees must keep a copy of this written notice as part of the Facility's operating record in accordance with 40 CFR § 264.73. [See 40 CFR §§ 264.12(b) and 264.73.]

II.C. GENERAL WASTE ANALYSIS

II.C.1. The Permittees shall follow the waste analysis procedures in accordance with 40 CFR § 264.13, Permit Attachment Section C, and the Waste Analysis Plan, Permit Attachment Appendix IV. [See 40 CFR §264.13.]

II.C.2. The Permittees shall review the analysis of each waste stream provided by the generator as part of their quality assurance program in accordance with the frequencies set forth in the Waste Analysis Plan, Permit Attachment Appendix IV.

II.C.3. If an on-site lab is used, then the Permittees shall maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations.

II.C.4. If the Permittees use a contract or other off-site laboratory to perform analyses, then the Permittees shall inform the laboratory in writing that it must operate under the waste analysis conditions set forth in this Permit. Any failure of the

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laboratory to operate under the waste analysis conditions set forth in this Permit shall constitute a violation of the Permit by the Permittees. [See 40 CFR §264.13 and the Waste Analysis Plan, Permit Attachment Appendix IV.]

II.C.5. The Director, the Enforcement Director, or either's designee reserve the right to audit the on-site laboratory or the off-site laboratory utilized by the Permittees at any time.

II.C.6. The Director, the Enforcement Director, or either's designee reserve the right to sample the waste steam at the weigh belt to ensure compliance with this Permit.

II.C.7. The Permittees shall review the Waste Analysis Plan at least every two calendar years to determine if it is in compliance with current RCRA regulations and otherwise meets the needs of the Facility in accordance with Section 7.0 of the Waste Analysis Plan, Permit Attachment Appendix IV, incorporated herein by this reference. [See Section 7.0 of the Waste Analysis Plan, Permit Attachment Appendix IV.]

II.C.8. The Permittees shall comply with the test methods and procedural requirements described in 40 CFR § 264.1063 in accordance with the RCRA Subpart BB standards, where applicable, Permit Attachment Section N and Permit Attachment Appendix XIX, incorporated herein by this reference. [See 40 CFR § 264.1063, Permit Attachment Section N and Permit Attachment Appendix XIX. See also Permit Condition I.K.10.]

II.C.9. At the request of the Director, the Permittees shall perform a waste determination for a hazardous waste managed in any tank or container exempted from using air emission controls under the provisions of 40 CFR § 264.1082. [See 40 CFR § 264.1082(d).]

II.D. SECURITY

II.D.1. The Permittees shall comply with the security provisions of 40 CFR §264.14. The treatment process and operating areas of the Facility are surrounded by a fence as depicted on the Reactivation Facility Site Plan (D14789-08) contained

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in Permit Attachment Appendix III. This Reactivation Facility Site Plan also shows gates for the Facility. All gates and building entrances must be locked or monitored when open. Additional access control requirements for the Facility are contained in Permit Attachment Section F (Procedures to Prevent Hazards), incorporated herein by this reference. [See 40 CFR § 264.14.]

II.D.2. The Permittees shall prevent, and minimize the possibility for, livestock and unauthorized people from entering the Facility. [See 40 CFR § 264.14(a).]

II.D.3. The Permittees shall post and maintain a sign at each entrance to the Facility, and at other prominent locations, in sufficient numbers to be seen from any approach to the Facility. The sign shall bear the legend "Danger - Unauthorized Personnel Keep Out". The legend shall be in English and in Spanish and must be legible from a distance of at least 25 feet. The Permittees may use existing signs with a legend other than "Danger--Unauthorized Personnel Keep Out" if the legend on the sign indicates that only authorized personnel are allowed to enter the Facility, and that entry onto the Facility can be dangerous. [See 40 CFR § 264.14(c).]

II.E. GENERAL INSPECTION REQUIREMENTS

II.E.1. The Permittees shall follow the inspection schedule as per Permit Attachment Section F and Permit Attachment Appendix XII and shall comply with the requirements of 40 CFR § 264.15. [See 40 CFR § 264.15.]

II.E.2. The Permittees shall inspect the facility for malfunctions and deterioration, operator errors, and discharges that may be causing, or may lead to any release of hazardous waste constituents to the environment or any threat to human health. The Permittees shall conduct these inspections often enough to identify problems in time to correct them before they result in harm to human health or the environment. [See 40 CFR § 264.15(a).]

II.E.3. The inspection should include at a minimum, monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards. Areas subject to spills,

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such as loading and unloading areas, shall be inspected daily when in use. [See 40 CFR 264.15(b). See also Table V-3 in Module V.]

II.E.4. The Permittees shall remedy any deterioration or malfunction discovered by an inspection in accordance with 40 CFR §§ 264.15(c) and 264.171. [See 40 CFR §§ 264.15(c) and 264.171.]

II.E.5. The Permittees shall record all inspections. The Permittees shall keep these records for at least three years from the date of inspection. At a minimum, the Permittees must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions. [See 40 CFR § 264.15(d).]

II.F. MAINTENANCE AND OPERATION

II.F.1. The Permittees shall maintain, calibrate, and operate the Facility in accordance with this Permit and Table V-3 in Module V. [See 40 CFR § 264.15 and Table V-3 in Module V.]

II.F.2. The Permittees shall maintain the SWMUs, HWMUs, and AOCs and their equipment in good operating condition.

II.G. PERSONNEL TRAINING

II.G.1. The Permittees shall conduct personnel training in accordance with 40 CFR § 264.16, and in accordance with Permit Attachment Section H and Permit Attachment Appendix XIV, both of which are incorporated herein by this reference. [See 40 CFR § 264.16.]

II.G.2. The Permittees shall maintain training documents and records in accordance with 40 CFR §§ 264.16(d) and (e). [See 40 CFR §§ 264.16(d) and (e).]

II.H. SPECIAL PROVISIONS FOR CERTAIN WASTES

II.H.1. The Permittees are prohibited from storing or treating hazardous waste that is not

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identified in Table II-2.

TABLE II-2 - PERMITTED HAZARDOUS WASTE

Description of permitted hazardous waste
D001, D004, D005 ,D006, D007, D008, D009, D010, D011, D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043. F001, F002, F003, F004, F005, F006, F012, F019, F025, F035, F037, F038, F039 (except for F039 that contains dioxin or furans). K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K014, K015, K016, K017, K018, K019, K020, K022, K023, K024, K025, K026, K029, K030, K031, K032, K033, K034, K035, K036, K037, K038, K039, K040, K041, K042, K046, K048, K049, K050, K051, K052, K061, K064, K065, K066, K071, K073, K083, K084, K085, K086, K087, K088, K090, K091, K093, K094, K095, K096, K097, K098, K100, K101, K102, K103, K104, K105, K106, K112, K113, K114, K115, K116, K117, K118, K125, K126. P001, P002, P003, P004, P005, P007, P008, P010, P011, P012, P013, P014, P015, P016, P017, P018, P020, P021, P022 (rust), P023, P024, P026, P027, P028, P029, P030, P031, P033, P034, P036, P037, P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048, P049, P050, P051, P054, P056, P057, P058, P059, P060, P062, P063, P064, P066, P067, P068, P069, P070, P071, P072, P073, P074, P075, P077, P078, P082, P084, P085, P087, P088, P089, P092, P093, P094, P095, P096, P097, P098, P099, P101, P102, P103, P104, P105, P108, P109, P110, P113, P114, P115, P116, P118, P119, P120, P121, P123. U001, U002, U003, U004, U005, U007, U008, U009, U010, U011, U012, U014, U015, U016, U017, U018, U019, U022, U024, U025, U026, U027, U028, U029, U030, U031, U032, U034, U035, U036, U037, U038, U039, U041, U042, U043, U044, U045, U046, U047, U048, U049, U050, U051, U052, U053, U055, U056, U057, U058, U059, U060, U061, U062, U063, U064, U066, U067, U068, U069, U070, U071, U072, U073, U074, U075, U076, U077, U078, U079, U080, U081, U082, U083, U084, U085, U086, U087,

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U088, U089, U090, U091, U092, U093, U094, U095, U097, U098, U099, U101, U102, U103, U105, U106, U107, U108, U109, U110, U111, U112, U113, U114, U115, U116, U117, U118, U119, U120, U121, U122, U124, U125, U126, U127, U128, U129, U130, U131, U132, U135, U136, U137, U138, U140, U141, U142, U143, U144, U145, U146, U147, U148, U149, U150, U151, U152, U153, U154, U155, U156, U157, U158, U159, U161, U162, U163, U164, U165, U166, U167, U168, U169, U170, U171, U172, U173, U174, U176, U177, U178, U179, U180, U181, U182, U183, U184, U185, U186, U187, U188, U190, U191, U192, U193, U194, U196, U197, U200, U201, U202, U203, U204, U206, U207, U208, U209, U210, U211, U213, U214, U215, U216, U217, U218, U219, U220, U221, U222, U225, U226, U227, U228, U235, U236, U237, U238, U239, U240, U243, U244, U246, U247, U248, U249, U328, U353, U359.

II.H.2. The Permittees shall follow the procedures for handling ignitable and incompatible waste and otherwise comply with the requirements of 40 CFR § 264.17. The Permittees shall follow the procedures for handling ignitable wastes set forth in Permit Attachment Section C, incorporated herein by this reference. [See 40 CFR § 264.17 and Permit Attachment Section C, at C.2.4.]

II.H.3. Waste received from off-site may only be stored at the Facility if it is to be regenerated through thermal treatment in RF-2.

II.H.4. The Permittees shall comply with the requirements for Air Emission Standards for Equipment Leaks (40 CFR Part 264, Subpart BB) in accordance with Permit Application Appendix XIX and Permit Attachment Section N, incorporated herein by this reference. [See 40 CFR § 264.1050 *et seq.*, including 40 CFR § 264.1063(f), and Permit Condition I.K.10.]

II.H.5. The Permittees shall not accept, store, consolidate or treat any of the following:

II.H.5.a. Radioactive or nuclear wastes regulated by the U.S. Department of Energy and U.S. Nuclear Regulatory Commission including any spent carbon contaminated with such material;

II.H.5.b. Wastes associated with dioxins and/or furans (*e.g.* F020, F021, F022, F023, F026, F027, F028, F032, K043, K099, K156, K158, K174, K178, P127, and/or P189)

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including any spent carbon contaminated with such material;

II.H.5.c. Leachate from the disposal of more than one restricted waste (F039) including any spent carbon contaminated with such material if it contains wastes associated with dioxins and/or furans (*e.g.* F020, F021, F022, F023, F026, F027, F028, F032, K043, K099, K156, K158, K174, K178, P127, and/or P189), [See definition of "Dioxins and furans" in 40 CFR 260.10.];

II.H.5.d. Wastes regulated under the Toxic Substances Control Act (TSCA) that contain levels of polychlorinated biphenyls (PCBs) equal to or greater than 50 mg/Kg (ppm), or where the source of the PCBs is equal to or greater than 50 ppm including any spent carbon contaminated with such material;

II.H.5.e. Medical or infectious wastes including any spent carbon contaminated with such material; or

II.H.5.f. RCRA mixed waste (radioactive and hazardous waste) including any spent carbon contaminated with such material.

II.H.5.g. Corrosive (D002) or reactive waste (D003) including spent carbon containing corrosive or reactive waste.

II.H.5.h. Benzedine-contaminated waste (U021) including spent carbon containing benzedine.

II.I. LOCATION STANDARDS

The Facility is not within a 100-year floodplain. In the event of a flood, the Permittees shall remove all hazardous waste, before flood waters can reach the Facility, to a location where the wastes will not be vulnerable to the flood waters. [See 40 CFR § 264.18(b), Permit Attachment Section B and Permit Attachment Appendix II.]

II.J. PREPAREDNESS AND PREVENTION

II.J.1. Required Equipment

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At a minimum, the Permittees shall maintain the following at the Facility:

- An internal communications or alarm system at or near areas of the Facility where hazardous waste is stored, treated or otherwise managed that is or are capable of providing immediate emergency instruction (voice or signal) to facility personnel;

- A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;

- Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

- Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems. [See 40 CFR § 264.32.]

II.J.2. Testing And Maintenance Of Emergency Equipment

The Permittees shall test and maintain all the communications and alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, as necessary, to assure its proper operation in time of emergency. Specific testing and maintenance procedures are included in the inspection schedule in Permit Attachment Section F and in Permit Attachment Appendix XII. [See 40 CFR § 264.33.]

II.J.3. Access To Communications Or Alarm System

Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, the Permittees shall ensure that all personnel involved in the operation have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee. If there is ever just one employee on the premises while the Facility is operating, the Permittees shall ensure that he or she has immediate access to a device, such as a telephone (immediately available at the scene

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of operation) or a hand-held two-way radio, capable of summoning external emergency assistance. [See 40 CFR § 264.34.]

II.J.4. Required Aisle Space

The Permittees shall maintain adequate aisle space at the Facility in accordance with Permit Attachment Section D, Permit Attachment Appendix III, and Permit Attachment Appendix VII. At a minimum, the Permittees shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency and for the purposes of conducting inspections. [See 40 CFR § 264.35.]

II.J.5. Arrangements with Local Authorities

The Permittees shall maintain arrangements with the appropriate state, local, and Colorado River Indian Tribes (CRIT) authorities in accordance with 40 CFR § 264.37. The Permittees shall periodically update the arrangements, at least every five years from the effective date of this Permit. If state, local, or CRIT officials refuse to renew the preparedness and prevention arrangements with the Permittees, the Permittees must get this refusal in writing and document this refusal and maintain such documentation in the Facility's operating record until closure is completed and certified. The Permittees shall also notify the Director of the Waste Management Division of this refusal by the local authority(ies). [See 40 CFR §§ 264.37, Permit Attachment Section G and Permit Appendix XIII.]

II.K. CONTINGENCY PLAN

II.K.1. Implementation of Plan

The Permittees shall comply with the requirements of 40 CFR §§264.50 through 264.56. The Permittees must immediately carry out the provisions of the Contingency Plan, Permit Attachment Section G and Permit Attachment Appendix XIII, whenever there is a fire, explosion, or release of hazardous waste or constituents which could threaten human health or the environment. [See 40 CFR §§ 264.50 through 264.56.]

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II.K.2. Copies of Plan

The Permittees shall maintain a copy of the Contingency Plan at the Facility, including all revisions to the plan and must submit a copy (and a copy of all revisions) to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services. The Contingency Plan, Permit Attachment Section G and Permit Attachment Appendix XIII is hereby incorporated into this Permit by this reference. [See 40 CFR § 264.53.]

II.K.3. Amendments to Plan

II.K.3.a. The Permittees shall review and immediately amend, if necessary, the Contingency Plan, whenever:

II.K.3.a.i. The facility permit is revised;

II.K.3.a.ii. The plan fails in an emergency;

II.K.3.a.iii. The facility changes—in its design, construction, operation, maintenance, or other circumstances—in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;

II.K.3.a.iv. The list of emergency coordinators changes; or

II.K.3.a.v. The list of emergency equipment changes. [See 40 CFR § 264.54.]

II.K.3.b. The Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with the accompanying amended Contingency Plan. [See 40 CFR § 270.42.]

II.K.4. Emergency Coordinator

The Permittees shall ensure that a trained emergency coordinator is available at all times at the Facility or on call in case of an emergency, in accordance with 40 CFR § 264.55.

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[See 40 CFR §§ 264.52(d) and 264.55.]

II.L. MANIFEST SYSTEM

II.L.1. The Permittees shall comply with the manifest requirements of 40 CFR §§264.70, 264.71, 264.72, and 264.76. [See 40 CFR §§ 264.70, 264.71, 264.72, and 264.76. See also § 270.30(l)(7) and (8).]

II.L.1.a. If a significant discrepancy in a manifest is discovered, the Permittees must attempt to reconcile the discrepancy. If not resolved within fifteen days, the Permittees must submit a letter report, including a copy of the manifest, to the Director. [See 40 CFR §§264.72 and 270.30(l)(7).]

II.L.1.b. An unmanifested waste report must be submitted to the Director within 15 days of receipt of unmanifested waste. [See 40 CFR §§264.76 and 270.30(l)(8).]

II.L.1.c. Pursuant to 40 CFR § 264.71, electronic manifests that are obtained, completed, and transmitted in accordance with §262.20(a)(3) and used in accordance with 40 CFR § 264.71 in lieu of the paper manifest form are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement to obtain, complete, sign, provide, use, or retain a manifest. [See 40 CFR §§ 262.20(a)(3) and 264.71.]

II.M. RECORDKEEPING AND REPORTING

In addition to the recordkeeping and reporting requirements specified elsewhere in this Permit, the Permittees shall do the following:

II.M.1. Operating Record

II.M.1.a. The Permittees shall maintain a written operating record at the facility in accordance with 40 CFR § 264.73. [See 40 CFR § 264.73.]

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II.M.1.b. The Permittees shall record and maintain, in the operating record for this Permit, all monitoring, inspection, and other data compiled under the requirements of this Permit in accordance with 40 CFR §§ 63.1211, 264.73 and 264.1064. The Permittees shall also maintain the test burn reports, data, and calculations in the operating record. [See Permit Condition I.K. and 40 CFR §§ 63.1211, 264.73 and 264.1064.]

II.M.1.c. The Permittees shall maintain, in the operating record for this Permit, the manuals listed in the Operating and Maintenance Manuals Maintained on Site Table identified in Permit Attachment Appendix XXI. Whenever the list of manuals needs to be revised, the Permittees shall submit a request for a Permit Modification in accordance with Permit Condition I.G.7. along with the accompanying revised Table. [See 40 CFR §§ 63.8(c)(3) and 63.1209(b)(2).]

II.M.1.d. The Permittees shall maintain, in the operating record for this Permit, the site specific CMS quality control performance evaluation test plan procedures in accordance with 40 CFR § 63.8(d). [See 40 CFR § 63.8(d).]

II.M.2. Reporting Requirements

The Permittees shall comply with the reporting requirements of 40 CFR §§ 61.357, 63.1211, 264.77, 264.1089 and 264.1090, as appropriate. To the extent that the cited regulatory requirements call for overlapping reporting of information, the Permittees may merge the information into one or more reports and need not provide duplicative information. [See 40 CFR §§ 61.357, 63.1211, 264.77, 264.1089 and 264.1090.]

II.M.3. Biennial Report

The Permittees shall comply with the biennial reporting requirements of 40 CFR §264.75. [See 40 CFR §§ 264.75 and 270.30(l)(9).]

II.M.4. Subpart BB Recordkeeping and Reporting

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In accordance with 40 CFR § 264.1064(m), if any "equipment" at the facility, as defined at 40 CFR § 264.1031, contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for 300 hours or more per calendar year and is subject to regulations at 40 CFR Part 60, Part 61, or part 63 and the Permittees elect to determine compliance with 40 CFR Part 264, Subpart BB by documentation of compliance with the regulations at 40 CFR Part 60, Part 61, or Part 63 pursuant to the relevant provisions of the regulations at 40 Part 60, Part 61, or Part 63, the documentation of compliance under the regulations at 40 CFR Part 60, Part 61, or Part 63 shall be kept with or made readily available with the facility operating record. Otherwise, the Permittees shall comply with the recordkeeping and reporting requirements described in 40 CFR §§ 264.1064 and 264.1065 in accordance with the RCRA Subpart BB standards, Permit Attachment Section N and Permit Attachment Appendix XIX, incorporated herein by this reference. [See 40 CFR §§ 264.1031, 264.1064 and 264.1065, Permit Attachment Section N and Permit Attachment Appendix XIX. See also Permit Condition I.K.10.]

II.M.5. Application Recordkeeping

Except as provided in Permit Condition I.J., the Permittees shall comply with the recordkeeping requirements described in 40 CFR § 270.10(i). [See 40 CFR § 270.10(i).]

II.N. GENERAL CLOSURE REQUIREMENTS

II.N.1. Performance Standard

II.N.1.a. The Permittees shall close the Facility in accordance with Permit Conditions III.L., IV.M., and V.H., and 40 CFR Part 264, Subpart G, (40 CFR §§264.110 *et seq.*), Permit Attachment Section I, and Permit Attachment Appendices XV and XVII, each of which is incorporated herein by this reference. [See 40 CFR Part 264, Subpart G, (40 CFR §§264.110 *et seq.*), the RCRA Facility Closure Plan, Permit Attachment Section I, and Permit Attachment Appendices XV and

XVII.]

II.N.1.b. The Permittees shall close RF-1 in accordance with Permit Conditions I.K, and V.H., and 40 CFR Part 264, Subpart G, (40 CFR §§264.110 *et seq.*), RF-1 Closure Plan, Permit Attachment Section I, and Permit Attachment Appendices XVI and XVII, each of which is incorporated herein by this reference. [See 40 CFR Part 264, Subpart G, (40 CFR §§264.110 *et seq.*), RF-1 Closure Plan, Permit Attachment Section I, and Permit Attachment Appendices XVI and XVII.]

II.N.2. Closure Plan Review

The Director reserves the right to review the closure plans at any time to ensure both contain all the requirements to meet the closure requirements of 40 CFR Part 264, Subpart G, (40 CFR §§264.110 *et seq.*). This review may include any unusual activities, notices of violation, and inspection reports. [See 40 CFR Part 264, Subpart G.]

II.N.3. Amendment to Closure Plans

II.N.3.a. The Permittees shall amend either or both the RCRA Facility Closure Plan and the RF-1 Closure Plan, in accordance with 40 CFR §264.112(c), whenever necessary. [See 40 CFR § 264.112.]

II.N.3.b. If the Director determines at any time that either or both closure plans require modification, the Permittees shall modify either or both closure plans as appropriate to incorporate findings identified by the Director's review in accordance with 40 CFR §§264.112(c)(4) and 270.42. [See 40 CFR §§ 264.112 and 270.42.]

II.N.3.c. If, prior to the time the notice of closure required by Permit Condition II.N.4. is submitted, the Permittees determine that an amendment to the Closure Plan is appropriate, the Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with an accompanying revised closure plan at least

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180 days before initiation of closure activities in accordance with 40 CFR § 270.42. [See 40 CFR § 270.42.]

II.N.4. Notification of Closure

In addition to the Notice of Closure of RF-1 required by Permit Condition I.K., the Permittees shall notify the Director in writing at least 60 days prior to the date on which they expect to begin closure of any additional part of the Facility or to begin final closure of the Facility. [See 40 CFR § 264.112(d).]

II.N.5. Time Allowed For Closure

Within 90 days after receiving the final volume of hazardous waste, the Permittees shall treat, remove from the unit or Facility, or dispose of on-site all hazardous waste and shall complete closure activities, in accordance with 40 CFR § 264.113 and the schedules specified in the Closure Plans, Permit Attachment Section I and Appendices XV and XVI. [See 40 CFR §§ 264.113 and 270.42.]

II.N.6. Disposal or Decontamination of Equipment, Structures, and Soils

The Permittees shall decontaminate and dispose of all contaminated equipment from the Facility, support structures, and soils in accordance with 40 CFR § 264.114 and the Closure Plans, Permit Attachment Section I, and Permit Attachment Appendices XV and XVI. **[**See 40 CFR § 264.114.]

II.N.7. Certification of Closure

The Permittees shall certify that the Facility has been closed in accordance with 40 CFR § 264.115 and the specifications in the Closure Plans, Permit Attachment Section I, and Permit Attachment Appendices XV and XVI. **[**See 40 CFR § 264.115.]

II.O. GENERAL POST-CLOSURE REQUIREMENTS

If waste is left in place (*e.g.* equipment, platforms, SWMUs), the Permittees shall submit

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a post-closure permit application in accordance with the requirements of 40 CFR Part 264, Subpart G. [See 40 CFR §§ 264.117 through 264.120.]

II.P. COST ESTIMATE FOR FACILITY CLOSURE

II.P.1. The Permittees' most recent closure cost estimates, for facility-wide closure and RF-1 closure, respectively, are specified in Attachment 4 to the Closure Plan, Permit Attachment Section I, and Permit Attachment Appendix XV and Attachment 4 to the RF-1 Closure Plan, Permit Attachment Section I and Permit Attachment Appendix XVI, which are each incorporated herein by this reference. [See 40 CFR §§ 264.142, 264.144, 264.197(c)(3) and (5), 264.228(c)(2), and 264.258(c)(2).]

II.P.2.

II.P.2.a. The Permittees must adjust the closure cost estimate for inflation within 60 days prior to each annual anniversary date of the establishment of the financial instrument(s) used to comply with 40 CFR § 264.143. [40 CFR § 264.142(b).]

II.P.2.b. If at any time during the operation of the Facility, the Permittees use a financial test or corporate guarantee to meet the financial responsibility requirements in accordance with 40 CFR §264.143(f), the Permittees must adjust the closure cost estimate for inflation within 30 days after the close of owner or operator's fiscal year, as appropriate, and before submission of updated information to the Director in accordance with 40 CFR § 264.142(b). [See 40 CFR § 264.142(b).]

II.P.3. The Permittees must revise either or both closure cost estimates whenever there is a change in either or both of the Facility's Closure Plans in accordance with 40 CFR § 264.142(c). [See 40 CFR § 264.142(c).]

II.P.4. The Permittees must keep the latest closure cost estimates (for RF-1 and the Facility-wide closure) at the Facility in accordance with 40 CFR § 264.142(d). [See 40 CFR § 264.142(d).]

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II.P.5. New, updated or revised financial assurance instruments and updated cost estimates must be submitted to the Director in accordance with 40 CFR §§ 264.142 and 264.143. [40 CFR §§ 264.142 and 264.143.]

II.Q. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

The Permittees shall demonstrate continuous compliance with the requirements of 40 CFR § 264.143 by providing documentation of financial assurance, as required by and in accordance with 40 CFR § 264.151, in at least the amount of the cost estimates required by Permit Condition II.P. Requests for changes in financial assurance mechanisms demonstrating compliance with this Permit Condition II.Q. shall be submitted to the Director for review and approval in accordance with Permit Condition I.G.5. before being implemented. [See 40 CFR §§ 264.143 and 264.151.]

II.R. LIABILITY REQUIREMENTS

The Permittees shall demonstrate continuous compliance with the requirement of 40 CFR § 264.147(a) to have and maintain liability coverage for sudden and accidental occurrences in the amount of at least $1 million per occurrence, with an annual aggregate of at least $2 million, exclusive of legal defense costs. [See 40 CFR § 264.147(a).]

II.S. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Permittees shall comply with 40 CFR § 264.148, whenever applicable. [See 40 CFR § 264.148.]

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MODULE III - CONTAINERS

III.A. APPLICABILITY

This Module provides requirements for any containers used to store or treat hazardous waste at the Facility, including those received from off-site sources. Waste analysis requirements are contained in Module II, in Permit Condition II.C., in Permit Attachment Section C, and in Permit Attachment Appendix IV, the Waste Analysis Plan. [See 40 CFR § 264.13.]

III.B. GENERAL REQUIREMENTS FOR CONTAINERS

III.B.1. The Permittees shall not manage, store, treat, and/or consolidate hazardous waste in containers other than in the designated container storage areas listed in Table III-1 below. [See 40 CFR § 264.170.]

III.B.2. The Permittees must maintain the Spent Carbon Container Storage Area containment capacity of at least 10,000 gallons. [See 40 CFR § 264.175(b)(3).]

III.B.3. The Permittees shall not manage, store, and/or consolidate containers of hazardous wastes in excess of the maximum capacities for each individual container storage area identified in Table III-1.

TABLE III-1
CONTAINER STORAGE AREAS, SATELLITE ACCUMULATION AREAS, AND DESIGN CAPACITIES

Description	Location*	Capacity
Spent Carbon Container Storage	Warehouse	100,000 gallons
Satellite accumulation area	North side of container storage area	55 gallons
Satellite accumulation area	South side of container storage area	55 gallons
Satellite accumulation area	East of control room	55 gallons or less

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Description	Location*	Capacity
Satellite accumulation area	Facility on-site screening laboratory	55 gallons or less
Container storage area for waste generated on-site	South east of H-1 hopper	40 cubic yards or less per bin

* Note: Locations may vary due to facility needs. Permit Attachment Appendix III contains diagrams and maps with unit locations

III.B.3. The Permittees must manage all containers used to store or otherwise manage hazardous waste at the Facility in accordance with 40 CFR Part 264, Subpart I. [See 40 CFR Part 264, Subpart I.]

III.B.4. Closure requirements for containers used to store or otherwise manage hazardous waste are included in Module II, in Permit Condition II.N, in this Module III, in Permit Condition III.L., Permit Attachment Section I and Permit Attachment Appendices XV and XVI. [See 40 CFR §§ 264.111 and 264.178.]

III.C. CONDITION OF CONTAINERS

The Permittees shall maintain containers in good condition (*e.g.*, no severe rusting, apparent structural defects, etc.). If a container holding hazardous waste is not in good condition or, if the container begins to leak, the Permittees shall repair the container or place it into another suitable container or transfer the waste from such a container into a container that is in good condition. [See 40 CFR § 264.171.]

III.D. COMPATIBILITY OF WASTE WITH CONTAINER

III.D.1. The Permittees must use containers that are made of or lined with materials that will not react with, and are otherwise compatible with, the hazardous wastes to be stored, so that the ability of the containers to contain the waste is not impaired. [See 40 CFR § 264.172.]

III.D.2. For all containers within a singular secondary containment system, the Permittees shall ensure that the containers are compatible with all wastes within that containment system. [See 40 CFR § 264.172.]

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III.D.3. The Permittees shall assure compliance with Permit Condition III.D.1. by utilization of the procedures (*e.g.*, testing of waste and containers) and equipment specified in the Waste Analysis Plan, Permit Attachment Section C and Permit Attachment Appendix IV.

III.D.4. The Permittees shall conduct pre-acceptance characterization of waste, as specified in the Waste Analysis Plan, Permit Attachment Section C and Permit Attachment Appendix IV, and ensure proper precautions are taken so as to prevent accidental ignition or reaction of ignitable or incompatible wastes. [See 40 CFR §§ 264.172, 264.176 and 264.177.]

III.E. MANAGEMENT OF CONTAINERS

III.E.1. The Permittees shall always keep all containers holding hazardous waste closed during storage, except when it is necessary to add or remove waste. [See 40 CFR § 264.173(a).]

III.E.2. The Permittees shall never open, handle, or store a container holding hazardous waste in a manner that may rupture the container or cause the container to leak. [See 40 CFR § 264.173(b).]

III.E.3. Storage Configuration

III.E.3.a. The Permittees shall maintain adequate aisle space between rows of containers to allow for the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the facility. [See 40 CFR § 264.35.]

III.E.3.b. A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak. [See 40 CFR § 264.173(b).]

III.E.3.c. The Permittees shall not exceed the maximum volumes of waste for each category of containers listed in Table III-2. [See 40 CFR § 264.173.]

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TABLE III-2

LIST OF CONTAINER TYPES AND VOLUMES

Container Type	Volume (ft^3)	Volume (US Gallons)
VSC/ASC 200/Drums	7.9	59
VSC/ASC 400	17.5	131
VSC/ASC 1000	44.9	336
VSC/ASC 2000	82.0	614
VSC 3000	164	1228
PV1000	44.9	336
PV2000	82.0	614
"Supersack"	Up to 67	Up to 500

III.F. CONTAINMENT SYSTEMS

III.F.1. The Permittees shall provide secondary containment for all hazardous waste containers in accordance with 40 CFR § 264.175(b) except that storage areas that store containers holding only wastes that do not contain free liquids need not have such a containment system so long as the storage area meets the requirements of 40 CFR § 264.175(c). [See 40 CFR §§ 264.175(b) and (c).]

III.F.2.

III.F.2.a. The Permittees shall remove all accumulated liquid, including spilled and/or leaked wastes and all accumulated precipitation or run-on from the sump or collection area in a timely manner to prevent overflow of the collection system. [See 40 CFR § 264.175(b)(5).]

III.F.2.b. At a minimum, removal of liquid shall occur within 24 hours of the initial accumulation of liquid, or sooner, based on inspection of the containment area. [See Permit Attachment Section F and Permit Appendix XII.]

III.F.2.c. If the collected material from a secondary containment system is a hazardous waste, it must be managed as a hazardous waste in accordance with all applicable requirements of this Permit and RCRA. [See 40 CFR § 264.175(b).]

III.F.2.d. The Permittees shall address any spills or leaks from the pad and, if applicable, containment system in accordance with 40 CFR §§264.15(c) and 264.171. [See 40 CFR §264.15(c) and 264.171.]

III.G. AIR EMISSION CONTROLS FOR CONTAINERS

III.G.1. The Permittees shall store and manage hazardous waste in containers in accordance with the requirements specified in 40 CFR Part 264, Subpart CC, Permit Attachment Section O and Permit Attachment Appendix XX. [See 40 CFR §264.179, and Part 264, Subpart CC.]

III.G.2. For containers exempted under 264.1082(c), the Permittees shall determine the average volatile organic concentration of the waste at the point of waste generation, in accordance with the procedures specified in 40 CFR § 264.1083(a). The average volatile organic concentration shall be determined over an annual timeframe, as specified in 40 CFR § 264.1083(a). [See 40 CFR §§ 264.1082(c) and 264.1083(a).]

III.G.3. In accordance with 40 CFR § 264.1082(c)(1), for containers exempted under 264.1082(c)(1), the Permittees shall review and update, as necessary, the determination of average volatile organic concentration of the waste at the point of waste generation at least once every 12 months following the date of the initial determination for the hazardous waste streams managed and/or stored in such containers. [See 40 CFR §§ 264.1082 and 264.1083.]

III.G.4. For any hazardous waste that has been treated at the Facility, the Permittees shall perform the applicable waste determinations for each treated hazardous waste placed in containers exempted under the provisions of 40 CFR § 264.1082(c)(2)(i) through (c)(2)(vi) in accordance with the procedures specified in 40 CFR §§ 264.1082(c)(2) and 264.1083(b). [See 40 CFR §§ 264.1082(c)(2) and 264.1083.]

III.G.5. Certain hazardous wastes or volumes of hazardous wastes managed at the facility trigger air emission control requirements under the RCRA air emission control provisions at 40 CFR Part 264, Subpart CC (referred to as "CC"). For wastes subject to the requirements of RCRA CC that are not subject to one of the exemptions listed at 40 CFR § 264.1082(c), that are received in containers at the facility, in addition to any other applicable provisions in this Module, the Permittees shall:

III.G.5.a. Visually observe container condition and record the material (carbon size) and how full the container is by percentage as per Permit Attachment Appendix IV, Appendix B Tally Sheet;

III.G.5.b. This Permit Condition III.G.5.b. applies to: (1) any hazardous waste containers having a design capacity greater than 0.1 cubic meters and less than or equal to 0.46 cubic meters for which all hazardous waste in or entering the unit has an average volatile organic concentration at the point of waste origination of more than 500 parts per million by weight; and (2) any hazardous waste containers having a design capacity greater than 0.46 cubic meters that is not "in light material service" as that term is defined in 40 CFR § 265.1081, for which all hazardous waste in or entering the unit has an average volatile organic concentration at the point of waste origination of more than 500 parts per million by weight. These containers must comply with the "Container Level 1 standards" in accordance with 40 CFR Part 264, Subpart CC. [See 40 CFR § 264.1086(b) and (c).]

III.G.5.c. This Permit Condition III.G.5.c. applies to any hazardous waste containers having a design capacity greater than 0.46 cubic meters that is "in light material service" as that term is defined in 40 CFR § 265.1081, for which all hazardous waste in or entering the unit has an average volatile organic concentration at the point of waste origination of more than 500 parts per million by weight. These containers must comply with the "Container Level 2 standards" in accordance with 40 CFR Part 264 Subpart CC. [See 40 CFR § 264.1086(b) and (d).]

III.G.5.d. This Permit Condition III.G.5.d. applies to any hazardous waste containers having a design capacity greater than 0.1 cubic meters that is used for

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treatment of a hazardous waste by a waste stabilization process, for which all hazardous waste in or entering the unit has an average volatile organic concentration at the point of waste origination of more than 500 parts per million by weight. These containers must comply with the "Container Level 3 standards" in accordance with 40 CFR Part 264 Subpart CC. [See 40 CFR § 264.1086(b) and (e).]

III.G.6. For containers that contain or contact hazardous wastes with organic concentrations of 10% by weight or less, the Permittees shall comply with 40 CFR §§ 264.1063 and 264.1064. [See 40 CFR §§ 264.1050(b), 264.1063(d), and 264.1064(k).]

III. H. INSPECTION SCHEDULES AND PROCEDURES

III.H.1. The Permittees shall, upon receipt of containers of hazardous waste, inspect the containers in accordance with Permit Attachment F and Permit Appendices IV and XII and shall also ensure the container is in good condition within the meaning of 40 CFR § 264.171. Pursuant to 40 C7FR § 264.171, if any container is determined to be not in good condition or if it begins to or has leaked, the Permittees must transfer the hazardous waste from the container to a container that is in good condition or manage the waste in some other way that complies with the provisions of this Permit. [See 40 CFR § 264.171.]

III.H.2. The Permittees shall conduct daily inspections of the Spent Carbon Container Storage Area and the containers stored there in accordance with Permit Attachment F and Permit Appendix XII and shall maintain daily records of inspections at the facility.

III.H.3. The Permittees shall, at a minimum, conduct weekly inspections of all areas where hazardous waste containers are stored or managed, in accordance with the provisions of and inspection schedule in Permit Attachment F and Permit Appendix XII, to detect leaking containers and deterioration of containers or the containment system, which may be caused by corrosion or other factors. [See 40 CFR § 264.174.]

III.H.4. The Permittees' inspections shall include inspection and monitoring of any air emission control equipment used to comply with the provisions of Permit

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Condition III.G. in accordance with a written plan and schedule in accordance with 40 CFR § 264.1088.

III.H.5.

III.H.5.a. Prior to their receipt, identify any hazardous waste containers subject to the Container Level 1 Standards that will not or may not be emptied within 24 hours of their receipt at the Facility and conduct an inspection on or before receipt of such containers as follows:

III.H.5.a.i. Visually inspect the container, cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position;

III.H.5.a.ii. Repair defects, if detected, in accordance with the requirements, including time frames, of 40 CFR § 264.1086(c)(4)(iii) ;

III.H.5.a.iii. If a container used for managing hazardous waste remains at the facility for a period of 1 year or more, the owner or operator shall visually inspect the container and its cover and closure device(s) initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. [See 40 CFR § 264.1086(c)(4).]

III.H.5.b. Prior to their receipt, identify any hazardous waste containers subject to the Container Level 2 Standards that will not or may not be emptied within 24 hours of their receipt at the Facility and conduct an inspection on or before receipt of such containers in accordance with the requirements of 40 CFR § 264.1086(d)(4). [See 40 CFR § 264.1086(d)(4).]

III.H.5.c. Prior to their receipt, identify any hazardous waste containers subject to the Container Level 3 Standards and inspect and monitor the closed vent systems and control devices on such containers in accordance with the

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requirements of 40 CFR § 264.1086(e)(4). [See 40 CFR § 264.1086(e)(4).]

III.I. RECORD KEEPING AND REPORTING

III.I.1. For hazardous waste containers subject to the requirements of RCRA CC, including those subject to one of the exemptions listed at 40 CFR § 264.1082(c), the Permittees shall comply with the recordkeeping requirements of 40 CFR §§ 264.1086 and 264.1089. [See 40 CFR §§ 264.1086 and 264.1089.]

III.I.2. For hazardous waste containers subject to the requirements of RCRA CC, including those subject to one of the exemptions listed at 40 CFR § 264.1082(c), the Permittees shall comply with the reporting requirements of 40 CFR § 264.1090. [See 40 CFR § 264.1090.]

III.I.3. The Permittees shall retain sketches, drawings, or data demonstrating compliance with Permit Condition III.J.1., (location of buffer zone [15 m or 50 ft] and containers holding ignitable or reactive wastes). [See 40 CFR §§ 264.176.]

III.I.4. The Permittees shall retain sketches, drawings, or data demonstrating compliance with Permit Condition III.K.3., (location of incompatible wastes in relation to each other), where applicable. [See Permit Appendix IV (Waste Analysis Plan) and 40 CFR § 264.177.]

III.I.5. The Permittees shall maintain at the Facility until closure is completed and certified by an independent, registered professional engineer, the following hazardous waste container-specific documents and information and all amendments, revisions, and modifications to these documents and information:

III.I.5.a. For storage areas that store hazardous waste containers having free liquids, a description of the containment system to demonstrate compliance with container storage area provisions of 40 CFR § 264.175. This description must show the following:

III.I.5.a.i. Basic design parameters, dimensions, and materials of construction;

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III.I.5.a.ii. How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system;

III.I.5.a.iiii. Capacity of the containment system relative to the number and volume of hazardous waste containers to be stored;

III.I.5.a.iv. Provisions for preventing or managing run-on; and

III.I.5.a.v. How accumulated liquids can be analyzed and removed to prevent overflow.

III.I.5.b. For storage areas that store containers holding hazardous wastes that do not contain free liquids, a demonstration of compliance with 40 CFR 264.175(c), including:

III.I.5.b.i Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and

III.I.5.b.ii. A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids.

III.I.6. When management of ignitable or reactive waste or incompatible waste occurs at the Facility, the Permittees must document compliance with Permit Conditions III.J. and III.K. This documentation may be based on references to published scientific or engineering literature, data from trial tests (e.g., bench scale or pilot scale tests), waste analyses (as specified in the Waste Analysis Plan), or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions. [See Permit Appendix IV (Waste Analysis Plan) and 40 CFR § 264.17(c).]

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III.J. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE AND REACTIVE WASTES

III.J.1. The Permittees shall not locate containers holding ignitable or reactive waste within 50 feet (15 meters) of the facility property line. The physical location of this 50-foot boundary shall be permanently marked and maintained while the facility is in operation. [See 40 CFR § 264.176.]

III.J.2. The Permittees shall prevent accidental ignition or reaction of ignitable or reactive waste. The Permittees shall follow the procedures specified in the Waste Analysis Plan (Permit Appendix IV) regarding the identification of ignitable and reactive wastes. [40 CFR §§ 264.177(a) and 264.176.]

III.J.3 The Permittees shall comply with the general requirements of 40 CFR § 264.17 for ignitable or reactive wastes managed or stored in containers at the Facility. [See 40 CFR § 264.17.]

III.J.4. Containers of ignitable and reactive wastes shall be stacked no more than two containers high.

III.K. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

III.K.1. The Permittees shall not place incompatible wastes, or incompatible wastes and materials, in the same container unless such placement is performed in accordance with the provisions of 40 CFR § 264.17(b). [See 40 CFR §§ 264.17(b) and 264.177(a).]

III.K.2. The Permittees shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material. [See 40 CFR § 264.177(b).]

III.K.3. The Permittees shall separate containers of incompatible wastes as specified in the Waste Analysis Plan. Storage containers with incompatible wastes shall be separated from other material or be protected from other materials by means of a berm, dike, wall, or other device. [See 40 CFR § 264.177(c).]

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III.K.4. The Permittees shall ensure that the management of any incompatible wastes at the Facility will not result in any leak, corrosion, compromise or failure of any secondary containment required by this Permit. [See 40 CFR § 264.175.]

III.L. CLOSURE

III.L.1. At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. [See 40 CFR § 264.178.]

III.L.2. At closure, the Permittees must manage any hazardous waste removed from the containment system in accordance with the requirements of this Permit. [See comment to 40 CFR § 264.178.]

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MODULE IV - STORAGE IN TANKS

IV.A. APPLICABILITY

IV.A.1. All hazardous waste tank systems and tank-like systems managed at the Facility must comply with the design, installation, and other requirements for "new tank systems" at 40 CFR § 264.192, incorporated herein by this reference, as opposed to the requirements for "existing tank systems" at 40 CFR § 264.191. [See 40 CFR §§ 260.10, 264.191 and 264.192.]

IV.A.2. Except as otherwise specifically set forth in this Permit, the requirements of 40 CFR § 264, Subpart J, Subpart BB (Subpart BB), and Subpart CC (Subpart CC), and 40 CFR § 61, Subpart FF (Subpart FF) are applicable to the hazardous waste tanks systems (T-1, T-2, T-5, T-6, and T-18) that are used to store or otherwise manage hazardous waste at the Facility. Map of Tanks systems' locations can be found in the Permit Attachment Appendix III. Certain air emission control requirements also apply to Tank T-11, as indicated in Permit Condition IV.G.1. and Table IV-2.

IV.A.3. This module also contains Permit Conditions for the Hoppers H-1 and H-2, which are ancillary equipment to Tank Systems T-1, T-2, T-5 and T-6 and are used to transport or feed hazardous waste to these Tank Systems. These Hoppers are defined as "open valves or lines" under RCRA's air emissions requirements found at 40 CFR Part 264, Subpart BB, and as "individual drain systems" under the Clean Air Act's air emission control requirements for individual drain systems found at 40 CFR Part 61, Subpart FF.

IV.A.4. Table IV-1 below provides descriptions of the hazardous waste tank systems that are discussed in this Module and that are subject to the permit conditions of this Module.

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TABLE IV-1
INFORMATION ABOUT HAZARDOUS WASTE TANK SYSTEMS

Tank/Ancillary Equipment No. & Description	*Tank/Ancillary Equipment Materials Of Construction*	*Tank/Ancillary Equipment Dimensions*	*Tank/Ancillary Equipment Design Capacity (Gallons)*	*Tank/Ancillary Equipment Maximum Allowable Design Vapor Pressure (kPa)*
T-1 spent carbon storage tank	300 Series Stainless Steel, Fixed Roof	16'-0" Straight Side 10'-0" Diameter 8'-0" 62° Bottom Cone	8,319 gal.	Atmospheric
T-2 spent carbon storage tank	300 Series Stainless Steel, Fixed Roof	16'-0" Straight Side 10'-0" Diameter 8'-0" 62° Bottom Cone	8,319 gal.	Atmospheric
T-5 spent carbon storage tank	300 Series Stainless Steel, Fixed Roof	16'-0" Straight Side 10'-0" Diameter 8'-0" 62° Bottom Cone	8,319 gal.	Atmospheric
T-6 spent carbon storage tank	300 Series Stainless Steel, Fixed Roof	16'-0" Straight Side 10'-0" Diameter 8'-0" 62° Bottom Cone	8,319 gal.	Atmospheric
T-18 RF-2 Feed Tank	300 Series Stainless Steel	7'-6" Straight Side 10'-4.5" Diameter 9'-4.75" 60° Bottom Cone	6,500 gal.	Atmospheric
H-1 Outdoor spent	Mild Steel	14' length x 8' width	5000 lb. capacity	Atmospheric

Tank/Ancillary Equipment No. & Description	*Tank/Ancillary Equipment Materials Of Construction*	*Tank/Ancillary Equipment Dimensions*	*Tank/Ancillary Equipment Design Capacity (Gallons)*	*Tank/Ancillary Equipment Maximum Allowable Design Vapor Pressure (kPa)*
carbon unloading hopper		x 7' height		
H-2 Indoor spent carbon unloading hopper	Mild Steel	4' length x 4' width x 4' height	5000 lb. capacity	Atmospheric

IV.B. GENERAL REQUIREMENTS FOR TANK SYSTEMS

IV.B.1. Tank design capacities for the tanks and the hoppers are shown in Table IV-1. This design capacity for each tank or hopper shall not be exceeded.

IV.B.2. Prior to the installation of any new tank systems, tank-like systems or components, the Permittees shall submit to the Director the information required in a Part B permit application for new tank systems or components in accordance with 40 CFR §§ 264.192, along with an accompanying request for a permit modification in accordance with Permit Condition I.G.7. (See 40 CFR §§ 264.192 and 270.42.)

IV.B.3. Hoppers H-1 and H-2, described in Table IV-1, are considered ancillary equipment to Tanks T-1, T-2, T-5 and T-6 and must meet each of the requirements applicable to ancillary equipment that are set forth in 40 CFR Part 264, Subpart J, which is incorporated herein by this reference. (See 40 CFR § 264.190 *et seq.*)

IV.B.4. Pursuant to the Schedule of Compliance set forth in Permit Condition I.K., the Permittees must obtain and submit written assessments for Hoppers H-1 and H-2 that meet the requirements of 40 CFR § 264.192(a) as follows:

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IV.B.4.a. Pursuant to the Schedule of Compliance set forth in Permit Condition I.K., the Permittees must obtain and submit written assessments for Hopper H-1 that meet the requirements of 40 CFR § 264.192(a) and that demonstrate compliance with 40 CFR § 264.192. The Permittees must maintain a copy of these assessments on file at the Facility in accordance with 40 CFR § 264.192(g). [See 40 CFR § 264.192 and Permit Condition I.K.]

IV.B.4.b. Pursuant to the Schedule of Compliance set forth in Permit Condition I.K., the Permittees must obtain and submit written assessments for Hopper H-2 that meet the requirements of 40 CFR § 264.192(a) and that demonstrate compliance with 40 CFR § 264.192. The Permittees must maintain a copy of these assessments on file at the Facility in accordance with 40 CFR § 264.192(g). [See 40 CFR § 264.192 and Permit Condition I.K.]

IV.C. CONDITION OF TANK SYSTEMS

IV.C.1. The Permittees shall maintain hazardous waste tank systems in good condition (*e.g.*, no severe rusting, apparent structural defects, etc.). If a tank system holding hazardous waste is not in good condition or, if the tank system begins to leak, the Permittees shall repair the tank system or transfer the waste from such a tank system into one or more tanks systems or containers that are in good condition. [See 40 CFR § 264.171.]

IV.D. COMPATIBILITY OF WASTE WITH TANK SYSTEMS

IV.D.1. Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the tank's containment system to rupture, leak, corrode, or otherwise fail. [See 40 CFR § 264.194(a).]

IV.E. MANAGEMENT OF TANK SYSTEMS

IV.E.1. The Permittees must use appropriate controls and practices to prevent spills and overflows from tank systems or containment systems. [See 40 CFR § 264.194(b).]

IV.E.2. The Permittees must utilize appropriate spill prevention controls (*e.g.*, check valves, dry disconnect couplings), overfill prevention controls (*e.g.*, level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank), and maintenance of sufficient freeboard in uncovered tanks and H-1 to prevent overtopping by wind action or by precipitation. [See 40 CFR § 264.194(b).]

IV.E.3. The Permittees shall ensure that the unloading and feeding of waste into H-1 and H-2 are done in a manner that prevents the migration of waste from these units. The Permittees may not use the units H-1 or H-2 for waste storage and are required to pump any waste fed into H-1 or H-2 into Tanks T-1, T-2, T-5 or T-6 as soon as practical, even if carbon regeneration operations at the Facility have ceased or been curtailed.

IV.F. CONTAINMENT SYSTEMS

IV.F.1. The Permittees must maintain secondary containment in accordance with the requirements of 40 CFR § 264.193. [See 40 CFR § 264.193.]

IV.F.2. The secondary containment must be designed or operated to contain 100 percent of the capacity of the largest tank within its boundary, and must be designed and operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. [See 40 CFR §§ 264.193(e)(1)(i), (ii), (iii) and (iv) and Permit Attachment Appendix IX.]

IV.F.3. The Permittees shall maintain the secondary containment in a manner so as to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank systems. The Permittees must ensure that the secondary containment is free from cracks or gaps by maintaining a sealant on any such areas that is compatible with the spent carbon. [See 40 CFR §§ 264.193(b)(1) and (e)(1)(iii).]

IV.F.4. The Permittees must retain the containment volume of secondary containment within the concrete pad that serves as the secondary containment for Tanks T-1, T-2, T-5 and T-6 at or above the 9,847 gallons at all times. The maximum tank volume of Tanks T-1, T-2, T-5 and T-6 is 8,319 gallons and the calculated applicable rainfall volume for secondary containment for Tanks T-1, T-2, T-5 and T-6 is 1,528 gallons. The containment volume must meet the total required volume of 9,847 gallons. [See 40 CFR § 264.193(e) and Permit Attachment Appendix IX.]

IV.F.5. The Permittees shall maintain the double walled tank T-18 in accordance with 40 CFR 264.193(e)(3). [See 40 CFR § 264.193(e)(3).]

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IV.F.6. Spent Carbon Unloading Hopper H-1

IV.F.6.a. In accordance with the Compliance Schedule set forth in Permit Condition I.K., the Permittees shall submit to EPA for approval a work plan with a schedule for providing secondary containment for the spent carbon unloading Hopper H-1 in accordance with 40 CFR § 264.193. [See 40 CFR § 264.193.]

IV.F.6.b.i. Until such time as the secondary containment for Hopper H-1 is provided in accordance with Permit Condition IV.F.6.a., the Permittees must conduct a leak test or other integrity assessment to ensure the integrity of Hopper H-1 annually from the date of the leak test or other integrity assessment required in Permit Condition I.K. and maintain a record of the results of each such assessment in the operating record at the Facility and otherwise comply with the requirements of 40 CFR § 264.193(i), incorporated herein by this reference. [See 40 CFR § 264.193(i).]

IV.F.6.b.ii. Until such time as the secondary containment for Hopper H-1 is provided in accordance with Permit Condition IV.F.6.a., the Permittees must perform daily inspections of the spent carbon unloading Hopper H-1 in accordance with 40 CFR § 264.195(f). [See 40 CFR § 264.195(f).]

IV.F.6.b.iii. If the secondary containment for Hopper H-1 is not implemented within a year from the effective date of this Permit, as provided in accordance with Permit Conditions I.K.7. and IV.F.6.a., the Permittees shall be subject to the requirements of Permit Conditions I.K.9. and II.M.3., and 40 CFR § 264.197(c), incorporated herein by this reference. [See 40 CFR § 264.197(c).]

IV.F.7. The Permittees shall maintain the secondary containment for the spent carbon unloading Hopper H-2 in the container storage warehouse in accordance with 40 CFR § 264.193(e)(1). The pad under H-2 serves as a liner external to the hopper, providing secondary containment. [See 40 CFR § 264.193(e)(1).]

IV.G. AIR EMISSION CONTROLS

IV.G.1. Tank systems T-1, T-2, T-5, T-6, T-11 and T-18 are subject to air emission control requirements pursuant to this Permit. Tanks T-1, T-2, T-5, T-6 and T-18 and hoppers H-1 and H-2 are equipped with closed vent systems leading to air pollution control devices. The Permittees must comply with the RCRA and CAA

regulations that are identified in the column labeled "Air Emission Control Regulations Applicable to this Unit" in Table IV-2 and that relate to the emissions standards, monitoring records, reporting and management requirements for the correlating units, *i.e.*, tanks T-1, T-2, T-5, T-6, T-11 and T-18, and their associated ancillary equipment, (H-1 and H-2), and the carbon adsorbers WS-1, WS-2, and WS-3, and their associated closed vent systems (e.g. hoses/piping and connections). [See Permit Attachment Sections N and O, Permit Attachment Appendices XIX and XX, Permit Attachments Subpart BB Compliance Plan and Subpart FF Compliance Plan and 40 CFR Part 61 and §§ 264.1050 *et* seq., 264.1087, 264.1088, 264.1089, and 264.1090.]

IV.G.2.

IV.G.2.a. If sampling and analysis or operator knowledge of the waste entering Tank T-11 demonstrates that the average annual Volatile Organic concentration of the waste entering the unit is greater than or equal to 500 parts per million by weight, the Permittees shall ensure that tank T-11 complies with the "Air Emission Control Regulations Applicable to this Unit" in Table IV-2.

IV.G.2.b. For Hoppers H-1 and H-2, the Permittees must ensure that H-1 and H-2 are at all times in compliance with either 40 CFR Part 264, Subpart BB requirements for open ended valves or lines or with 40 CFR Part 61, Subpart FF requirements for individual drain systems, as set forth in the column labeled "Air Emission Control Regulations Applicable to this Unit" in Table IV-2. [See 40 CFR §§ 264.1050 *et seq.*, and §§ 61.340 *et seq.* See also Permit Condition I.K.10.]

IV.G.2.c. For carbon adsorber WS-2 and the piping, connections, and any flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to WS-2, the Permittees must ensure that WS-2, and any such piping, connections and devices, are at all times in compliance with either 40 CFR Part 264, Subpart BB requirements for closed-vent systems and control devices or with 40 CFR Part 61, Subpart FF requirements for closed vent systems and control devices, as set forth in the column labeled "Air Emission Control Regulations Applicable to this Unit" in Table IV-2. [See 40 CFR §§ 264.1050 *et seq.*, and §§ 61.340 *et seq.* See also Permit Condition I.K.10.]

IV.G.3. In accordance with Permit Attachment Section N and Permit Attachment Appendix XIX, the Permittees must comply with the requirements of 40 CFR Part

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264, Subpart BB. **[**See 40 CFR Part 264, Subpart BB. See also Permit Condition I.K.10.]

IV.G.4. In accordance with Permit Attachment Section O and Permit Attachment Appendix XX, the Permittees must comply with the record-keeping and reporting requirements of 40 CFR §§ 264.1089(f)(1) and 264.1090(a) when operating the scrubber, recycler, boiler and cooling tower blow-down storage tank, T-11. [See Permit Attachment Section O, Permit Attachment Appendix XX, and 40 CFR §§ 264.1089(f)(1) and 264.1090(a).]

IV.G.5. The Permittees shall maintain and operate the air pollution control equipment at the Facility in a manner consistent with good air pollution control practice for minimizing emissions. [See, *e.g.*, 40 CFR §264.31.]

TABLE IV-2
MANAGEMENT OF EACH TANK SYSTEM, HOPPERS AND THE AIR POLLUTION CONTROL DEVICES

Tank or Unit No.	**Description**	**Air Emission Control Requirements Applicable to this Unit**
T-1	Spent Carbon Storage Tank. Tank T-1 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-1).	40 CFR Part 61, Subparts A and FF and 40 CFR §264.1089(j).
T-2	Spent Carbon Storage Tank. Tank T-2 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-1).	40 CFR Part 61, Subparts A and FF and 40 CFR §264.1089(j).
T-5	Spent Carbon Storage Tank. Tank T-5 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-1).	40 CFR Part 61, Subparts A and FF and 40 CFR §264.1089(j).
T-6	Spent Carbon Storage Tank. Tank T-6 vapors are controlled by a closed vent system leading to carbon adsorber (WS-1).	40 CFR Part 61, Subparts A and FF and 40 CFR §264.1089(j).
T-11	Scrubber/ Recycle/	40 CFR §§ 264.1082(c)(1),

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Tank or Unit No.	Description	Air Emission Control Requirements Applicable to this Unit
	Boiler and Cooling Tower Blow-Down Water Storage Tank	264.1089(f)(1) and 264.1090(a). Tank T-11 is subject to monitoring and record keeping requirements of 40 CFR Part 264, Subpart CC. If sampling and analysis or operator knowledge of the waste entering Tank T-11 demonstrates that the average annual Volatile Organic concentration of the waste entering the unit is greater than or equal to 500 parts per million by weight, the Permittees shall at such time ensure that tank T-11 meets the additional requirements of 40 CFR §§ 264.13(b)(8), 264.1082, 264.1084 and 264.1087.
T-18	Hearth feed tank or spent carbon feed tank. Tank T-18 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-3).	40 CFR Part 61, Subparts A and FF and 40 CFR §264.1089(j).
H-1	Outdoor spent carbon unloading hopper (open ended line; individual drain system). Hopper H-1 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-2).	40 CFR §§ 61.01 through 61.19, 61.346 (or 40 CFR Part 264, Subpart BB), and Permit Conditions I.K.10., II.H.4. and IV.G.3.
H-2	Indoor spent carbon unloading hopper (open ended line; individual drain system). Hopper H-2 vapors are controlled by a closed vent system leading to a carbon adsorber (WS-2).	40 CFR §§ 61.01 through 61.19, 61.346 and 264.1064(m) (or 40 CFR Part 264, Subpart BB), and Permit Conditions I.K.10., II.H.4. and IV.G.3.
WS-1	Carbon Adsorber No.1 and associated Closed Vent System (e.g. connections and hoses/piping) for tanks T-1, T-2, T-5, and T-6. WS-1, and the piping, connections, and any flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to WS-1, is an air pollution control device.	40 CFR §§ 61.01 through 61.19, 61.349, 61.354(d), 264.1089(j), and Permit Conditions II.H.4. and IV.G.3.

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Tank or Unit No.	Description	Air Emission Control Requirements Applicable to this Unit
WS-2	Carbon Adsorber No.2 and associated Closed Vent System (e.g. connections and hoses/piping) for hoppers H-1 and H-2. WS-2, and the piping, connections, and any flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to WS-2, is an air pollution control device.	40 CFR §§ 61.01 through 61.19, 61.349, 61.354(d), and 264.1064(m) (or 40 CFR Part 264, Subpart BB, for closed vent systems and control devices) and Permit Conditions I.K.10., II.H.4. and IV.G.3.
WS-3	Carbon Adsorber No.3 and associated Closed Vent System (e.g. connections and hoses/piping) for tank T-18. WS-3, and the piping, connections, and any flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to WS-3, is an air pollution control device.	40 CFR §§ 61.01 through 61.19, 61.349, 61.354(d), 264.1089(j), and Permit Conditions II.H.4. and IV.G.3..
Closed Vent Systems Connected to WS-1 and WS-3	Hoses/piping and connections leading from tanks to adsorbers. The piping, connections, and any flow-inducing devices that transport gas or vapor from the hazardous waste tanks to air pollution control devices, such as WS-1, and WS-3, are closed vent systems.	40 CFR §§ 61.01 through 61.19, 61.349, 61.354(d), 264.1089(j), and Permit Conditions II.H.4. and IV.G.3.
Closed Vent Systems Connected to WS-2	Hoses/piping and connections leading from hoppers to adsorbers. The piping, connections, and any flow-inducing devices that transport gas or vapor from the hoppers to an air pollution control device, such as WS-2, are closed vent systems.	40 CFR §§ 61.01 through 61.19, 61.349, 61.354(d), 264.1064(m), (or 40 CFR Part 264, Subpart BB, for closed vent systems) and Permit Conditions I.K.10., II.H.4. and IV.G.3.

IV.G.6. For hazardous waste managed and/or stored on site in any tank systems that are not equipped with air pollution control devices installed prior to December 6, 1996, the Permittees shall determine the average volatile organic concentration of the waste at the point of waste generation, in accordance with the procedures

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specified in 40 CFR § 264.1083(a). The average shall be determined over an annual timeframe, as specified in 40 CFR § 264.1083(a). In accordance with 40 CFR § 264.1082(c)(1), the Permittees shall review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the hazardous waste streams managed and/or stored in such containers. [See 40 CFR §§ 264.1082 and 264.1083.]

IV.G.7. For any hazardous waste that has been treated at the Facility, the Permittees shall perform the applicable waste determinations for each treated hazardous waste placed in tanks that are exempted under the provisions of 40 CFR § 264.1082(c)(2)(i) through (c)(2)(vi) in accordance with the procedures specified in 40 CFR § 264.1083(b). [See 40 CFR § 264.1083.]

IV.G.8. Certain hazardous wastes or volumes of hazardous wastes managed at the facility trigger air emission control requirements under either the RCRA air emission control provisions at 40 CFR Part 264, Subpart CC or the Clean Air Act air emission control provisions at 40 CFR Part 61, Subpart FF, or both. For wastes subject to the requirements of either RCRA Subpart CC or CAA Subpart FF or both that are not subject to one of the exemptions listed at 40 CFR § 264.1082(c), that are managed in tank systems at the Facility, in addition to the requirements in Permit Condition III.G.1, the Permittees shall:

IV.G.8.a.i. This Permit Condition IV.G.8.a.i. applies to any hazardous waste tank that meets all of the conditions specified in 40 CFR § 264.1084(b)(1)(i) through (iii), which is not equipped with a carbon canister meeting the requirements of 40 CFR § 61, Subpart FF. The Permittees must control air pollutant emissions from such tanks in accordance with the Tank Level 1 controls specified in 40 CFR § 264.1084(c) or the Tank Level 2 controls specified in 40 CFR § 264.1084(d). If Tank Level 1 or Tank Level 2 controls apply, the Permittees must perform inspections, recordkeeping and reporting required for tanks subject to Tank Level 1 or Tank Level 2 controls, as applicable. [See 40 CFR §§ 264.1084(b)(1), (c) and (d).]

IV.G.8.a.ii. This Permit Condition IV.G.8.a.ii. applies to any hazardous waste tank that does not meet all of the conditions specified in 40 CFR § 264.1084(b)(1)(i) through (iii), and which is not equipped with a carbon canister meeting the requirements of 40 CFR § 61, Subpart FF. The Permittees must control air pollutant emissions from such tanks in accordance with the Tank Level 2 controls specified in 40 CFR § 264.1084(d). If Tank Level 2 controls

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apply, the Permittees must perform inspections, recordkeeping and reporting required for tanks subject to Tank Level 2 controls. [See 40 CFR §§ 264.1084(b)(2), and (d).]

IV.G.8.a.iii. This Permit Condition IV.G.8.a.iii. applies to any hazardous waste tank for which air pollution emissions are controlled by venting the tank to a control device, other than those tanks equipped with a carbon canister meeting the requirements of 40 CFR § 61, Subpart FF. The Permittees shall control air emissions from such tanks in accordance with the requirements set forth at 40 CFR § 264.1084(g)(1) through (g)(3). If the requirements of 40 CFR § 264.1084(g)(1) through (g)(3) apply, the Permittees must perform inspections, recordkeeping and reporting required for tanks subject to 40 CFR 264.1084(g). [See 40 CFR §§ 264.1084(g).]

IV.G.8.a.iv. This Permit Condition IV.G.8.a.iv. applies to the transfer of hazardous waste to any hazardous waste tank where the average volatile organic concentration is above the standard set forth at 40 CFR 264.1082(c)(1) (*i.e.*, 500 ppmw) other than to a tank equipped with a carbon canister meeting the requirements of 40 CFR § 61, Subpart FF. The Permittees shall transfer hazardous waste to any such tank in accordance with the requirements of 40 CFR § 264.1084(j). [See 40 CFR § 264.1084(j).]

IV.G.8.b. This Permit Condition IV.G.8.b. applies to any tank equipped with a carbon canister meeting the requirements of 40 CFR Part 61, Subpart FF. The Permittees shall operate and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to the carbon canister in accordance with the following requirements:

IV.G.8.b.i. The fixed-roof shall meet the requirements set forth at 40 CFR § 61.343(a)(1)(i).

IV.G.8.b.ii. The closed-vent system and control device (*i.e.*, carbon canister) shall be designed and operated in accordance with the requirements of 40 CFR § 61.349. [See 40 CFR Part 61, Subpart FF.]

IV.G.9. The Permittees shall change-out the carbon in WS-1, WS-2 and WS-3, respectively, in accordance with the schedule set forth in the Permit Attachment Appendix XXIII, Section 4.5 and the engineering calculations in Appendix C thereto to ensure control of emissions from volatile organic compounds (VOCs)

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into ambient air.

IV.G.10. The Permittees shall comply with the record keeping requirements of 40 CFR §§ 264.1064(m) and 264.1089(j) for any tank or equipment equipped with and operating air emission controls in accordance with CAA requirements set forth in 40 CFR Parts 60, 61, or 63, which are deemed in compliance with 40 CFR Part 264 Subpart BB or Subpart CC, as appropriate. [See 40 CFR §§ 264.1064(m) and 264.1089(j). See also Permit Condition I.K.10.]

IV.H. INSPECTION SCHEDULES AND PROCEDURES

IV.H.1. The Permittees shall inspect the tank systems, in accordance with the Inspection Schedule in Permit Attachment Section F and Permit Attachment Appendix XII. [See 40 CFR § 264.195, Permit Attachment Section F and Permit Attachment Appendix XII.]

IV.H.2. The Permittees shall visually inspect the spent carbon storage tank systems, (T-1, T-2, T-5, T-6 and T-18), daily. This inspection shall include, at a minimum:

IV.H.2.a. A visual inspection of the above-ground portions of the tank systems to detect corrosion or releases of waste in accordance with 40 CFR § 264.195(c)(1);

IV.H.2.b. A visual inspection of the construction materials and the area immediately surrounding the externally accessible portion of each tank system, including the secondary containment systems to detect erosion or signs of releases of hazardous waste in accordance with 40 CFR § 264.195(c)(2);

IV.H.2.c. Ancillary equipment that is not provided with secondary containment, as described in 40 CFR § 264.193(f)(1) through (4), must be inspected at least once each operating day in accordance with 40 CFR § 264.195(f); and

IV.H.2.d. For ancillary equipment not contained or located over secondary containment, a leak test must be conducted annually in accordance with 40 CFR § 264.193(i). [See 40 CFR § 264.193(i).]

IV.H.3. The Permittees shall conduct daily inspections of the overfill/spill control equipment (*e.g.*, waste-feed cutoff systems, bypass systems, and drainage

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systems) to ensure that this equipment is in good working order. [See 40 CFR § 264.195.]

IV.H.3.a. The Permittees shall conduct daily visual inspections of the tank walls and pad for wetness, cracks, holes, or other evidence of malfunction. [See Permit Attachment Section F.]

IV.H.3.b. The Permittees shall, on a daily basis, check for leaks around the valve areas, couplings, and threaded nipples, as applicable. [See Permit Attachment Section F.]

IV.H.3.c. The Permittees shall, on a daily basis, check tank markings for weathering and proper identification of tank contents. [See Permit Attachment Section F.]

IV.H.3.d. The Permittees shall, on a daily basis, check external tank walls for signs of corrosion and pitting. [See Permit Attachment Section F.]

IV.H.4. At least once each operating day, the Permittees shall conduct reviews of the data gathered from monitoring and leak detection equipment (*e.g.*, pressure or temperature gauges, monitoring wells) to ensure that the tank systems are being operated according to their designs. [See 40 CFR § 264.195(b).]

IV.H.5. The Permittees shall visually inspect daily the valve position and level monitoring systems for proper operation. [See Permit Attachment Section F.]

IV.H.6. The Permittees shall perform inspections of each hazardous waste tank to ensure that no cracks or gaps occur and that access doors and other openings are closed and gasketed properly. [See 40 CFR § 264.1084.]

IV.H.7. Ultrasonic Thickness Testing

IV.H.7.a. The Permittees shall conduct annual ultrasonic thickness testing at the bottom of the cylinder wall above the cone-cylinder intersection and at the previous locations of minimum shell thickness readings (as recommended in the tank assessment in the Permit Attachment Appendix IX) for each major component (top head, cylinder wall, bottom cone and support skirt) on each of tanks T-1, T-2, T-5, T-6 and T-18. [See Permit Attachment Section F and Permit Attachment Appendix IX.]

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IV.H.7.b. In addition, the Permittees shall conduct comprehensive ultrasonic thickness testing every five (5) years for each major component (top head, cylinder wall, bottom cone, and support skirt) on each of the and tanks T-1, T-2, T-5, T-6 and T-18 as recommended in the tank assessment in the Permit Attachment Appendix IX. [See Permit Attachment Section F and Permit Attachment Appendix IX.]

IV.H.7.c. The Permittees shall remove from service and repair or replace any tank with cylindrical wall thickness that is less than or equal to 0.157 inches. [See Permit Attachment Section F and Permit Attachment Appendix IX.]

IV.H.7.d. The Permittees shall replace all carbon steel components and fittings of any hazardous waste tank system that are in direct contact with spent carbon and recycle water slurry with 300 series stainless steel components and fittings prior to performing the next set of comprehensive ultrasonic thickness test measurements. [See Permit Attachment Section F and Permit Attachment Appendix IX.]

IV.H.8. The Permittees shall inspect the air emission control equipment in accordance with the following requirements and Permit Attachment Section F and Permit Attachment Appendix XII. The Permittees shall visually inspect the carbon adsorption systems (WS-1, WS-2, and WS-3) and their closed vent systems on a daily basis to ensure there are no leaks from these devices and that they are properly operated. The visual inspection shall include inspection of ductwork and piping and connections to covers and control devices for evidence of visible defects such as holes in ductwork or piping and loose connections. [See Permit Attachment Section F and Permit Attachment Appendix XII.]

IV.H.9. The Permittees shall maintain the paint coating on exterior surfaces of all tank system components that are carbon steel by repainting if visual observation indicates that 20% or greater of the component's paint coating is damaged. [See Permit Attachment Section F and Permit Attachment Appendix IX.]

IV.H.10. If a tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment, the Permittees shall comply with Permit Condition IV.C. of this Permit and notify the Director in accordance with Permit Condition IV.J. of this Permit. [See 40 CFR § 264.193(i)(5).]

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IV.I. RESPONSE TO LEAKS, SPILLS OR DEFECTS

IV.I.1. In the event of: (1) a leak or a spill from a tank system, (2) a leak or spill from a secondary containment system, (3) a system becomes unfit for continued use due to defects or a state of disrepair, or (4) a defect in a carbon adsorber is detected, the Permittees shall remove the system from service immediately and complete the following actions:

IV.I.1.a. Immediately stop the flow of hazardous waste into the system and inspect the system to determine the cause of the release. [See 40 CFR § 264.196(a).]

IV.I.1.b. Remove waste and accumulated precipitation from the system within 24 hours of the detection of the leak to prevent further release and to allow inspection and repair of the system. [See 40 CFR § 264.196(b).]

IV.I.1.b.i. If the Permittees find that it will be impossible to meet this time period, the Permittees shall, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the system to be performed and in as timely a manner as is possible to prevent harm to human health or the environment. In such event, the Permittees shall also provide prompt notification (*i.e.*, within 24 hours of detection of the leak) to the Director regarding any additional time that may be required to complete removal of waste and accumulated precipitation from the system. The Director may approve the additional time required or set another time frame to complete removal of the leaked material in their sole discretion.

IV.I.1.b.ii. If the collected material is a RCRA hazardous waste, it must be managed in accordance with all applicable requirements of this Permit. The Permittees shall note that if the collected material is discharged through a point source to U.S. waters or to a Publicly Owned Treatment Works (POTW), such discharge is subject to requirements of the Clean Water Act. If the collected material is released to the environment, it may be subject to additional reporting requirements pursuant to 40 CFR Part 302.

IV.I.1.c. Contain visible releases to the environment. The Permittees shall immediately

conduct a visual inspection of all releases to the environment and based on that inspection:

IV.I.1.c.i. Prevent further migration of the leak or spill to soils or surface water; and

IV.I.1.c.ii. Remove and properly dispose of any visible contamination of the soil or surface water. [See 40 CFR § 264.196(c).]

IV.I.1.d. Close the system in accordance with the Closure Plan, Permit Attachment I, unless the following actions are taken:

IV.I.1.d.i. For a release caused by a spill that has not damaged the integrity of the system, the Permittees shall remove the released waste and make any necessary repairs to the system before returning the system to service. [See 40 CFR § 264.196(e)(2).]

IV.I.1.d.ii. For a release caused by a leak from a tank system to a secondary containment system, the Permittees shall repair the tank system prior to returning it to service. [See 40 CFR § 264.196(e)(3).]

IV.I.1.d.iii. For a release to the environment caused by a leak from a component of a tank system that does not have secondary containment, the Permittees shall repair the tank system in accordance with 40 CFR § 264.196(e)(4) before returning it to service. [See 40 CFR § 264.196(e)(4).]

IV.I.1.d.iv. For a defect or other problem detected during equipment inspections, repairs must be performed within the time frames outlined in Table 1 of the Permit Attachment Appendix XXIII, Subpart FF Compliance Plan.

IV.I.1.e. For all major repairs to eliminate leaks or restore the integrity of the tank systems, the Permittees must obtain a certification by an independent, qualified, registered Professional Engineer in accordance with 40 CFR § 270.11(d) and notify the Director that the repaired system is capable of handling hazardous wastes without release for the intended life of the system before returning the system to service. Examples of major repairs are: installation of an internal liner, repair of a ruptured tank, or repair or

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replacement of a secondary containment vault. [See 40 CFR § 264.196(f).]

IV.I.2. In the event a defect is detected during any of the inspections required under Permit Condition IV.H.8., the Permittees shall repair each defect detected in accordance with 40 CFR §§ 264.1084(k)(1) and (2). [See 40 CFR §§ 264.1084(k)(1) and (2).]

IV.J. RECORDKEEPING AND REPORTING

IV.J.1. For any existing tank system that does not have secondary containment meeting the requirements of 40 CFR § 264.193, the Permittees must maintain and keep on file at the Facility a written assessment in accordance with 40 CFR § 264.191. [See 40 CFR § 264.191.]

IV.J.2. Unless a leak or spill of hazardous waste is exempted from the reporting requirements in accordance with 40 CFR § 264.196(d)(2), the Permittees shall report to the Director, within 24 hours of detection, regarding any leak or spill of hazardous waste to the environment. [See 40 CFR §§ 264.196(d)(1) and (2).]

IV.J.3. Within 30 days of detecting a release to the environment from a tank system or secondary containment system, the Permittees shall report the following information to the Director:

IV.J.3.a. Likely route of migration of the release;

IV.J.3.b. Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);

IV.J.3.c. Results of any monitoring or sampling conducted in connection with the release, if available. (If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the Director as soon as they become available.);

IV.J.3.d. Proximity of down gradient drinking water, surface water, and populated areas; and

IV.J.3.e. Description of response actions taken or planned. [See 40 CFR § 264.196(d)(3).]

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IV.J.4. If the Permittees have repaired a tank system in accordance with permit condition IV.I.1.e., the Permittees shall maintain the required Professional Engineer certification in the operating record at the Facility until closure of the Facility is completed. [See 40 CFR § 264.196(f).]

IV.J.5. The Permittees shall maintain at the Facility a record of the most recent results of leak tests and integrity tests for each tank system or secondary containment system conducted in accordance with this Permit. [See 40 CFR §§ 264.193(i)(4).]

IV.J.6. The Permittees shall document compliance with Permit Conditions IV.H.1. through IV.H.6 and IV.H.8. and place this documentation in the operating record for the Facility for at least three (3) years from the date such inspection or test occurs. The Permittees shall maintain records of the Ultrasonic Thickness testing for at least 5 years from the date such testing occurs. [See 40 CFR §§ 264.73 and 264.195(h).]

IV.J.7. The Permittees shall maintain a copy of the Permit Attachment Subpart FF Compliance Plan in the Facility's operating record for the operating life of the facility.

IV.J.8. In accordance with 40 CFR § 264.1064, the Permittees shall maintain documentation pertaining to WS-1, WS-2 and WS-3 as required by either 40 CFR § 61.355 or 40 CFR §§ 264.1060 and 264.1064, as elected in the [revised] Subpart BB Compliance Plan, Permit Attachment Appendix XIX, pursuant to Permit Condition I.K.10. [See 40 CFR § 61.355 and 40 CFR §§ 264.1060 and 264.1064. See also Permit Condition I.K.10.]

IV.K. SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

IV.K.1. The Permittees shall not place ignitable waste in a tank or secondary containment system unless one of the following conditions is met:

IV.K.1.i. The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that it meets the requirements of 40 CFR § 264.198(a)(1)(i) and (ii);

IV.K.1.ii. The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite; or

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IV.K.1.iii. The tank system is used solely for emergencies. [See 40 CFR § 264.198(a). See also Permit Condition II.H.1.]

IV.K.2. If ignitable waste is stored or treated in a tank system at the Facility, the Permittees must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon, as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code," (1977 or 1981). [See 40 CFR § 264.198(b). See also Permit Condition II.H.1.]

IV.L. SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTES

IV.L.1. The Permittees shall not place incompatible wastes, or incompatible wastes and materials, in the same tank system or the same secondary containment system, unless they are doing so in compliance with 40 CFR § 264.17(b) and Permit Condition II.H.1. [See 40 CFR §§ 264.17(b) and 264.199(a).]

IV.L.2. The Permittees shall not place hazardous waste in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless they are doing so in compliance with 40 CFR § 264.17(b) and Permit Condition II.H.1. [See 40 CFR §§ 264.17(b) and 264.199(b).]

IV.M. CLOSURE AND POST-CLOSURE CARE

IV.M.1. At closure of each tank system, the Permittees shall follow the procedures in the Closure Plan and in Permit Attachment Section I and Permit Attachment Appendix XV. [See 40 CFR § 264.197(a). See also Permit Attachment Section I and Permit Attachment Appendix XV.]

IV.M.2. If the Permittees demonstrate that not all contaminated soils can be practically removed or decontaminated in accordance with the Closure Plan, then the Permittees shall close such tank system(s) and perform post-closure care following the contingent procedures in the Closure Plan (Permit Attachment Section I and Permit Attachment Appendix XV) and in Permit Condition II.N. [See 40 CFR § 264.197(b). See also Permit Attachment Section I and Permit Attachment Appendix XV.]

IV.M.3. If the secondary containment for Hopper H-1 is not implemented within a year

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from the effective date of this Permit, the contingent closure plan and proof of financial responsibility requirements of 40 CFR § 264.197(c) shall be implemented in accordance with Permit Condition I.K.9. [See also Permit Condition IV.F.6.b.iii. and 40 CFR § 264.197(c).]

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MODULE V

THERMAL TREATMENT UNIT/CARBON REGENERATION FURNACE

V.A. APPLICABILITY

V.A.1. This module contains Permit Conditions for the operating Carbon Regeneration Furnace (RF-2), which consists of a five hearth furnace and the Afterburner (AB-2), and is classified as a miscellaneous unit, as defined in 40 CFR § 260.10. RF-2 and AB-2 are subject to the requirements set forth at 40 CFR Part 264, Subpart X. The RF-2 unit is used to regenerate spent activated carbon via thermal treatment. Process flow diagrams and a description of the carbon reactivation process are included in Permit Attachment Appendix VI. [See 40 CFR §§ 260.10, 264.600 to 264.603, and 270.23.]

V.A.2. This module also includes permit conditions for the Air Pollution Control Equipment (APCE) for RF-2, AB-2, ancillary equipment of RF-2 and AB-2, and the feed system from Tank T-18. The APCEs are the Quench (Gas Cooling)/Venturi Scrubber (SC-11), Caustic Packed Bed Scrubber (SC-12), Wet Electrostatic Precipitator (W-11), Induced Draft Fan, and Stack. The five hearth furnace (RF-2), AB-2, and all their associated components (ancillary equipment [*e.g.*, piping, weigh belt] and the APCEs) are collectively referred to herein as the "RF-2." [See 40 CFR §§ 264.600 to 264.603, and 270.23.]

V.A.3. RF-2 is subject to the conditions and requirements set forth in this Module. Based on the authority contained in the regulations at 40 CFR §§ 264.600 *et seq.*, additional requirements are included in this Module to ensure protection of human health and the environment. These additional requirements are also based on 40 CFR Part 264 Subpart O, (Incinerators) and 40 CFR Part 63, Subpart EEE (Hazardous Waste Combustor, Maximum Achievable Control Technology Standards). [See 40 CFR §§ 63.1200 *et seq.*, 260.10, 264.600 to 264.603, and 270.23.]

V.B. GENERAL REQUIREMENTS FOR RF-2

V.B.1. Waste Processing and Handling Requirements

V.B.1.i. The Permittees receive hazardous wastes, *i.e.*, spent activated carbon from different generators, for treatment in RF-2. The Permittees also generate spent activated carbon onsite that constitutes a hazardous waste. The Permittees shall abide by the requirements established in Permit Condition V.B.2. for all wastes permitted for treatment in RF-2.

V.B.1.ii. The Permittees shall ensure that carbon loading operations are safe for field workers engaged in these operations.

V.B.1.iii. The Permittees shall ensure that the residence time for the solid carbon in the RF-2 is a minimum of 38 minutes at a shaft speed of 1 rotation per minute (rpm).

V.B.2. Permitted Wastes for Treatment in RF-2

V.B.2.i. The Permittees shall only treat in RF-2 spent carbon generated off-site containing hazardous waste identified in waste codes that are listed on Table II-2 in Module II of this permit.

V.B.2.ii. The Permittees may also treat in RF-2 spent activated carbon generated on-site as a result of the Permittees' treatment activities. The sources of on-site generated spent activated carbon shall be limited to the adsorbers that are used for control of gaseous emissions from the hazardous waste storage tanks (Tanks T-1, T-2, T-5, and T-6). [See Permit Attachment Appendix IV.]

V.B.3. Prohibited Wastes for Treatment in RF-2

V.B.3. The Permittees shall not accept, store or treat in RF-2 any hazardous waste other than as set forth in Permit Condition II.H.

V.C. OPERATION OF RF-2

V.C.1. General Operating Conditions

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V.C.1.i. The Permittees shall only feed wastes at or below the feed rates shown in Table V-1. The Permittees are not authorized to treat or feed in the RF-2 spent activated carbon that contains hazardous constituents in concentrations exceeding permissible feed limits. The applicable permissible feed limits are set forth in Permit Condition Table V-1. Periodic Performance Demonstration Tests, performed in accordance with Permit Condition I.K.1., shall also be used to demonstrate compliance with each of the parameters set forth in Table V-1, Performance Limits.

V.C.1.ii. The Permittees are not authorized to treat or feed spent activated carbon that contains hazardous constituents in concentrations that would cause exceedances of permissible emission limits shown in Table V-1. In addition, for each of the parameters listed in Table V-1, the Permittees shall ensure that the permissible emission limit shown in Table V-1 is not exceeded. [See 40 CFR § 63.1209.]

Table V-1 - PERFORMANCE LIMITS

Parameter	**Emission Limits from 40 CFR § 63.1219**	**How to Ensure Emission Limits are Met[1]**
Low Volatile Metals[2]	Emission Limits 92 μg[3]/dscm[4]	Feed Rate Limit: 1.5 lbs/hr[5](12 hour rolling average)
Semi Volatile Metals[6]	Emission Limit: 230 μg/dscm	Feed Rate Limit: 0.1 lbs/hr (12 hour rolling average)
Carbon Monoxide	Emission Limit: 100 ppmdv[7] as corrected to 7% oxygen.	CEMS[8] at the stack.

[1] The Permittees must comply with 40 CFR § 63.1209 for monitoring for all Emission Limits below. See Permit Condition V.C.1.IX.
[2] Low volatile metal feed rate limits apply to arsenic, beryllium, and chromium, combined.
[3] μg – micrograms.
[4] dscm - dry standard cubic meter.
[5] lbs/hr – pounds per hour.
[6] Semi-volatile metal feed rate limits apply to lead and cadmium, combined.
[7] ppmdv - parts per million on a dry volumetric basis.
[8] CEMS – Continuous Emissions Monitoring System.

Parameter	**Emission Limits from 40 CFR § 63.1219**	**How to Ensure Emission Limits are Met[1]**
Total Hydrocarbons	Emission Limit: 10 ppmdv as corrected to 7% oxygen.	Performance Demonstration Tests (PDT).[9]
Chlorine/ Chloride	Emission Limits: 32 ppmdv	Feed Rate Limit: 60 lbs/hr (12 hour rolling average).
Mercury[10]	Emission Limit: 130 µg/dscm	Feed Rate Limit: 1.8E-3 lbs/hr (12 hour rolling average).
Particulate Matter	Emission Limits: 0.013 gr/dscf[11] corrected to 7 percent oxygen.	PDT
Dioxins and Furans	Emission Limit: 0.40 ng TEQ[12]/dscm, corrected to 7 percent oxygen.	PDT
Sulfur Oxides	Emission Limit: 30.01 tpy	Feed Rate Limit as set forth in revised WAP required pursuant to Permit Condition I.K.11.[13]
Nitrogen Oxides	Emission Limit: 22.22 tpy	Monitoring of the Natural Gas usage and PDT.

[9] The rate of emissions below the applicable emission limit will be demonstrated during the PDTs.
[10] The mercury feed rate to be calculated per 40 CFR § 264.1209(l)(1)(i)
[11] gr/dscf - grains per dry standard cubic foot
[12] TEQ – Toxic Equivalency, which means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.
[13] This limit will not be in effect until the WAP has been modified in accordance with Permit Condition I.K.11.

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V.C.1.iii. Throughout operation, the Permittees shall conduct analysis in accordance with the Waste Analysis Plan, Permit Attachment C and Permit Attachment Appendix IV and Permit Condition II.C. to verify that waste fed to RF-2 is within the physical and chemical composition limits specified in this Permit. [See 40 CFR §§ 264.341(b) and 270.23.]

V.C.1.iv. The Permittees are required to inspect, safely operate, and properly monitor RF-2 in accordance with the conditions of this Permit to protect human health and the environment during operation, maintenance, start-up, shut-down and malfunction of RF-2.

V.C.1.v. The Permittees shall maintain RF-2 in accordance with the design plans, design specifications, stack layout drawing, and maintenance procedures contained in Permit Attachment B, Permit Attachment Appendices VI and X.

V.C.1.vi. The operating parameters are grouped into the following categories: Groups A1, A2, B and C; and are categorized as defined in EPA guidance document: Handbook: Guidance on Setting Permit Conditions and Reporting Trial Burn Results, (EPA/625/6-89/019), Table 2-1.

V.C.1.vi.a. Group A1 parameters shall be continuously monitored and recorded, and shall be interlocked with the automatic waste feed cutoff system. Group A1 parameter limits were established from test operating data, and are used to ensure that system operating conditions are equal to or are more rigorous than those demonstrated during the test.

V.C.1.vi.b. Group A2 parameters shall be continuously monitored and recorded, and shall be interlocked with the automatic waste feed cutoff system. Group A2 parameter limits have been established based on regulatory requirements rather than on the test operating conditions, e.g., the maximum stack CO concentration.

V.C.1.vi.c. Group B parameters shall be continuously monitored and recorded, but are not required to be interlocked with the

automatic waste feed cutoff system. Operating records are required to ensure that established limits for these parameters are not exceeded. The Group B parameter limits were established based on the operation of the system during the performance test.

V.C.1.vi.d. Group C parameters shall be continuously monitored and recorded, but are not required to be interlocked with the automatic waste feed cutoff system. Group C parameter limits are based on manufacturer's recommendations, operational safety, and good operating practice considerations rather than on the test operating conditions, e.g., the minimum packed bed scrubber pressure differential.

V.C.1.vii. The following Table V-2 includes critical operating conditions. The term "AWFCO" in the comments column indicates that the operating parameter shall be interlocked with the automatic waste feed cutoff system. The Permittees shall comply with the Operating Limits in Table V-2.

Table V-2 - OPERATING LIMITS AND PARAMETERS

Control Parameters[14]	**Permit Limit**	**Comments**
GROUP A1 PARAMETERS		
Maximum spent carbon feed rate (lbs/hr)	3049	Block hour AWFCO
Minimum afterburner temperature (°F)	1760	Hourly rolling average AWFCO
Minimum hearth #5 temperature (°F)	1350	Hourly rolling average AWFCO
Minimum venturi scrubber pressure differential (in. w.c.)	18	Hourly rolling average AWFCO
Minimum quench/venturi scrubber total liquid flow rate (gpm)	75	Hourly rolling average AWFCO
Minimum packed bed scrubber pH	4.4	Hourly rolling average AWFCO

[14] Groups A1, A2, B, and C Parameters are explained in detail in Permit Condition V.C.1.vi.

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Control Parameters[14]	Permit Limit	Comments
Minimum packed bed scrubber liquid flow rate (gpm)	63	Hourly rolling average AWFCO
Minimum wet scrubber blowdown flow rate (gpm)	58	Hourly rolling average AWFCO
Minimum WESP secondary voltage (kVDC)	22	Hourly rolling average AWFCO
Maximum stack gas flow rate (acfm)	9,550	Hourly rolling average AWFCO
GROUP A2 PARAMETERS		
Maximum stack gas carbon monoxide (ppmdv, @7% oxygen)[15]	100	Hourly rolling average AWFCO
GROUP B PARAMETERS		
Allowable hazardous constituents	All except dioxin wastes and TSCA PCBs	Class 1 POHC demonstrated to meet the 99.99% Destruction Removal Efficiency per Permit Attachment Appendix V
Maximum total chlorine and chloride feed rate (lbs/hr)	60	12-hour rolling average
Maximum mercury feed rate (lbs/hr)	1.8E-3[16]	12-hour rolling average
Maximum semivolatile metal (Cd + Pb) feed rate (lbs/hr)	1.0E-01	12-hour rolling average
Maximum low volatility metal (As + Be + Cr) feed rate (lbs/hr)	1.5E+00	12-hour rolling average
GROUP C PARAMETERS		
Minimum packed bed scrubber pressure differential (in. w.c.)	0.1	Hourly rolling average

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As = Arsenic
AWFCO = Automatic Waste Feed Cutoff
Be = Beryllium
Cd = Cadmium

[15] AWFCO interlock is not active during the daily continuous emission monitor CEM calibration period.
[16] 1.8E-3 = 1.8 x 10-3.

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Cr = Chromium
lbs/hr = pounds per hour
WESP = Wet electrostatic precipitator
Pb = Lead
POHC = Principal organic hazardous constituent
TSCA = Toxic Substances Control Act
PCBs = Polychlorinated Biphenyls
in. w.c. = inches of water column
kVDC = kilovolts Direct Current
gpm = gallons per minute
acfm = actual cubic feet per minute
ppmdv = parts per million on a dry volumetric basis in the stack gas
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V.C.1.viii. Waste shall not be fed to the RF-2 if any of the continuous monitoring instruments malfunction or otherwise fail to operate properly.

V.C.1.ix. All monitoring must be conducted in accordance with the requirements of 40 CFR § 63.1209 applicable to incinerators. [See 40 CFR § 63.1209.]

V.C.1.x. Failure to comply with the operating requirements in this Permit is failure to ensure compliance with the emission standards included in this Permit. [See 40 CFR § 63.1206(c)(1)(iii).]

V.C.2. Start Up, Shutdown, and Malfunction Plan

V.C.2.a. The Permittees shall implement the Start-up, Shutdown, and Malfunction Plan (SSMP) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. The Permittees' SSMP is found in the Application in Appendix XXII and is incorporated into this Permit by this reference as Permit Attachment Appendix XXII.

V.C.2.b. The Permittees shall follow the requirements of the SSMP, whenever RF-2 is in non-compliance with the provisions of this Permit.

V.C.2.c. The Permittees shall submit to the Director a request for a Permit Modification in accordance with Permit Condition I.G.7., with an accompanying revised SSMP whenever they determine that one or more changes to the SSMP are appropriate.

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V.C.2.d. The Permittees must maintain a copy of the SSMP in the operating record at the Facility for the operating life of RF-2.

V.C.3. Monitoring Equipment

The Permittees shall maintain, calibrate, and operate monitoring equipment and record the data required by this Permit while processing hazardous waste.

V.C.4. Regulatory Compliance Instrumentation

V.C.4.i. The Permittees shall operate RF-2 and calibrate the RF-2-related instrumentation listed in Table V-3 pursuant to the parameters – including the frequencies -- set forth in Table V-3. Quality assurance and quality control shall be done in accordance with 40 CFR Part 60 QA/QC requirements.

TABLE V-3 - REGULATORY COMPLIANCE INSTRUMENTATION

Parameter	***Identification Number of Sensor/ Transmitter[17]***	***Instru-ment Type***	***Units***	***Range***	***Operating Point or Range***	***Calibration Frequency***	***Averaging***	***AWFCO (Y/N)***
Feed rate of spent activated carbon	WE/WT-427	Weigh cell	lbs/hr	0-6000	Less than or equal to 3049	Semi-annually	1-hr Block	Y
Total feed rate of mercury	Computer	Calcu-lated	lbs/hr	NA	0 – Less than or equal to 1.8E-03	NA	12-hr RA	N
Total feed rate of SVM	Computer	Calcu-lated	lbs/hr	NA	Less than or equal to 0 – 1.0	NA	12-hr RA	N

[17] Instrument identification from P&IDs.

Parameter	***Identification Number of Sensor/ Transmitter[17]***	***Instru-ment Type***	***Units***	***Range***	***Operating Point or Range***	***Calibration Frequency***	***Averaging***	***AWFCO (Y/N)***
Total feed rate of LVM	Computer	Calcu-lated	lbs/hr	NA	Less than or equal to 0 – Less than or equal to 1.5	NA	12-hr RA	N
Afterburner gas temperature	TE-464A/B	Thermo-couple	°F	0-2400	Greater than or equal to 1760	Semi-annually	1-hr RA	Y
Venturi scrubber pressure differential	PDIT-556	Pressure sensor	in. w.c.	0-50	Greater than or equal to 18	Annually	1-hr RA	Y
Venturi / Quench scrubber recycle liquid flow rate (Total Flow)	FI-562 (Total of FE/FIT-553, 554, & 555)	Sum of Magnetic flow meters (Dynac Function)	gpm	0-656	Greater than or equal to 75	Annually	1-hr RA	Y
Packed bed scrubber pH	AE/AIT-590	pH probe	pH	0-14	Greater than or equal to 4.4	Quarterly	1-hr RA	Y
Packed bed scrubber recycle liquid flow rate	FE/FIT-552	Magnetic flow meter	gpm	0-200	Greater than 63	Annually	1-hr RA	Y

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Parameter	***Identification Number of Sensor/ Transmitter[17]***	***Instru-ment Type***	***Units***	***Range***	***Operating Point or Range***	***Calibration Frequency***	***Averaging***	***AWFCO (Y/N)***
Packed bed scrubber pressure differential	PDIT-560	Pressure sensors	in. w.c.	0-10	Greater than 0.1	Annually	1-hr RA	N
Scrubber blowdown flow rate	FE/FIT-605	Magnetic flow meter	gpm	0-691	Greater than 58	Annually	1-hr RA	Y
WESP secondary DC voltage	EI-558	Voltmeter	kV DC	0-80	14-22	NA	1-hr RA	Y
Stack gas flow rate	FE/FIT-700	Ultrasonic meter	acfm	Not avail-able	Less than or equal to 9,550	Semi-annually	1-hr RA	Y
Stack gas carbon monoxide[18]	AE-575	Non-dispersive infrared CEMS	ppmdv @7% O_2	0-100 0-1000	Less than 100	Daily/ Quarterly/ Annually	1-hr RA	Y
Stack gas oxygen[19]	AE-576	Para-magnetic CEMS	vol%, dry	0-25	7	Daily/ Quarterly/ Annually	None	N
Weigh belt						Calibrated Semi-Annually		

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RA = Rolling average as defined in 40 CFR § 63.1209(a)(6).
AWFCO = Automatic Waste Feed Cut Off.

[18] Continuous Emissions Monitoring System (CEMS) calibrations shall include daily zero and span check, quarterly cylinder gas audit, and annual performance specification test.
[19] Continuous Emissions Monitoring System (CEMS) calibrations shall include daily zero and span check, quarterly cylinder gas audit, and annual performance specification test.

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SVM = Semi-Volatile Metals
LVM = Low-Volatile Metals
in. w.c. = inches of water column
kVDC = kilovolts Direct Current
gpm = gallons per minute
acfm = actual cubic feet per minute
ppmdv @ 7% O_2 = parts per million on a dry volumetric basis in the stack gas as corrected to 7% oxygen
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V.C.4.ii. The Permittees must keep the necessary parts for routine repairs of the continuous monitoring system (CMS) equipment, including the CEMS equipment, readily available.

V.C.4.iii. The Permittees shall conduct the CMS performance and test protocols, including all record keeping and reporting, set forth in 40 CFR § 63.8.

V.C.5. Automated Waste Feed Cutoff Requirements

V.C.5.i. The Permittees shall operate RF-2 with a functioning automatic waste feed cutoff system (AWFCO) that immediately and automatically cuts off the hazardous waste feed to RF-2 in accordance with 40 CFR § 63.1206(c)(3). [See 40 CFR § 63.1206(c)(3).]

V.C.5.ii. The Permittees shall automatically cut off the hazardous waste feed to RF-2 if any of the following occur:

V.C.5.ii.a. Operating limits for Groups A1 and A2 parameters listed in Table V-2 or emission limits listed in Table V-4 are not met.

V.C.5.ii.b. When the span value of any CMS detector, except a CEMS, is met or exceeded; [See 40 CFR § 63.1206(c)(3)(i)(B).]

[Note: Parameter CMSs are process instruments that continuously monitor and record parameter data from the operation of the carbon reactivation process. The instruments consist of weigh belts, flow meters, pressure transducers, thermocouples and other devices that collect process information on key regulatory parameters.]

V.C.5.ii.c. Upon malfunction of a CMS; [See 40 CFR § 63.1206(c)(3)(i)(C).] or

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V.C.5.ii.d. When any component of the AWFCO system fails. [See 40 CFR § 63.1206(c)(3) (i)(D).]

V.C.5.iii. During an AWFCO, the Permittees must continue to duct combustion gases to the air pollution control equipment while hazardous waste remains in RF-2 (*i.e.*, if the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated). After an AWFCO, the remainder of the system shall continue to operate until residence time has transpired to ensure all waste remaining in the system has been processed with the APCE still operational. [See 40 CFR § 63.1206(c)(3)(ii).]

V.C.5.iv. In the event of an AWFCO, the Permittees shall implement the SSMP and operate RF-2 under the provisions of the SSMP. [See 40 CFR §§ 63.1206(c)(2) and (c)(3).]

V.C.5.v. During malfunctions, the Permittees shall comply with the AWFCO requirements of the SSMP and 40 CFR § 63.1206(c)(3), except for sections 63.1206(c)(3)(v) and (vi). [See 40 CFR § 63.1206(c)(2)(v)(A)*(1)*.]

V.C.5.v.a. If the Permittees fail to meet an emission standard listed in Table V-4 or a Group A-1 or Group A-2 parameter specified in Table V-2, the AWFCO system must immediately and automatically cut off the hazardous waste feed. If the malfunction itself prevents immediate and automatic cut off of the hazardous waste feed, however, the Permittees must cease feeding hazardous waste as quickly as possible. [See 40 CFR § 63.1206(c)(2)(v)(A)*(1)*.]

V.C.5.v.b.(1). The AWFCO requirements continue to apply during a malfunction. If an exceedance of an emission standard listed in Table V-4 or a Group A-1 or Group A-2 parameter specified in Table V-2 occurs, the Permittees shall undertake the corrective measures prescribed in the SSMP. [See 40 CFR § 63.1206(c)(2)(v)(A)*(2)*.]

V.C.5.v.b.(2). For the purposes of determining the duration of an exceedance as a result of a malfunction (including power outages), the exceedance will begin once an emission standard or operating limit is exceeded

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while spent carbon is in RF-2. The exceedance will end once the spent activated carbon has cleared RF-2 or once the emissions and operating parameters are reestablished within their respective permit limits, whichever occurs sooner. Thus one incident may constitute one exceedance, which may include multiple emissions or operating parameters not being met.

V.C.5.v.c. For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (*i.e.*, when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, the Permittees must comply with the requirements of 40 CFR § 63.1206(c)(2)(v)(A)*(3)* as follows:

V.C.5.v.c.(1). Within 45 days of the 10th exceedance, the Permittees must complete an investigation of the cause of each exceedance and evaluation. The evaluation is to include approaches to minimize the frequency, duration, and severity of each exceedance, and revise the SSMP as warranted by the evaluation to minimize the frequency, duration, and severity of such exceedances. [See 40 CFR § 63.1206(c)(2)(v)(A)*(3)(i).]*

V.C.5.v.c.(2). The Permittees must record the results of the investigation and evaluation in the operating record, and include a summary of the investigation and evaluation, and any changes to the SSMP in an excess emissions report that meets the requirements of 40 CFR § 63.10(e)(3) but need only submitted to the Director for approval in accordance with Permit Condition V.C.5.v.c.(3) after each 10th exceedance as described in Permit Condition V.C.5.v.c.(1). [See 40 CFR § 63.1206(c)(2)(v)(A)*(3)(ii).*]

V.C.5.v.c.(3). The Permittees must submit to the Director for approval in accordance with Permit Condition I.G.5. an excess emissions report that otherwise meets the requirements of 40 CFR § 63.10(e)(3) within 60 days following each 10th exceedance as described in Permit Condition V.C.5.v.c.(1). [See 40 CFR § 63.1206(c)(2)(v)(A)*(3)(ii).*]

V.C.5.v.d. If, after any AWFCO, there is an exceedance of a parameter in Table V-2 required to be interlocked with the AWFCO system, or when an exceedance of a Group A-1 or Group A-2 parameter specified in Table V-2 occurs, irrespective of whether the exceedance occurred while hazardous waste remained in the combustion chamber (*i.e.*, whether the hazardous waste residence time has transpired since the hazardous waste feed cutoff system was activated), the Permittees must investigate the cause of the AWFCO, take appropriate corrective measures to minimize future AWFCOs, and record the findings and corrective measures in the Facility's operating record. [See 40 CFR§ 63.1206(c)(3)(v).]

V.C.5.vi. The Permittees shall not feed waste carbon during startups and shutdowns. [See 40 CFR § 63.1206(c)(2)(v)(B).]

V.C.5.vii. Restarting Waste Feed

The Permittees must not start feeding waste until the operating parameters specified in Table V-2 and the CEMS have returned to within the operating limits. [See 40 CFR § 63.1206(c)(3)(iii).]

V.C.5.viii. Failure of an AWFCO

If the AWFCO system fails to automatically and immediately cut off the flow of hazardous waste upon exceedance of a parameter in Table V-2 required to be interlocked with the AWFCO system, or when an exceedance of a Group A-1 or Group A-2 parameter specified in Table V-2 occurs, the Permittees must cease feeding hazardous waste as quickly as possible. [See 40 CFR § 63.1206(c)(3)(iv).]

V.C.5.ix. Testing AWFCO

The Permittees must test the AWFCO system and associated alarms at least monthly to verify operability. The Permittees must document and record AWFCO operability test procedures and results in the Facility's

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operating record. [See 40 CFR §§ 63.1206(c)(3)(vii) and 264.347(c) and (d).]

V.C.6. Burning of Natural Gas

V.C.6.i. RF-2 (including all its APCE and ancillary equipment) shall be powered by natural gas only. Alternative fuel cannot be used unless this permit is modified. Any such modification request may require additional performance testing and/or an updated risk analysis.

V.C.6.ii. The amount of natural gas burned in RF-2 (including all its APCE and ancillary equipment) shall be recorded monthly in millions of standard cubic feet (MMSCF) and such records shall be maintained in the operating record.

V.C.6.iii. Each month, the Permittees shall calculate and record in the operating record the 12-month rolling sum in tons per year of nitrogen oxides (NOx) emissions from RF-2 (including all its APCE and ancillary equipment), based on: (1) the amount of natural gas burned in MMSCF; and (2) the emission factor in pounds per MMSCF, based on the most recent Performance Demonstration Test.

V.D. AIR POLLUTION CONTROL EQUIPMENT

V.D.1. The Permittees shall not exceed the Performance and Emission Limits specified in Table V-4.

TABLE V-4 - PERFORMANCE AND EMISSION LIMITS FOR RF-2

Parameter	Purpose	Limit[20]
Destruction and Removal Efficiency (DRE)	To limit organic emissions	99.99%

[20] All values except DRE are corrected to 7% oxygen in the stack gas.

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Parameter	Purpose	Limit[20]
Particulate Matter (PM)	To limit particulate matter emissions	0.013 gr/dscf[21]
HCl/Chlorine	To limit HCl/chlorine combined emissions	32 ppmdv[22]
SO_2[23]	To limit SO_2 emissions	30.01 tons per consecutive 12 month period
NO_2[24]	To limit NO_2 emissions	22.22 tons per consecutive 12 month period
Mercury	To limit mercury emissions	130 µg/dscm[25]
Semi volatile metals[26]	To limit Pb and Cd emissions	230 µg/dscm
Low volatile metals[27]	To limit As, Be and Cr emissions	92 µg/dscm
Dioxin and furans	To limit dioxin and furan emissions	0.4 ηg TEQ/dscm[28][29]
Carbon monoxide[30]	To ensure good combustion	100 ppmdv
Total hydrocarbons	To limit organic emissions	10 ppmdv

V.D.2. The Permittees shall continuously operate, and maintain the hearth, afterburner, Quench (Gas Cooling)/Venturi Scrubber (SC-11), Caustic Packed Bed Scrubber (SC-12), Wet Electrostatic Precipitator (W-11), Induced Draft Fan, and Stack.

[21] "gr/dscf" is grains per dry standard cubic foot of stack gas.
[22] "ppmdv" is parts per million on a dry volumetric basis in the stack gas.
[23] Based on the Tribal New Source Rule registration by Evoqua dated Aug 2012.
[24] Based on the Tribal New Source Rule registration by Evoqua dated Aug 2012.
[25] "µg/dscm" is micrograms per dry standard cubic meter of stack gas.
[26] Semi-volatile metals are lead and cadmium.
[27] Low volatile metals are arsenic, beryllium and chromium.
[28] "ηgTEQ/dscm" is nanograms TEQ per dry standard cubic meter.
[29] TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.
[30] 100 ppm by volume on a dry gas basis using a one hour rolling average.

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V.D.3. The Permittees shall perform any necessary operations and air pollution control equipment maintenance to minimize emissions so that emissions are at or below the emission limits specified in this Permit.

V.D.4. The Permittees shall, to the extent practicable, maintain and operate equipment in a manner consistent with good air pollution control practice for minimizing emissions. [See 40 CFR § 61.12(c).]

V.D.5. The Permittees shall maintain the APCE in accordance with the design plans and specifications contained in Permit Attachment Appendices VI and X.

V.E. FUGITIVE EMISSIONS CONTROLS

V.E.1. The Permittees shall control fugitive emissions from the combustion zone in accordance with 40 CFR §§ 61.348(e), 63.1206(c)(5), and 264.345(d). [See 40 CFR §§ 61.348(e), 63.1206(c)(5), and 264.345(d).]

V.E.2. The Permittees shall ensure that fugitive emissions from process units and ancillary components (tanks, furnace, APCEs, and piping) do not exceed 500 ppmv (parts per million by volume) of VOCs above background in accordance with the procedures spelled out in 40 CFR § 61.355(h). [See 40 CFR § 61.355(h), 63.1206(c)(5), and 40 CFR § 264.1082(c)(1).]

V.F. INSPECTION REQUIREMENTS

V.F.1. The Permittees shall inspect RF-2 in accordance with the Inspection Schedule and Checklist, Permit Attachment Section F, Permit Attachment Appendix XII, and Permit Condition II.E.

V.F.2. The Permittees shall thoroughly, visually inspect RF-2 at least daily, for leaks, spills, fugitive emissions, and signs of tampering. [See 40 CFR § 264.347(b).]

V.F.3. The Permittees shall thoroughly, visually inspect the instrumentation for out-of-tolerance monitored and/or recorded operational data.

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V.F.4. Upon request of the Director, the Permittees shall perform sampling and analysis of the waste and exhaust emissions to verify that the operating requirements established in this Permit are being met.

V.G. RECORDKEEPING AND REPORTING

V.G.1. The monitoring and inspection data required by this Module V must be recorded and the records must be placed in the operating record required by Permit Condition II.M.1.i. and maintained in the operating record for five years. [See 40 CFR §§ 63.10, 63.1211, and 264.347(d).]

V.G.2. The Permittees shall record in the operating record for this Permit the date and time of all automatic waste feed shut-offs, including the triggering parameters, reason for the shut-off, and corrective actions taken. The Permitees shall also record all failures of the automatic waste feed shut-offs to function properly and corrective actions taken. [See 40 CFR §§ 63.10 and 63.1211.]

V.G.3. The Permittees shall record in the operating record for this Permit the date and time of all shutdowns or malfunctions, the reason(s) for the shut-down or malfunction, and corrective actions taken. [See 40 CFR §§ 63.10 and 63.1211.]

V.G.4. In addition to the excess emissions report(s) required by Permit Condition V.C.5.v.c., if, despite the requirement to comply with the SSMP, an action taken by the Permittees during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the SSMP and there is an exceedance of any applicable emission limitation in the relevant emission standard, then the Permittees must record the actions taken for that event and must report such actions to the Director within 2 working days after commencing actions inconsistent with the plan, followed by a letter to the Director within 7 working days after the end of the event, in accordance with 40 CFR §63.10(d)(5). [See 40 CFR §§ 63.6(e)(3)(iv) and 63.10(d)(5).]

V.G.5. The Permittees shall maintain in the operating record for the Facility required by Permit Condition II.M.1. the site specific CMS quality control performance

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evaluation test plan procedures in accordance with 40 CFR § 63.8(d). [See 40 CFR § 63.8(d).]

V.H. CLOSURE

V.H.1. At closure the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from RF-2. [See 40 CFR § 264.351.]

V.H.2. The Permittees shall follow the procedures in Permit Attachment Section I and in the RCRA Facility Closure Plan for the Closure of RF-2 in Permit Attachment Appendices XV and XVII.

V.H.3. The Permittees shall follow the procedures in Permit Attachment Section I and in the Closure Plan for the Closure of RF-1 in Permit Attachment Appendices XVI and XVII. The Permittees shall initiate closure of RF-1 in accordance with the Closure Schedule contained in the RF-1 Closure Plan contained in Permit Attachment Appendix XVI and the Compliance Schedule set forth in Permit Condition I.K. [See 40 CFR § 264.112(d).]

V.H.4. The Permittees shall submit a post-closure plan with a schedule to EPA for approval if, after implementation of either the Closure Plan for Closure of RF-1 or the Closure Plan for Closure of RF-2, soil contamination is present and the Permittees are unable to adequately remediate that contamination. Upon approval by EPA, the Permittees shall implement the Post-Closure Plan as approved.

V.I. ADDITIONAL INVESTIGATIONS

Upon request by the Director, sampling and analysis of the waste, soil and/or groundwater at or around the Facility, and exhaust emissions must be conducted to verify that the operating requirements established in this Permit achieve the performance standards set forth in this Permit. A report shall be submitted to the Director for approval in accordance with Permit Condition I.G.5. within the time frame specified in the Director's request. [See, e.g., 40 CFR § 264.347(a)(3).]

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MODULE VI
CORRECTIVE ACTION

VI.A. Standard Conditions

VI.A.1. The Permittees must take corrective action as necessary to protect human health and the environment from all releases of hazardous waste and/or constituents from any Hazardous Waste Management Unit (HWMU), Solid Waste Management Unit (SWMU) and/or Area of Concern (AOC) at the Facility, regardless of the time at which waste was placed in such unit or area, in accordance with §3004(u) of RCRA, 42 USC Section 6924(u), 40 CFR §§ 264.90(a) and 264.101. [See RCRA Section 3004(u) and 40 CFR §§ 264.90(a) and 264.101. See also Permit Attachment Section J and the Final RCRA Facility Assessment (RFA), incorporated herein as Permit Attachment RFA. To the extent that there are any discrepancies between Section J and the RFA, the language in the RFA shall control.]

VI.A.2. The Permittees must take corrective action beyond the facility property boundary where necessary to protect human health and the environment, in accordance with §3004(v) of RCRA, 42 USC Section 6924(v), and 40 CFR §264.101. [See 40 CFR §264.101.]

VI.A.3. Any noncompliance with approved plans, schedules or reports required in accordance with this Permit shall be deemed noncompliance with this Permit.

VI.A.4. If the Director determines that further corrective action beyond the requirements of this Permit is warranted, then the Director may modify this Permit according to the permit modification processes under 40 CFR § 270.41. [See 40 CFR §§ 264.100(e)(2) and 270.41. See also Permit Condition I.B.1.]

VI.A.5. All raw data and reports, including inspection reports, laboratory reports, drilling logs, geological and hydrogeological investigations, bench-scale or pilot-scale data, laboratory data and other supporting information gathered or generated during activities undertaken pursuant to this Permit, including any reissued permits, shall be provided at the request of the Director.

VI.A.6. Failure to timely submit the information required in this Permit, or falsification of any submitted information, is grounds for termination of this permit in accordance with 40 CFR §270.43.

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VI.A.7. All work performed pursuant to this Corrective Action Module shall be under the direction and supervision of qualified personnel. At least forty-five (45) days prior to initiating any work pursuant to this Module, the Permittees shall notify the Director in writing of the following:

VI.A.7.a. The names, titles, and qualifications of the personnel, including contractors, subcontractors, consultants and laboratories, to be used in carrying out such work; and

VI.A.7.b. The name, address, phone number, electronic mail address and qualifications of the Corrective Action Project Coordinator.

VI.A.7.b.i. The Permittees have the right to change their Corrective Action Project Coordinator. Notification of a change in the Permittees' Corrective Action Project Coordinator must be provided to EPA in writing at least ten (10) days prior to the change.

VI.A.7.b.ii. EPA may disapprove of Permittees' Corrective Action Project Coordinator (original or replacement) at any time based upon the person's qualifications and ability to effectively perform the role. The qualifications of the Permittees' Corrective Action Project Coordinator (original or replacement) shall be subject to EPA's review, for verification that such person meets minimum technical background and experience requirements. All persons under the direction and supervision of the Permittees' Corrective Action Project Coordinator must possess all necessary professional licenses required by federal law and any applicable state or tribal law. EPA's disapproval of the Permittees' Corrective Action Project Coordinator is subject to review in accordance with the Informal Dispute Resolution provisions set forth in Permit Condition I.L.

VI.A.7.c. In those circumstances where Permittees must take action in less than the forty-five (45) day period referenced in Permit Condition VI.A.7., the information required by Permit Conditions VI.A.7.a. and VI.A.7.b. must be provided to EPA as soon as practicable. (See, *e.g.*, Permit Condition VI.E.1.)

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VI.A.8. Any activities performed pursuant to this Corrective Action Module shall be conducted in compliance with this Permit, and are subject to EPA approval as set forth herein. The Permittees should perform Corrective Action consistent with good scientific principles. For example, the Permittees should consider taking into account appropriate EPA guidance including, but not limited to, the following:

- "RCRA Corrective Action Plan" (OSWER Directive 9902.3-2A, May 1994);
- "Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action" (EPA, EPA530-R-04-030, April 2004);
- "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA, SW-846), available at http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm;
- Advance Notice of Proposed Rulemaking, "Corrective Action for Releases from Solid Waste Management Units at Hazardous Waste management Facilities" (EPA, 61 FR 19432 dated May 1, 1996), available at http://www.epa.gov/docs/fedrgstr/EPA-WAST/1996/May/Day-01/pr-547.pdf;
- "RCRA Public Participation Manual" (EPA, EPA/530/R-96/007, 1996), available at http://www.epa.gov/epawaste/hazard/tsd/permit/pubpart/manual.htm;
- "A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, Final Project Report" (EPA, EPA/600/R-08/003, January 2008), available at http://www.epa.gov/ada/pbs/reports/600R08003.html; and
- "RCRA Groundwater Monitoring Technical Enforcement Guidance Document" (OSWER Directive 9950.1, September 1986).

VI.B. Reporting Requirements

VI.B.1. When requested by the Director, the Permittees shall submit to the Director for approval in accordance with Permit Condition I.G.5. signed and certified corrective action progress reports on a semi-annual basis in accordance with the deadlines specified in the Director's request. Such corrective action progress reports shall contain:

VI.B.1.a. A discussion and summary of all corrective action-related activities undertaken during the time period;

VI.B.1.b. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify these problems;

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VI.B.1.c. Summaries of all findings made during the time period including summaries of laboratory data; and

VI.B.1.d. Projected work for the next reporting period.

VI.B.2. The Permittees shall maintain copies of other corrective action reports (e.g. inspection reports); geological and hydrogeological investigations; records of groundwater monitoring wells, including boring logs, and associated groundwater surface elevations; and all laboratory data, including raw data, for the active life of the Facility, and shall make them available to the Director upon request.

VI.B.3. The Director may require the Permittees to conduct new or more extensive assessments, investigations, or studies, as needed, based on information provided in these progress reports or other supporting information.

VI.C. Results of the RCRA Facility Assessment (RFA)

VI.C.1. The results and recommendations of the RCRA Facility Assessment can be found in the Final Permit Attachment RFA dated September 2016.

VI.C.2. The HWMUs, SWMUs, and AOCs are identified in Tables VI-1, VI-2, and VI-3.

VI.D. Newly-Identified, Newly-Discovered, or Newly-Created AOCs, SWMUs and/or HWMUs

VI.D.1.a. The Permittees shall notify the Director in writing of any newly-identified, newly-discovered, or newly created AOC(s), SWMU(s) and/or HWMU(s). This initial notice shall be provided no later than fifteen (15) calendar days after discovery of the newly-identified, newly-discovered, or newly-created AOC, SWMU and/or HWMU.

VI.D.1.b. No later than 60 days after identifying, discovering or creating any new AOC(s), SWMU(s), and/or HWMU(s), the Permittees shall initiate a permit modification in accordance with Permit Condition I.G.7. and 40 CFR § 270.42 to update Tables VI-1, VI-2, and/or VI-3 and Permit Attachment Section J, as appropriate, to add the new AOC(s), SWMU(s), and/or HWMU(s) to the table(s).

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VI.D.2. Within ninety (90) days after the after identifying, discovering or creating any new AOC(s), SWMU(s), and/or HWMU(s), the Permittees shall submit an Assessment Report for any newly-identified, newly-discovered or newly created AOC, SWMU and/or HWMU to the Director for approval in accordance with Permit Condition I.G.5. At a minimum, the Report shall provide the following information for each newly-identified, newly-discovered, or newly-created AOC, SWMU and/or HWMU:

VI.D.2.a. The location of each such AOC, SWMU and/or HWMU in relation to other AOCs, SWMUs, HWMUs, building numbers, or other descriptive landmarks;

VI.D.2.b. The type and function of the AOC, SWMU and/or HWMU;

VI.D.2.c. The general dimensions, capacities, and structural description of the AOC, SWMU and/or HWMU (supply all available drawings);

VI.D.2.d. The period during which the AOC, SWMU and/or HWMU was operated;

VI.D.2.e. Waste characterization information for all wastes that have been or are being managed at the AOC, SWMU and/or HWMU;

VI.D.2.f. A description of any release (or suspected release) of hazardous waste and/or constituents originating from the AOC, SWMU, and/or HWMU including planned or unplanned releases to the air and any other media. Include information on the date of release, type of hazardous waste and/or constituents, quantity released, nature of the release, extent of release migration, and cause of release (e.g., overflow, broken pipe, tank leak). Also provide any available data which characterizes the nature and extent of environmental contamination, including the results of air, soil and/or groundwater sampling and analysis efforts. Also submit any existing monitoring information that shows that a release of hazardous waste and/or constituents has not occurred or is not occurring; and

VI.D.2.g. Whether or not any further Permit Modification(s) to incorporate additional information about the newly-discovered AOC, SWMU and/or HWMU(s) into the Permit is appropriate. The Permittees shall submit a Permit Modification request in accordance with Permit Condition I.G.8. if the approved Assessment Report determines that such modification is warranted.

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VI.D.3. Based on the results of the approved Assessment Report, the Director will determine whether there is a need for further investigations at specific unit(s) or areas covered in the Assessment Report. If the Director determines that such investigations are needed, the Director will require the Permittees to prepare a RCRA Facility Investigation (RFI) Work Plan in accordance with Permit Condition VI.F.

VI.E. Newly-Discovered Releases

VI.E.1. The Permittees shall notify the Director, in writing, of any newly-discovered spills or releases of hazardous waste. This notification shall be submitted in two parts as set forth in Permit Conditions VI.E.1.a. and VI.E.1.b. Releases that are less than or equal to a quantity of one (1) pound and immediately contained and cleaned up are not subject to this Permit Condition VI.E.1. The Permittees shall investigate and, if necessary, remediate the discovered spill(s) or release(s). Such spills or releases may be from newly-identified or newly-created AOCs, SWMUs and/or HWMUs, from AOCs, SWMUs and/or HWMUs at which the Director had previously determined that no further investigation was necessary, or from AOCs, SWMUs and/or HWMUs investigated as part of this Permit or otherwise identified in Tables VI-1, VI-2, or VI-3.

VI.E.1.a. First, within fifteen (15) calendar days of discovery of the release, the Permittees shall submit in writing an initial notification of the discovery. This notification shall alert the Director to the magnitude of the threat to human health and/or the environment.

VI.E.1.b. Second, within sixty (60) days of discovery of the release, the Permittees must submit a written report. The report shall discuss the Permittees' efforts to investigate and/or remediate the discovered release and shall specifically include:

- the concentrations and estimated quantities of any hazardous waste and/or constituents released;
- the known, or expected, pathway(s) through which the contamination is migrating (or may migrate), and the extent, rate, and direction of that migration;
- the projected fate and transport of the release;

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- the likely exposure pathway(s) for potential receptors, and the consequences of exposure to these receptors; and
- an outline of proposed Interim Corrective Measures to control the release, as well as a schedule for implementing the Interim Corrective Measures. The schedule must be justified by a discussion of possible consequences arising from any delay in implementing Interim Corrective Measures.

VI.E.2. Within sixty (60) days of discovery of a spill or release, the Permittees shall initiate a permit modification in accordance with Permit Condition I.G.7. and 40 CFR § 270.42 to update Tables VI-1, VI-2 and/or VI-3 and Permit Attachment Section J, as appropriate, to add the spill or release to the table(s). The Permittees shall include the hazardous waste constituents that were released and the actions taken to clean up or mitigate the spill or release in the revised Permit Attachment Section J.

VI.E.3. Within ninety (90) days of discovery of a release, the Permittees shall submit to the Director for approval in accordance with Permit Condition I.G.5. a Report describing the Interim Corrective Measures activities taken to date and whether or not additional investigation or implementation of corrective measures are warranted. This Report shall include the reporting requirements specified in Permit Condition VI.B. If the approved Interim Corrective Measures Report concludes that additional investigation or corrective measures are required, the Permittees shall submit a request for a permit modification to investigate and perform additional Interim Corrective Measures in accordance with Permit Condition I.G.8.

VI.E.4. If the approved Interim Corrective Measures Report concludes that there is a need for further investigations or implementation of corrective measures, the Director will require the Permittees to prepare a RCRA Facility Investigation (RFI) Work Plan in accordance with Permit Condition VI.F.

VI.F. RCRA Facility Investigation (RFI) Work Plan

VI.F.1. If, under Permit Conditions VI.D.3. or VI.E.4., the Director determines that an RFI is necessary for any newly-discovered or newly-created AOC, SWMU or HWMU or for a newly discovered release, or to further investigate an existing AOC, SWMU, or HWMU, the Permittees shall submit an RFI Work Plan, within the time period specified by the Director, to the Director for approval in accordance with Permit Condition I.G.5.

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VI.F.2. The RFI Work Plan must identify the AOCs, SWMUs, and/or HWMUs, releases of hazardous waste and/or constituents, and media of concern which require corrective action. The RFI Work Plan shall describe the objectives of the investigation and the overall technical and analytical approach to completing all actions necessary to characterize the nature, direction, rate, movement, and concentration of releases of hazardous waste and/or constituents from specific AOCs, SWMUs, HWMUs or groups of AOCs, SWMUs, or HWMUs and their actual or potential receptors. The RFI Work Plan shall detail all proposed activities and procedures to be conducted at the area and/or unit, the schedule for implementing and completing such investigations, an outline of the RFI Report required in Permit Condition VI.G.1., and the overall management of the RFI. The RFI Work Plan should be consistent with good scientific principles. For example, the Permittees should consider taking into account screening levels consistent with the EPA's health and ecological based guidance effective at the time of implementation, and EPA's current corrective action guidance, including RCRA Facility Investigation (RFI) Guidance, OSWER Directive 9502.00-6C, dated May 1989.

VI.F.3. The RFI Work Plan shall discuss sampling and data collection quality assurance and data management procedures, including formats for documenting and tracking data and other results of investigations, and health and safety procedures for conducting the field work.

VI.F.4. The Director may review for approval as part of the RFI Work Plan any plans, reports or other material developed pursuant to Permit Conditions VI.D. and/or VI.E.

VI.G. <u>RCRA Facility Investigation (RFI) Final Report</u>

VI.G.1. The Permittees shall develop and submit an RFI Final Report if the Director determines that an RFI is necessary as described in VI.F.1. The Permittees should conduct the RCRA Facility Investigation and prepare the RFI Final Report consistent with good scientific principles. For example, the Permittees should consider taking into account appropriate EPA guidance including, but not limited to, EPA's RCRA Facility Investigation Guidance, OSWER Directive 9502.00-6C, dated May 1989.

VI.G.2. Within the time period specified in the schedule included in the approved RFI Work Plan, the Permittees shall submit an RFI Final Report to the Director for approval in accordance with Permit Condition I.G.5.

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. **VI.G.3.** The RFI Final Report shall describe the procedures, methods, and results of all facility investigations of AOCs, SWMUs and/or HWMUs and their releases, including information on the type and extent of contamination at the Facility, sources and migration pathways, and actual or potential receptors. The RFI Final Report shall present all information necessary to support further corrective action decisions at the area(s) and/or unit(s).

VI.G.4. The RFI Final Report shall also include the Permittees' recommendations, if any, regarding any appropriate modifications to the conditions of this Permit, based on the results of the RFI in accordance with Permit Condition I.G.8. and 40 CFR Part 270.

VI.H. Interim Corrective Measures Implementation at the Direction of EPA

VI.H.1. If, at any time, the Director determines that a release or potential release of hazardous waste and/or constituents at the Facility poses or may present a threat to human health or the environment, the Director will notify the Permittees that they must submit to the Director, for approval in accordance with Permit Condition I.G.5., an Interim Corrective Measures Work Plan, for conducting Interim Corrective Measures designed to minimize the threat to human health and the environment. The Director will provide direction to the Permittees regarding the appropriate time frame for submittal of such Interim Corrective Measures Work Plan. Implementation by the Permittees of treatment or containment activities during "immediate response," as defined in 40 CFR § 264.1(g)(2), to a discharge of hazardous waste and/or constituents, or an imminent and substantial threat of a discharge of hazardous waste and/or constituents, or a discharge of material which, when discharged, becomes a hazardous waste, is not subject to this Permit. Actions taken to address the discharge after the immediate response is completed are subject to this Permit.

VI.H.1.a. The Interim Corrective Measures Work Plan shall include a schedule for implementation of Interim Corrective Measures and the submittal of an Interim Corrective Measures Report.

VI.H.2. Except as set forth in Permit Condition VI.H.5, the Director's decision to require the submittal of an Interim Corrective Measures Work Plan is subject to the dispute resolution procedures set forth in Permit Condition I.L. The following factors may be considered by the Director in determining the need for additional Interim Corrective Measures:

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VI.H.2.a. Time required to develop and implement a final remedy;

VI.H.2.b. Actual and potential exposure of human and environmental receptors;

VI.H.2.c. Actual and potential contamination of drinking water supplies and sensitive ecosystems;

VI.H.2.d. Potential for further degradation of the medium absent the additional Interim Corrective Measures;

VI.H.2.e. Presence of hazardous waste in containers or tanks that may pose a threat of release;

VI.H.2.f. Presence and concentration of hazardous waste and/or constituents in soils, ground water, surface water, or air;

VI.H.2.g. Weather conditions that may affect the current levels of contamination or potential for exposure;

VI.H.2.h. Risks of fire, explosion, or accident; and

VI.H.2.i. Other situations that may pose a threat to human health or the environment.

VI.H.3. Upon the Director's approval of the Interim Corrective Measures Work Plan, the Permittees shall implement the Interim Corrective Measures according to the approved schedule.

VI.H.4. Within the time period set forth in the schedule in the approved Interim Corrective Measures Work Plan, the Permittees shall submit to the Director for approval in accordance with Permit Condition I.G.5. a Report describing the Interim Corrective Measures activities taken to date and whether or not additional investigation or implementation of corrective measures are warranted. This Report shall include the reporting requirements specified in Permit Condition VI.B. If the approved Interim Corrective Measures Report concludes that additional investigation or corrective measures are required, and/or that there is a need for further investigations or implementation of corrective measures, the Director will require the Permittees to prepare a RCRA Facility Investigation (RFI) Work Plan in accordance with Permit Condition VI.F.

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VI.H.5. If, at any time, the Director determines that a release or potential release of hazardous waste and/or constituents at the Facility poses or may present an imminent or emergency threat to human health or the environment, the Director will notify the Permittees that they must conduct Emergency Interim Corrective Measures as instructed by the Director. Such Emergency Interim Corrective Measures shall be limited to that necessary to address or resolve the urgency associated with and/or emergency nature of any such threat to human health or the environment. The Director's decision to require such Emergency Interim Corrective Measures may be subject to the informal dispute resolution procedures of Permit Condition I.L., but the Permittees shall implement such Emergency Interim Corrective Measures, as instructed by the Director, simultaneously during any such invocation of informal dispute resolution under this Permit.

VI.I. Corrective Measures Study

VI.I.1. If the Director has reason to believe that an AOC, SWMU and/or HWMU has released concentrations of hazardous constituents in excess of the EPA's current health- and ecological-based levels, or if the Director determines that contaminants present at levels below the EPA's current health-based levels pose a threat to human health or the environment given site-specific exposure conditions, the Director may require a Corrective Measures Study (CMS) and, if so, will notify the Permittees in writing. This notice will identify the hazardous constituents(s) which have exceeded action levels as well as those which have been determined to present a potential threat to human health or the environment given site-specific exposure conditions.

VI.I.2. No later than sixty (60) calendar days after the Permittees have received notification from the Director, under Permit Condition VI.I.1., of the need for a CMS, the Permittees shall submit to the Director for approval in accordance with Permit Condition I.G.5., a Work Plan, with a schedule, for conducting a CMS. Upon the Director's approval of the CMS Work Plan, the Permittees shall implement the CMS according to the approved schedule. The CMS should be consistent with the EPA's guidance.

VI.I.3. The Permittees shall submit a CMS Final Report to the Director for approval in accordance with Permit Condition I.G.5. and according to the schedule approved by the Director pursuant to Permit Condition VI.I.2. The CMS Final Report shall summarize the results of the investigations for each remedy, and of any bench-scale

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or pilot tests conducted. The CMS Final Report must include an evaluation of each remedial alternative, and a proposal for corrective measures implementation. The CMS Final Report shall contain adequate information to support the Director in the remedy selection decision-making process, described in Permit Condition VI.J.

VI.J. Remedy Selection

If, based on the results contained in the RFI Final Report, CMS Final Report, or any further evaluations of additional remedies, the Director determines that it is appropriate to select a corrective action remedy for the facility, the Director will propose to select a remedy that will: (1) be protective of human health and the environment; (2) meet the concentration levels of hazardous constituents in each medium that the remedy must achieve to be protective of human health and the environment; (3) control the source(s) of release(s) so as to reduce or eliminate, to the maximum extent practicable, further releases that might pose a threat or potential threat to human health and the environment; and (4) meet all applicable waste management requirements.

VI.K. Permit Modification

Based on information the Permittees submit in the RFI Final Report, the CMS Final Report, or other information, the Permittees or the Director may initiate a modification to this Permit for selection and implementation of the remedy, pursuant to 40 CFR §§ 270.41 or 270.42, and/or to create or make changes to a Corrective Action Schedule of Compliance for this Permit. Any modification relating to selection and implementation of a remedy may include conditions that require submittal by the Permittees of corrective measures design, implementation, and monitoring plans.

VI.L. No Further Action

VI.L.1. Based on the results of any investigation, study, assessment, interim measure and/or corrective action and any other relevant information, the Permittees may submit an application to the Director for a permit modification in accordance with 40 CFR § 270.42(c) to terminate all or a portion of a Corrective Action Schedule of Compliance. This permit modification application must contain information demonstrating that there are no releases of hazardous wastes or hazardous constituents from HWMU(s), SWMU(s) and/or AOC(s) at the Facility that pose a threat to human health or the environment, as well as information required in 40 CFR § 270.42(c), which incorporates by reference 40 CFR §§270.13 through 270.22,

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270.62, and 270.63. Relevant information to be included in the application shall include, at a minimum:

- Depth of Released Contamination into Soil.
- Impact on Groundwater or Surface Water
- Constituents Sampled
- Data Quality Objectives
- Sampling Method
- Laboratory Results of Analysis
- Data Quality
- Results of Cleanup Verification Sampling

VI.L.2. If, based on review of the Permittees' request for a permit modification, any investigation, study, assessment, interim measure and/or corrective action and any other relevant information, including comments received during any relevant public comment period, the Director determines that releases or suspected releases which were investigated are either non-existent or do not pose a threat to either human health or the environment, the Director will grant the requested modification.

VI.L.3. A determination of no further action shall not preclude the Director from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates a release or likelihood of a release from a HWMU, SWMU and/or AOC or that the Facility is likely to pose a threat to human health or the environment. In such a case, the Director will initiate a modification according to the procedures set forth in 40 CFR § 270.41, to rescind the determination made in accordance with this Permit Condition VI.L.

VI.M. Corrective Action Beyond the Facility Boundary

If the Director determines that further actions beyond those provided in a Corrective Action Schedule of Compliance, or changes to that which is stated herein, are warranted, the Director will create or modify such Schedule of Compliance and/or other Permit Condition(s) in

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accordance with the permit modification processes set forth in 40 CFR § 270.41. [See 40 CFR § 270.41.]

VI.N. Financial Assurance for Corrective Action

VI.N.1. A proposal for establishing a financial assurance mechanism for either performance of any of the work described in a Corrective Action Schedule of Compliance or implementation of any other remedy in accordance with this Permit, including construction of such corrective action or remedy, shall be submitted to the Director for approval in accordance with Permit Condition I.G.5., simultaneously with the request for a permit modification required under Permit Condition VI.K. The proposal shall contain, at a minimum:

- A cost estimate for construction, operation, maintenance, and monitoring of the selected corrective action or remedy for a period of 20 years including assumptions used to make the cost estimate;
- A description of the financial assurance mechanism that will be used; and
- A schedule for establishing the mechanism.

VI.N.3. The mechanism by which financial assurance is secured -- for either performance of any of the work described in a Corrective Action Schedule of Compliance or implementation of any other remedy in accordance with this Permit -- may include surety bonds, insurance policies (issued by an independent commercial insurer), letters of credit, or any other mechanism acceptable to the Director as described in any permit modification undertaken in accordance with Permit Condition VI.K. The mechanism shall be established to allow the U.S. Environmental Protection Agency to direct the funds to ensure construction, operation, maintenance and/or monitoring occur as required by this Permit.

VI.O. Quality Assurance and Quality Control

VI.O.1. As part of any work plan(s) required by this Module, the Permittees shall include a Quality Assurance Project Plan ("QAPP"), for the Director's review and approval in accordance with Permit Condition I.G.5. The QAPP shall address quality assurance, quality control, and chain of custody procedures for any sampling, monitoring and analytical activities. The Permittees shall follow "EPA Requirements for Quality

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Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001 (Reissued May 2006)), "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/b-01/002, March 2001) as well as other applicable documents identified by the Director.

VI.O.2. As part of any work plan(s), the Permittees shall include Data Quality Objectives for any data collection activity to ensure that data of known and appropriate quality are obtained and that data are sufficient to support their intended use as required by this Module.

VI.O.3. The Permittees shall ensure that laboratories used by the Permittees for analysis perform such analysis according to the latest approved edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (also known as SW-846) or other methods approved by EPA. If methods other than EPA methods are to be used, the Permittees shall specify all such protocols in the appropriate work plan(s). In accordance with the procedures set forth in Permit Condition I.G.5., the Director may reject any data that does not meet the requirements of the approved work plan(s) and EPA analytical methods and may require resampling and additional analysis.

VI.O.4. The Permittees shall ensure that all laboratories employed for analyses participate in a quality assurance/quality control ("QA/QC") program equivalent to the program that EPA follows. The Permittees shall, on the Director's request, make arrangements for EPA to conduct a performance and QA/QC audit of the laboratories chosen by the Permittees, whether before, during, or after sample analyses. Upon the Director's request, the Permittees shall have the laboratories perform analyses of samples provided by EPA to demonstrate laboratory QA/QC and performance. If the audit reveals deficiencies in a laboratory's performance or QA/QC, the Permittees shall submit a plan to address the deficiencies and the Director may require resampling and additional analysis. Requests by the Director in accordance with this Permit Condition VI.O.4. are subject to the informal dispute resolution provisions of Permit Condition I.L.

VI.O.5. The Director may require the Permittees to change laboratories for reasons including, but not limited to: QA/QC, performance, conflict of interest, or confidential agency audit information. In the event the Director requires a laboratory change, the Permittees shall propose two alternative laboratories within thirty (30)

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calendar days. Once the Director approves of the laboratory change, the Permittees shall ensure that laboratory service shall be made available within fifteen (15) calendar days. The Director's requirement(s) and approval(s) pursuant to this Permit Condition VI.O.5. are subject to the informal dispute resolution provisions of Permit Condition I.L.

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
1	Spent carbon reactivation furnace - RF-1 and Associated Equipment (Dewater screw)	South of RF-2	Furnace shell – carbon steel; internal firebrick lining and block insulation; hearths and furnace roof constructed with firebrick; furnace roof is comprised of firebrick backed with block insulation and castable insulation; bottom hearth is insulated with block insulation and castable insulation	August 1992; Shut down in 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
2	Spent carbon reactivation furnace RF-2 and Associated Equipment (Dewater Screw, Weigh Belt)	East of warehouse	Furnace shell – carbon steel; internally lined with firebrick and block insulation; hearths and furnace roof constructed with firebrick; furnace roof is comprised of firebrick backed with block insulation and castable insulation; bottom hearth is insulated with block insulation and castable insulation; Continuously seal welded internally to assure an air-tight assembly. Dewatering screw length 17 ft; diameter 8 in.	July 1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
3	3 RF–1 Air pollution control equipment					
	Afterburner	RF-1 structure	Refractory lined steel	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Venturi scrubber	RF-1 structure	Hastelloy C	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Packed bed scrubber	RF-1 structure	Fiberglass	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Emissions stack	RF-1 structure	Mild steel	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None
4	RF–2 Air pollution control equipment					

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
	Afterburner	RF-2 structure	Refractory lined steel cylinder chamber	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Venturi scrubber	RF-2 structure	Hastelloy C	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Packed bed scrubber	RF-2 structure	Fiberglass	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Wet electrostatic precipitator	RF-2 structure	Fiberglass/AL6XN	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
	Induced draft fan	RF-2 structure	300-series SS	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
	Emissions stack	RF-2 structure	Fiberglass surrounded by a mild steel shell	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
5	Spent carbon unloading hopper H-1	North end of facility on containment	5000 lb capacity; mild steel	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
6	Spent carbon unloading hopper H-2	Inside warehouse facing east wall	500 lb capacity; mild steel	August 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
7	Hopper air pollution control equipment piping and baghouse	North end of facility on containment	Ducting, baghouse and fan are mild steel	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
8	Spent carbon slurry and recycle water transfer system	Inside warehouse on containment	4” pipes hopper to tank; 3” pipes T-tank to furnace feed tank; 300-series SS	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
9	Spent carbon storage warehouse	Inside warehouse	80 ft by 80 ft concrete/ metal	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
10	Spent carbon slurry storage tank, T–1	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
11	Spent carbon slurry storage tank, T–2	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
12	Spent carbon slurry storage tank, T–5	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
13	Spent carbon slurry storage tank, T–6	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
14	Furnace Feed System Tank T-8 and Ancillary Equipment	RF–1 Structure	905 gal 300 series SS	August 1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None
15	T-18 and Ancillary Equipment	RF-2 structure	6500 gal 300-series SS	July 1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
16	Wastewater conveyance piping to wastewater treatment tank	East of RF-2 structure	3” PVC piping	August 1992	Spent activated carbon. See Part B Application for list of applicable waste codes	None
17	Spent carbon storage warehouse barrel washer	Next to H-2 in warehouse	2 ft by 3 ft 300 series stainless steel	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
18	Carbon adsorber - PV1000	North of Containment Pad for Storage Tanks	1000 lb carbon capacity; mild steel.	August 1992	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
19	Carbon adsorber WS-1	Beside spent carbon storage tank	2 x 2000 lb carbon capacity. Mild steel	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
20	Carbon adsorber WS-2	Beside H-1	5000 lb carbon capacity Fiberglass	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None
21	Carbon adsorber WS-3	Beside RF–2	1000 lb carbon capacity Mild steel	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	See Section J.2 of the Part B Application
22	Slurry transfer inclined plate settler tank	Adjacent to the venturi scrubber	Mild steel	1992 to 1994	Spent activated carbon. See Part B Application for list of applicable waste codes	See Section J.2 of the Part B Application
23	Scrubber recycle tank T-17	Beside RF-1	Mild steel	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**General Dimensions and Structural Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
24	Filter press	Next to scrubber system for RF-1	Mild steel with polypropylene plates	1992 to 1994	Spent activated carbon. See Part B Application for list of applicable waste codes	None
25	New Facility Discharge Piping System	New piping bypasses Lift Station to POTW	6" PVC	February 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None

TABLE VI-2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
1	Bermed containment area	East of Warehouse	Approx 180' x 55'; concrete	August 1992	Spent activated carbon. See Part A Application for list of applicable waste codes	None
2	Sump by H-1	South of H-1	3'-4" square; concrete	July 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
3	Sump by storage tank, T–9	East of warehouse in between T-9 and RF-2	3'-4" square sump; U-drain 30' long x 16"wide; concrete	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
4	Recycled motive water storage tank, T–9	East of warehouse on containment	10,500 gal 316 series stainless steel	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
5	Rainwater and motive water storage tank, T–12	East of warehouse on containment	25,080 gal Mild steel	1992. Removed from service in 2002.	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE VI-2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
6	Wastewater storage tank, T–11 System	East of the warehouse and south of RF -2	10' Dia x 20' H; Approx 12,000 gal fiberglass	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
7	Sump by cooling screw under Venturi scrubber tank	East of warehouse beside RF-2	3'-4" square; concrete	July 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
8	RF–2 scrubber water equalization tank, T-19	Under RF-2 Structure	Approx. 1000 gal Fiberglass	July 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
9	Hazardous waste debris bin	North of warehouse on asphalt pavement	20 - 40 cubic yards Mild steel	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
10	Spent carbon storage warehouse grated trenches and sump	Warehouse in containment area	Trench 3 ft, 4 in square sump U-drain 50 ft long, 16 in wide; cross drain sections 40 ft long 16 in wide Concrete	1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE VI-2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
11	Hopper concrete pad	Outside H-1 structure	Approx 60' x 44'; concrete	July 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
12	WWTP	Inside warehouse	Fiberglass, mild steel modular water treatment system. Separate containment.	October 2003 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
13	Wastewater lift station and piping system (old)	At the end of access road to plant. Old piping from Tank T-11 to the Lift Station	Approx. height 15 ft; outside diameter 5 ft Lift Station: mild steel/concrete/fiberglass Old piping system PVC.	1992 to 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
14	Spent carbon unloading and transfer area asphalt pad	North area of facility	Approx. 44 ft by 80 ft	August 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
15	Satellite Accumulation Area	North side of warehouse	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None
16	Satellite Accumulation Area	South side of drum containment	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None
17	Satellite Accumulation Area	East of Control Room	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None

TABLE VI-2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
18	Satellite Accumulation Area	Laboratory in Admin Building	≤ 55 gallons (metal or plastic)	August 1996 to present	Laboratory Debris and laboratory Testing	None
19	Satellite Accumulation Area	Underneath Spent Carbon Baghouse	≤ 55 gallons (metal or plastic)	August 1992 to present	Spent Carbon Dust from Baghouse	

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TABLE VI-3 - AREAS OF CONCERN (AOC) IDENTIFICATION TABLE, NEW UNIT NAME

No.	Description of AOC	Location	Management Requirements at Closure
1	Spent carbon unloading and transfer area.	AOC 1 is entirely contained within SWMU14.	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 5 & 7.
2	Tank area concrete containment pad	AOC 2 is entirely contained within SWMU 1.	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 3.
3	Receiving area/pad	AOC 3 is entirely contained within SWMU14.	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 8.
4	Hopper H-1 loading/unloading area	See HWMU 5 for more detail on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 4 & 5.
5	Hopper H-2 loading/unloading area	See HWMU 6 for more detail on this unit	Sampling. See Closure Plan Container Area Sample Locations 1 & 2.
6	Spent carbon storage warehouse	See HWMU 9 for more detail on this unit	Sampling. See Closure Plan Container Area Sample Locations 1, 2, & 3.
7	Furnace feed systems	See HWMUs 14 and 15 for more details on these units	Sampling. See Closure Plan RF-1 and RF-2 Process Area Sample Locations 1 & 2
8	Recycled motive water tank T-9	See SWMU 4 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 6.
9	Rainwater, Dewatering Screw, and Motive Water Storage Tank T-12	See SWMU 5 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 2.

TABLE VI-3 - AREAS OF CONCERN (AOC) IDENTIFICATION TABLE, NEW UNIT NAME

No.	Description of AOC	Location	Management Requirements at Closure
10	Spent carbon storage warehouse barrel washer	See HWMU 17 for more details on this unit	Sampling. See Closure Plan Container Area Sample Locations 1, 2, & 3.
11	Bermed concrete pad in process area	AOC 2 is entirely contained within SWMU 1. See SWMU 1 for more detail on this unit	Sampling. See Closure Plan RF-1 and RF-2 Process Area Sample Locations 1, 2, & 3.
12	Sump by unloading hopper H-1	See SWMU 2 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 4.
13	Sump by storage tank T-9	See SWMU 3 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 6.
14	Spent carbon storage tanks and carbon adsorbers	Please see HWMUs 10, 11, 12, & 13 and HWMUs 19, 20, & 21 for more details on these units	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 1, 2, & 3.

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Appendix B

Checklists

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APPENDIX B
CHECKLISTS

Checklists for the applicable regulatory provisions from the following regulations are included in this Appendix B to the Statement of Basis. These checklists cover regulations referenced in the draft permit from the following Parts of Title 40 of the Code of Federal Regulations (40 CFR): Parts 61, 63, 124, 264, and 270.

The checklists do not repeat the regulations verbatim. They are merely excerpts, designed to assist the public in understanding the basis for specific, proposed permit conditions in the draft permit.

40 CFR Part 264 includes the Resource Conservation and Recovery Act (RCRA) regulations applicable to permitted treatment, storage and disposal facilities (TSDs) and these include the basic requirements for TSD facilities and the units in which hazardous waste is managed at such facilities.

40 CFR Part 270 includes the regulations applicable to RCRA permits generally. 40 CFR Part 124 includes the regulations generally applicable to all EPA permits, including those permits issued under the authority of RCRA.

The carbon regeneration furnace at the Evoqua Water Technologies, LLC facility in Parker, AZ is considered a "miscellaneous unit" as defined at 40 CFR §260.10. As such, the proposed permit terms and provisions of the draft permit include those requirements of Part 264, Subparts I through O and Subparts AA through CC, Part 270, and Part 63, Subpart EEE, that are appropriate for this particular type of miscellaneous unit. In addition, some of the requirements under Part 264, Subparts AA through CC are inapplicable where units or equipment are equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act (CAA) regulation codified under 40 CFR Parts 60, 61, or 63.

As a result, checklists for 40 CFR Part 61, primarily for Subpart FF (National Emission Standard for Benzene Waste Operations), and Part 63, primarily for Subpart EEE (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors) are included in this Appendix to help guide the public in understanding how specific requirements from Part 61 and Part 63 were included in the draft permit.

The draft permit also includes references to regulatory requirements from other parts of Title 40 of the Code of Federal Regulations that are not reflected in these checklists. For example, draft Permit Condition II.A.2. references 40 CFR Part 262, and draft Permit Condition II.A.3. references 40 CFR Part 268. For the full text of all regulatory requirements, whether or not they are referenced in a checklist here, the public is advised to review the regulatory language, which may be found online at http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

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40 CFR Section	Requirement	Permit Condition(s)
Part 61		IV.G.1.
Subpart A	**GENERAL PROVISIONS**	Table IV-2
61.01	(a) The following list presents the substances that, pursuant to section 112 of the Act, have been designated as hazardous air pollutants. The Federal Register citations and dates refer to the publication in which the listing decision was originally published. *** Benzene (42 FR 29332; June 8, 1977) *** [The full text of this regulation is not included in this checklist for the sake of brevity.]	
61.12	**Compliance with standards and maintenance requirements.** [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) The owner or operator of each stationary source shall maintain and operate the source, including associated equipment for air pollution control, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of the source. [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c) –V.D.4.
Subpart FF	**National Emission Standard For Benzene Waste Operations**	IV.G.2.b. IV.G.2.c. Table IV-2 IV.G.8. IV.G.8.a.i. IV.G.8.a.ii. IV.G.8.a.iii. IV.G.8.a.iv. IV.G.8.b. IV.G.8.b.ii.
61.343	**Standards: Tanks.** (a) Except as provided in paragraph (b) of this section and in § 61.351, the owner or operator must meet the standards	(a)(1)(i) - IV.G.8.b.i.

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	in paragraph (a)(1) or (2) of this section for each tank in which the waste stream is placed in accordance with § 61.342 (c)(1)(ii). The standards in this section apply to the treatment and storage of the waste stream in a tank, including dewatering. (1) The owner or operator shall install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to a control device. (i) The fixed-roof shall meet the following requirements: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
61.346	**Standards: Individual drain systems.** (a) Except as provided in paragraph (b) of this section, the owner or operator shall meet the following standards for each individual drain system in which waste is placed in accordance with § 61.342(c)(1)(ii) of this subpart: (1) The owner or operator shall install, operate, and maintain on each drain system opening a cover and closed-vent system that routes all organic vapors vented from the drain system to a control device. (i) The cover shall meet the following requirements: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	TABLE IV-2
61.348	**Standards: Treatment processes.** [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (e) Except as specified in paragraph (e)(3) of this section, if the treatment process or wastewater treatment system unit has any openings (e.g., access doors, hatches, etc.), all such openings shall be sealed (e.g., gasketed, latched, etc.) and kept closed at all times when waste is being treated, except during inspection and maintenance. (1) Each seal, access door, and all other openings shall . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(e) - V.E.1.
61.349	**Standards: Closed-vent systems and control devices.** (a) For each closed-vent system and control device used to comply with standards in accordance with §§ 61.343 through 61.348 of this subpart, the owner or operator shall properly design, install, operate, and maintain the closed-	TABLE IV-2 IV.G.8.b.ii.

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	vent system and control device in accordance with the following requirements: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
61.355	**Test methods, procedures, and compliance provisions.** (a) An owner or operator shall determine the total annual benzene quantity from facility waste by the following procedure: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) For the purposes of the calculation required by §§ 61.355(a) of this subpart, an owner or operator shall determine the flow-weighted annual average benzene concentration in a manner that meets the requirements given in paragraph (c)(1) of this section using either of the methods given in paragraphs (c)(2) and (c)(3) of this section. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (h) An owner or operator shall test equipment for compliance with no detectable emissions as required in §§ 61.343 through 61.347, and § 61.349 of this subpart in accordance with the following requirements: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	IV.J.8. (h) V.E.2. and Permit Attachment Appendix XXIII (Subpart FF Compliance Plan) at Section 3.7.3.and Table 1.
61.357	**Reporting requirements.** (a) Each owner or operator of a chemical plant, petroleum refinery, coke by-product recovery plant, and any facility managing wastes from these industries shall . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.2.

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40 CFR Section	Requirement	Permit Condition(s)
PART 63—National Emission Standards For Hazardous Air Pollutants For Source Categories		
Subpart A – General		
63.6	[The full text of this regulation is not included in this checklist for the sake of brevity.]	
	(3) *Startup, shutdown, and malfunction plan.* [The full text of this regulation is not included in this checklist for the sake of brevity.]	
	(iii) When actions taken by the owner or operator during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
	(iv) If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the owner or operator must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with §63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator). [The full text of this regulation is not included in this checklist for the sake of brevity.]	(e)(3)(iv) – V.G.4.
63.7	**Performance testing requirements.**	I.K.1.c.

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	[The full text of this regulation is not included in this checklist for the sake of brevity.]	
63.8	**Monitoring requirements.** [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.K.1.c. V.C.4.iii.
63.8(c)(3)	All CMS shall be installed, operational, and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests under §63.7. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration o ref the system.	II.M.1.c.
63.8(d)	(d) *Quality control program.* (1) The results of the quality control program required in this paragraph will be considered by the Administrator when he/she determines the validity of monitoring data. [The full text of this regulation is not included in this checklist for the sake of brevity.]	(d) – I.K.1.b. II.M.1.d. (d)(1) – V.G.5.
63.9(e)	Notification of performance test. The owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the Administrator to review and approve the site-specific test plan required under §63.7(c), if requested by the Administrator, and to have an observer present during the test.	I.K.1.c.
63.9(f)	Notification of opacity and visible emission observations. The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting the opacity or visible emission observations specified in §63.6(h)(5), if such observations are required for the source by a relevant standard. The notification shall be submitted with the notification of the performance test date, as specified in paragraph (e) of this section, or if no performance test is required or visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under §63.7, the owner or operator shall deliver or postmark the notification not less than 30 days before the opacity or visible emission observations are scheduled to take place.	I.K.1.c.
63.9(g)	(g) *Additional notification requirements for sources with continuous monitoring systems.* The owner or operator of an affected source required to use a CMS by a relevant	I.K.1.b. I.K.1.c.

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	standard shall furnish the Administrator written notification as follows: [The full text of this regulation is not included in this checklist for the sake of brevity.]	
63.9(h)(2)	(2)(i) Before a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit to the Administrator a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list— [The full text of this regulation is not included in this checklist for the sake of brevity.]	(h)(2) - I.K.3.c.
63.9(j)	Change in information already provided. Any change in the information already provided under this section shall be provided to the Administrator in writing within 15 calendar days after the change.	I.K.1.c.
63.10	Recordkeeping and reporting requirements. (a) Applicability and general information. (1) The applicability of this section is set out in §63.1(a)(4). [The full text of this regulation is not included in this checklist for the sake of brevity.]	V.G.1. V.G.2. V.G.3.
63.10(d)	[The full text of this regulation is not included in this checklist for the sake of brevity.] (5)(i) *Periodic startup, shutdown, and malfunction reports.* If actions taken by an owner or operator during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan (see §63.6(e)(3)), the owner or operator shall state such information in a startup, shutdown, and malfunction report. Actions taken to minimize emissions during such startups, shutdowns, and malfunctions shall be summarized in the report and may be done in checklist form; if actions taken are the same for each event, only one checklist is necessary. Such a report shall also include . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(d)(5) – V.G.4.

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63.10(e)	(3) *Excess emissions and continuous monitoring system performance report and summary report.* (i) Excess emissions and parameter monitoring exceedances are defined in relevant standards. The owner or operator of an affected source required to install a CMS by a relevant standard shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to the Administrator semiannually, except when— [The full text of this regulation is not included in this checklist for the sake of brevity.]	(e)(3) - V.C.5.v.c.(2). V.C.5.v.c.(3).
Subpart EEE — National Emission Standards For Hazardous Air Pollutants From Hazardous Waste Combustors		V.A.3.
General		
63.1200	**Who is subject to these regulations?** [The full text of this regulation is not included in this checklist for the sake of brevity.]	
Monitoring and Compliance Provisions		
63.1206	[The full text of this regulation is not included in this checklist for the sake of brevity.] (b) Compliance with standards- [The full text of this regulation is not included in this checklist for the sake of brevity.] (5) Changes in design, operation, or maintenance—(i) Changes that may adversely affect compliance. If you plan to change (as defined in paragraph (b)(5)(iii) of this section) the design, operation, or maintenance practices of the source in a manner that may adversely affect compliance with any emission standard that is not monitored with a CEMS: (A) Notification. You must notify the Administrator at least 60 days prior to the change, unless you document	(b)(5) – I.E.10., I.G.4.

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	circumstances that dictate that such prior notice is not reasonably feasible. The notification must include: (1) A description of the changes and which emission standards may be affected; and (2) A comprehensive performance test schedule and test plan under the requirements of §63.1207(f) that will document compliance with the affected emission standard(s); (B) Performance test. You must conduct a comprehensive performance test under the requirements of §§63.1207(f)(1) and (g)(1) to document compliance with the affected emission standard(s) and establish operating parameter limits as required under §63.1209, and submit to the Administrator a Notification of Compliance under §§63.1207(j) and 63.1210(d); and (C) Restriction on waste burning. (1) Except as provided by paragraph (b)(5)(i)(C)(2) of this section, after the change and prior to submitting the notification of compliance, you must not burn hazardous waste for more than a total of 720 hours (renewable at the discretion of the Administrator) and only for the purposes of pretesting or comprehensive performance testing. Pretesting is defined at §63.1207(h)(2)(i) and (ii). (2) You may petition the Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. You must specify operating requirements, including limits on operating parameters, that you determine will ensure compliance with the emission standards of this subpart based on available information. The Administrator will review, modify as necessary, and approve if warranted the interim operating requirements. (ii) Changes that will not affect compliance. If you determine that a change will not adversely affect compliance with the emission standards or operating requirements, you must document the change in the operating record upon making such change. You must revise as necessary the performance test plan, Documentation of Compliance, Notification of Compliance, and start-up, shutdown, and malfunction plan to reflect these changes.	

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	(iii) Definition of "change." For purposes of paragraph (b)(5) of this section, "change" means any change in design, operation, or maintenance practices that were documented in the comprehensive performance test plan, Notification of Compliance, or startup, shutdown, and malfunction plan. [The full text of this regulation is not included in this checklist for the sake of brevity.]	
	(c) Operating requirements. —(1) General . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (iii) Failure to comply with the operating requirements is failure to ensure compliance with the emission standards of this subpart . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) Startup, shutdown, and malfunction plan. [The full text of this regulation is not included in this checklist for the sake of brevity.] (v) *Operating under the startup, shutdown, and malfunction plan*—(A) *Compliance with AWFCO requirements during malfunctions.* (*1*) During malfunctions, the automatic waste feed cutoff requirements of §63.1206(c)(3) continue to apply, except for paragraphs (c)(3)(v) and (c)(3)(vi) of this section. If you exceed a part 63, subpart EEE, of this chapter emission standard monitored by a CEMS or COMs or operating limit specified under §63.1209, the automatic waste feed cutoff system must immediately and automatically cutoff the hazardous waste feed, except as provided by paragraph (c)(3)(viii) of this section. If the malfunction itself prevents immediate and automatic cutoff of the hazardous waste feed, however, you must cease feeding hazardous waste as quickly as possible. (*2*) Although the automatic waste feed cutoff requirements continue to apply during a malfunction, an exceedance of an emission standard monitored by a CEMS or COMS or operating limit specified under §63.1209 is not a violation of this subpart if you take the	(c)(1)(iii) – V.C.1.x. (c)(2) – V.C.5.iv. (c)(2)(v)(A)(1) - V.C.5.v. V.C.5.v.a.. (c)(2)(v)(A)(2) - V.C.5.v.b.(1). (c)(2)(v)(A)(3) - V.C.5.v.c. (c)(2)(v)(A)(3)(i) – V.C.4.v.c.(1). (c)(2)(v)(A)(3)(ii) – V.C.4.v.c.(2). V.C.4.v.c.(3).

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	corrective measures prescribed in the startup, shutdown, and malfunction plan. (*3*) *Excessive exceedances during malfunctions.* For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, you must: (*i*) Within 45 days of the 10th exceedance, complete an investigation of the cause of each exceedance and evaluation of approaches to minimize the frequency, duration, and severity of each exceedance, and revise the startup, shutdown, and malfunction plan as warranted by the evaluation to minimize the frequency, duration, and severity of each exceedance; and (*ii*) Record the results of the investigation and evaluation in the operating record, and include a summary of the investigation and evaluation, and any changes to the startup, shutdown, and malfunction plan, in the excess emissions report required under §63.10(e)(3).	
	(B) *Compliance with AWFCO requirements when burning hazardous waste during startup and shutdown.* (*1*) If you feed hazardous waste during startup or shutdown, you must include waste feed restrictions (e.g., type and quantity), and other appropriate operating conditions and limits in the startup, shutdown, and malfunction plan. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c)(2)(v)(B) - V.C.5.vi.
	(c)(3) *Automatic waste feed cutoff (AWFCO)*—(i) *General.* Upon the compliance date, you must operate the hazardous waste combustor with a functioning system that immediately and automatically cuts off the hazardous waste feed, except as provided by paragraph (c)(3)(viii) of this section: [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c)(3) - V.C.5.i. V.C.5.iv. V.C.5.v. (c)(3)(i)(B) – V.C.5.ii.b. (c)(3)(i)(C) – V.C.5.ii.c. (c)(3)(i)(D) – V.C.5.ii.d. (c)(3)(ii) – V.C.5.iii.

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		(c)(3)(iii) – V.C.5.vii. (c)(3)(iv) – V.C.5.viii. (c)(3)(v) – V.C.5.v.d. (c)(3)(vii) – V.C.5.ix.
	(c)(5) *Combustion system leaks.* (i) Combustion system leaks of hazardous air pollutants must be controlled by: [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c)(5) –V.E.1. V.E.2. (c)(5)(ii) – I.K.1.b. and I.K.1.c.
	(c)(6) Operator training and certification. (i) You must establish training programs for all categories of personnel whose activities may reasonably be expected to directly affect emissions of hazardous air pollutants from the source. [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c)(6) – I.K.13.
63.1207	**What are the performance testing requirements?** (a) *General.* The provisions of §63.7 apply, except as noted below. (b) *Types of performance tests*—(1) *Comprehensive performance test.* You must conduct comprehensive performance tests to demonstrate compliance with the emission standards provided by this subpart, establish limits for the operating parameters provided by §63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) Frequency of testing. Except as otherwise specified in paragraph (d)(4) of this section, you must conduct testing periodically as prescribed in paragraphs (d)(1) through (d)(3) of this section. The date of commencement of the initial comprehensive performance test is the basis for establishing the deadline to commence the initial confirmatory performance test and the next comprehensive performance test. You may conduct	I.K.1.b. (b)(1) – I.K.1.c. (d)(3) – I.K.2. (e)(2) – I.K.1.f. (j) – I.E.10., I.G.4. (l)(1)(i) and (ii) – I.K.4.b. (l)(1)(ii)(A) or (C) – I.K.4.c. (l)(2)(i) – I.K.4.b. (l)(2)(ii) and (iii) – I.K.4.b., I.K.4.c.

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	performance testing at any time prior to the required date. The deadline for commencing subsequent confirmatory and comprehensive performance testing is based on the date of commencement of the previous comprehensive performance test. Unless the Administrator grants a time extension under paragraph (i) of this section, you must conduct testing as follows . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (e) Notification of performance test and CMS performance evaluation, and approval of test plan and CMS performance evaluation plan. [The full text of this regulation is not included in this checklist for the sake of brevity.] (j) Notification of compliance—(1) Comprehensive performance test. (i) Except as provided by paragraphs (j)(4) and (j)(5) of this section, within 90 days of completion of a comprehensive performance test, you must postmark a Notification of Compliance documenting compliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under §63.1209. (ii) Upon postmark of the Notification of Compliance, you must comply with all operating requirements specified in the Notification of Compliance in lieu of the limits specified in the Documentation of Compliance required under §63.1211(c). [The full text of this regulation is not included in this checklist for the sake of brevity.] (l) Failure of performance test—(1) Comprehensive performance test. The provisions of this paragraph do not apply to the initial comprehensive performance test if you conduct the test prior to your compliance date. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
63.1208	**What are the test methods?** (a) [Reserved]	I.K.1.b.

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	(b) *Test methods.* You must use the following test methods to determine compliance with the emissions standards of this subpart: [The full text of this regulation is not included in this checklist for the sake of brevity.]	
63.1209	**What are the monitoring requirements?** (a) *Continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS).* (1)(i) You must use either a carbon monoxide or hydrocarbon CEMS to demonstrate and monitor compliance with the carbon monoxide and hydrocarbon standard under this subpart. You must also use an oxygen CEMS to continuously correct the carbon monoxide or hydrocarbon level to 7 percent oxygen. [The full text of this regulation is not included in this checklist for the sake of brevity.] (6) *Calculation of rolling averages.* [The full text of this regulation is not included in this checklist for the sake of brevity.]	V.C.1.ii. Table V-2 V.C.1.ix. (a)(6) – Table V-3.
	(b) *Other continuous monitoring systems (CMS).* [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) Except as specified in paragraphs (b)(2)(i) and (ii) of this section, you must install and operate continuous monitoring systems other than CEMS in conformance with §63.8(c)(3) that requires you, at a minimum, to comply with the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(b)(2) – II.M.1.c.
	(l) Mercury. You must comply with the mercury emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications. (1) Feedrate of mercury. (i) For incinerators and solid fuel boilers, when complying with the mercury emission standards under §§63.1203, 63.1216 and 63.1219, you	(l)(1)(i) – Table V-1

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	must establish a 12-hour rolling average limit for the total feedrate of mercury in all feedstreams as the average of the test run averages. [The full text of this regulation is not included in this checklist for the sake of brevity.]	
Notification, Reporting and Recordkeeping		
63.1210	(a) Summary of requirements. (1) You must submit the following notifications to the Administrator . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . .(d) Notification of compliance. (1) The Notification of Compliance status requirements of §63.9(h) apply, except that: (i) The notification is a Notification of Compliance, rather than compliance status . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.G.4. (d) - I.E.10.
63.1211	**What are the recordkeeping and reporting requirements?** *(a) Summary of reporting requirements.* You must submit the following reports to the Administrator: [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.1.b. II.M.2. V.G.1. V.G.2. V.G.3.
Replacement Emissions Standards and Operating Limits for Incinerators, Cement Kilns, and Lightweight Aggregate Kilns		
63.1219	**What are the replacement standards for hazardous waste incinerators?**	See, generally, Table V-1 in Module V.

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	(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain: [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.K.1.c.

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40 CFR Section	Requirement	Permit Condition(s)
Part 124		
Subpart A	General Program Requirements	
124.16	**Stays of contested permit conditions.** (a) *Stays.* (1) If a request for review of a RCRA . . . permit under § 124.19 of this part is filed, the effect of the contested permit conditions shall be stayed and shall not be subject to judicial review pending final agency action. Uncontested permit conditions shall be stayed only until the date specified in paragraph (a)(2)(i) of this section . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.C.
124.20	**Computation of Time.** (a) Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event. (b) Any time period scheduled to begin before the occurrence of an act or event shall be computed so that the period ends on the day before the act or event. (c) If the final day of any time period falls on a weekend or legal holiday, the time period shall be extended to the next working day. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.G.3.
Subpart B	Specific Procedures Applicable to RCRA Permits	
124.33	(a) Applicability. The requirements of this section apply to all applications seeking RCRA permits for hazardous waste management units over which EPA has permit issuance authority. For the purposes of this section only, "hazardous waste management units over which EPA has permit issuance authority" refers to hazardous waste management units for which the State where the units are located has not been authorized to issue RCRA permits pursuant to 40 CFR part 271.	I.J.1. I.K.12.

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	(b) The Director may assess the need, on a case-by-case basis, for an information repository. When assessing the need for an information repository, the Director shall consider a variety of factors, including: the level of public interest; the type of facility; the presence of an existing repository; and the proximity to the nearest copy of the administrative record. If the Director determines, at any time after submittal of a permit application, that there is a need for a repository, then the Director shall notify the facility that it must establish and maintain an information repository. (See 40 CFR 270.30(m) for similar provisions relating to the information repository during the life of a permit). . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
	(e) The Director shall specify requirements for informing the public about the information repository. At a minimum, the Director shall require the facility to provide a written notice about the information repository to all individuals on the facility mailing list.	I.J.3.
	(f) The facility owner/operator shall be responsible for maintaining and updating the repository with appropriate information throughout a time period specified by the Director. The Director may close the repository at his or her discretion, based on the factors in paragraph (b) of this section.	I.J.2.

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CHECKLIST FOR SIEMENS PARKER, AZ PERMIT (JULY 2016)

40 CFR Section	Requirement	Permit Condition(s)
Part 264	STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES	
Subpart B	General Facility Standards	
264.1	(a) The purpose of this part is to establish minimum national standards which define the acceptable management of hazardous waste. (b) The standards in this part apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste, except as specifically provided otherwise in this part or part 261 of this chapter. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (g) The requirements of this part do not apply to: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) The owner or operator of a facility managing recyclable materials described in §261.6 (a)(2), (3), and (4) of this chapter (except to the extent they are referred to in part 279 or subparts C, F, G, or H of part 266 of this chapter). . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(g)(2) – VI.H.1.
264.10	Applicability. (a) The regulations in this subpart apply to owners and operators of all hazardous waste facilities, except as provided in § 264.1 and in paragraph (b) of this section. (b) Section 264.18(b) applies only to facilities subject to regulation under subparts I through O and subpart X of this part.	I.
264.11	Identification number. Every facility owner or operator must apply to EPA for an EPA identification number in accordance with the EPA notification procedures (45 FR 12746).	I.
264.12(a)	Required notices.	(1): II.B.1.

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40 CFR Section	Requirement	Permit Condition(s)
	(1) The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source must notify the Regional Administrator in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.12(b)	The owner or operator of a facility that receives hazardous waste from an off-site source (except where the owner or operator is also the generator) must inform the generator in writing that he has the appropriate permit(s) for, and will accept, the waste the generator is shipping. The owner or operator must keep a copy of this written notice as part of the operating record.	II.B.2.
264.12(c)	Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the owner or operator must notify the new owner or operator in writing of the requirements of this part and part 270 of this chapter. [*Comment:* An owner's or operator's failure to notify the new owner or operator of the requirements of this part in no way relieves the new owner or operator of his obligation to comply with all applicable requirements.]	I.E.12.
264.13	General waste analysis. (a)(1) Before an owner or operator treats, stores, or disposes of any hazardous wastes, or nonhazardous wastes if applicable under §264.113(d), he must obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, the analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with this part and part 268 of this chapter. (2) The analysis may include data developed under part 261 of this chapter, and existing published or documented data on the hazardous	II.C.1. II.C.4. III.A. (b)(8) – Table IV-2.

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40 CFR Section	Requirement	Permit Condition(s)
	waste or on hazardous waste generated from similar processes. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.14	Security	II.D.1.
264.14(a)	(a) The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility, *unless* he can demonstrate to the Regional Administrator that: (1) Physical contact with the waste, structures, or equipment within the active portion of the facility will not injure unknowing or unauthorized persons or livestock which may enter the active portion of a facility; and (2) Disturbance of the waste or equipment, by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility, will not cause a violation of the requirements of this part. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.D.2.
264.14(c)	Unless the owner or operator has made a successful demonstration under paragraphs (a) (1) and (2) of this section, a sign with the legend, "Danger—Unauthorized Personnel Keep Out", must be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion. The legend must be written in English and in any other language predominant in the area surrounding the facility (e.g., facilities in counties bordering the Canadian province of Quebec must post signs in French; facilities in counties bordering Mexico must post signs in Spanish), and must be legible from a distance of at least 25 feet. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.D.3.
264.15	General inspection requirements.	II.E.1. II.F.1.
264.15(a)	(a) The owner or operator must inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing—or may lead to—(1) release of hazardous waste constituents to the	II.E.2.

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40 CFR Section	Requirement	Permit Condition(s)
	environment or (2) a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.	
264.15(b)	(1) The owner or operator must develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards. (2) He must keep this schedule at the facility. (3) The schedule must identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, etc.). (4) The frequency of inspection may vary for the items on the schedule. However, the frequency should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use, except for Performance Track member facilities, that must inspect at least once each month, upon approval by the Director, as described in paragraph (b)(5) of this section. At a minimum, the inspection schedule must include the items and frequencies called for in §§264.174, 264.193, 264.195, 264.226, 264.254, 264.278, 264.303, 264.347, 264.602, 264.1033, 264.1052, 264.1053, 264.1058, and 264.1083 through 264.1089 of this part, where applicable . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.E.3.
264.15(c)	The owner or operator must remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has	II.E.4. III.F.2.d.

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40 CFR Section	Requirement	Permit Condition(s)
	already occurred, remedial action must be taken immediately.	
264.15(d)	The owner or operator must record inspections in an inspection log or summary. He must keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.	II.E.5.
264.16	Personnel Training	I.K.13. II.G.1.
264.16(a)	(1) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this part. The owner or operator must ensure that this program includes all the elements described in the document required under paragraph (d)(3) of this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.16(d)	The owner or operator must maintain the following documents and records at the facility – [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.G.2.
264.16(e)	Training records on current personnel must be kept until closure of the facility; training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.	II.G.2.
264.17	General requirements for ignitable, reactive, or incompatible wastes. (a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-	II.H.2. III.J.3. (b) – III.K.1. IV.L.1. IV.L.2. (c) – III.I.6.

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40 CFR Section	Requirement	Permit Condition(s)
	producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No Smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.18	Location standards. [The full text of this regulation is not included in this checklist for the sake of brevity.] (b) *Floodplains.* (1) A facility located in a 100-year floodplain must be designed, constructed, operated, and maintained to prevent washout or any hazardous waste by a 100-year flood, *unless* the owner or operator can demonstrate to the Regional Administrator's satisfaction that – . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(b) - II.I.
Subpart C	Preparedness and Prevention	
264.31	Design and operation of facility. Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.	II.A.1. IV.G.5.
264.32	Required equipment. All facilities must be equipped with the following, *unless* it can be demonstrated to the Regional Administrator that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below: (a) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel; (b) A device, such as a telephone (immediately available at the scene of operations) or a hand-	II.J.1.

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40 CFR Section	Requirement	Permit Condition(s)
	held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams; (c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and (d) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.	
264.33	Testing and maintenance of equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.	II.J.2.
264.34	Access to communications or alarm system. (a) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, *unless* the Regional Administrator has ruled that such a device is not required under § 264.32. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.J.3.
264.35	Required aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, *unless* it can be demonstrated to the Regional Administrator that aisle space is not needed for any of these purposes.	II.J.4. III.E.3.a.
264.37	Arrangements with local authorities. (a) The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations:	II.J.5.

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40 CFR Section	Requirement	Permit Condition(s)
	(1) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes; (2) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority; (3) Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and (4) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
Subpart D	Contingency Plan and Emergency Procedures	
264.50	The regulations in this subpart apply to owners and operators of all hazardous waste facilities, except as §264.1 provides otherwise.	II.K.1.
264.51	Purpose and implementation of contingency plan. (a) Each owner or operator must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water. [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.K.1.
264.52	Content of contingency plan. (a) The contingency plan must describe the actions facility personnel must take to comply with §§ 264.51 and 264.56 in response to fires, explosions, or any unplanned sudden or non-	II.K.1. (d) - II.K.4.

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40 CFR Section	Requirement	Permit Condition(s)
	sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see § 264.55), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.53	Copies of contingency plan. A copy of the contingency plan and all revisions to the plan must be: (a) Maintained at the facility; and (b) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services. [*Comment:* The contingency plan must be submitted to the Regional Administrator with Part B of the permit application under part 270, of this chapter and, after modification or approval, will become a condition of any permit issued.]	II.K.1. II.K.2.
264.54	Amendment of contingency plan. The contingency plan must be reviewed, and immediately amended, if necessary, whenever: (a) The facility permit is revised; (b) The plan fails in an emergency; (c) The facility changes—in its design, construction, operation, maintenance, or other circumstances—in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency; (d) The list of emergency coordinators changes; or (e) The list of emergency equipment changes.	II.K.1. II.K.3.
264.55	Emergency coordinator.	II.K.1.

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40 CFR Section	Requirement	Permit Condition(s)
	At all times, there must be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan. [*Comment:* The emergency coordinator's responsibilities are more fully spelled out in § 264.56. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of waste(s) handled by the facility, and type and complexity of the facility.]	II.K.4.
264.56	Emergency procedures. (a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately: (1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and (2) Notify appropriate State or local agencies with designated response roles if their help is needed. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.K.1.
Subpart E	Manifest System, Recordkeeping, and Reporting	
264.70	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (b) The revised Manifest form and procedures in 40 CFR 260.10, 261.7, 264.70, 264.71. 264.72, and 264.76, shall not apply until September 5, 2006. The Manifest form and procedures in 40 CFR 260.10, 261.7, 264.70, 264.71. 264.72, and 264.76, contained	II.L.1.

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40 CFR Section	Requirement	Permit Condition(s)
	in the 40 CFR, parts 260 to 265, edition revised as of July 1, 2004, shall be applicable until September 5, 2006.	
264.71	(a)(1) If a facility receives hazardous waste accompanied by a manifest, the owner, operator or his/her agent must sign and date the manifest as indicated in paragraph (a)(2) of this section to certify that the hazardous waste covered by the manifest was received, that the hazardous waste was received except as noted in the discrepancy space of the manifest, or that the hazardous waste was rejected as noted in the manifest discrepancy space. (2) If a facility receives a hazardous waste shipment accompanied by a manifest, the owner, operator or his agent must – . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (f) Legal equivalence to paper manifests. Electronic manifests that are obtained, completed, and transmitted in accordance with § 262.20(a)(3) of this chapter, and used in accordance with this section in lieu of the paper manifest form are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement in these regulations to obtain, complete, sign, provide, use, or retain a manifest. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.L.1. II.L.1.c.
264.72	Manifest discrepancies. (a) Manifest discrepancies are: (1) Significant differences (as defined by paragraph (b) of this section) between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity and type of hazardous waste a facility actually receives; (2) Rejected wastes, which may be a full or partial shipment of hazardous waste that the TSDF cannot accept; or (3) Container residues, which are residues that exceed the quantity limits for "empty" containers set forth in 40 CFR 261.7(b). . .	II.L. II.L.1.a.

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40 CFR Section	Requirement	Permit Condition(s)
	[The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.73	Operating record. (a) The owner or operator must keep a written operating record at his facility. (b) The following information must be recorded, as it becomes available, and maintained in the operating record for three years unless noted as follows – . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.B.2. II.M.1.i.a. II.M.1.i.b. IV.J.6. (b)(9) – I.E.9.b. II.A.6.
264.74	Availability, retention, and disposition of records. (a) All records, including plans, required under this part must be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of EPA who is duly designated by the Administrator. (b) The retention period for all records required under this part is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Administrator. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - I.I.2. (b) - I.E.9.b.
264.75	Biennial report. The owner or operator must prepare and submit a single copy of a biennial report to the Regional Administrator by March 1 of each even numbered year. The biennial report must be submitted on EPA form 8700-13B. The report must cover facility activities during the previous calendar year and must include – . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.3.
264.76	Unmanifested waste report. (a) If a facility accepts for treatment, storage, or disposal any hazardous waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper as described by § 263.20(e) of this chapter, and if the waste is not excluded from the manifest requirement by this chapter, then the owner or operator must prepare and submit a letter to the Regional Administrator within 15 days after	II.L. II.L.1.b.

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40 CFR Section	Requirement	Permit Condition(s)
	receiving the waste. The unmanifested waste report must contain the following information – [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.77	Additional reports. In addition to submitting the biennial reports and unmanifested waste reports described in §§ 264.75 and 264.76, the owner or operator must also report to the Regional Administrator: (a) Releases, fires, and explosions as specified in § 264.56(j); (b) Facility closures specified in § 264.115; and (c) As otherwise required by subparts F, K through N, AA, BB, and CC of this part.	II.M.2.
Subpart F	Releases from Solid Waste Management Units	
264.90	Applicability. (a)(1) Except as provided in paragraph (b) of this section, the regulations in this subpart apply to owners or operators of facilities that treat, store or dispose of hazardous waste. The owner or operator must satisfy the requirements identified in paragraph (a)(2) of this section for all wastes (or constituents thereof) contained in solid waste management units at the facility, regardless of the time at which waste was placed in such units. (2) All solid waste management units must comply with the requirements in § 264.101. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) Regulations in this subpart may apply to miscellaneous units when necessary to comply with §§ 264.601 through 264.603. [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - VI.A.1.
264.100	Corrective action program. An owner or operator required to establish a corrective action program under this subpart must, at a minimum, discharge the following responsibilities: . . .	(e)(2) - VI.A.4

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40 CFR Section	Requirement	Permit Condition(s)
	[The full text of this regulation is not included in this checklist for the sake of brevity.] (e) In addition to the other requirements of this section, the owner or operator must conduct a corrective action program to remove or treat in place any hazardous constituents under §264.93 that exceed concentration limits under §264.94 in groundwater: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (2) Beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the Regional Administrator that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.101	Corrective action for solid waste management units. (a) The owner or operator of a facility seeking a permit for the treatment, storage or disposal of hazardous waste must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.A.1. VI.A.2.
Subpart G	Closure and Post Closure	II.N.1.a. II.N.1.b. II.N.2.
264.110	Applicability.	

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40 CFR Section	Requirement	Permit Condition(s)
	Except as § 264.1 provides otherwise: (a) Sections 264.111 through 264.115 (which concern closure) apply to the owners and operators of all hazardous waste management facilities; and . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.111	Closure performance standard. The owner or operator must close the facility in a manner that: (a) Minimizes the need for further maintenance; and (b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and (c) Complies with the closure requirements of this part, including, but not limited to, the requirements of §§ 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351, 264.601 through 264.603, and 264.1102.	III.B.4.
264.112	Closure plan; amendment of plan. (a) *Written plan.* (1) The owner or operator of a hazardous waste management facility must have a written closure plan. In addition, certain surface impoundments and waste piles . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (c) *Amendment of plan.* The owner or operator must submit a written notification of or request for a permit modification to authorize a change in operating plans, facility design, or the approved closure plan in accordance with the applicable procedures in parts 124 and 270. The written notification or request must include a copy of the amended closure plan for review or approval by the Regional Administrator. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.N.3.a. (c)(2) - II.N.3.b. (d) - II.N.4. V.H.3.

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	(d) *Notification of partial closure and final closure.* (1) . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.113	Closure; time allowed for closure. (a) Within 90 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator complies with all applicable requirements in paragraphs (d) and (e) of this section, at a hazardous waste management unit or facility, the owner or operator must treat, remove from the unit or facility, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan. The Regional Administrator may approve a longer period if the owner or operator . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.N.5.
264.114	Disposal or decontamination of equipment, structures and soils. During the partial and final closure periods, all contaminated equipment, structures and soils must be properly disposed of or decontaminated unless otherwise specified in §§ 264.197, 264.228, 264.258, 264.280 or § 264.310. By removing any hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and must handle that waste in accordance with all applicable requirements of part 262 of this chapter.	II.N.6.
264.115	Certification of closure. Within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within 60 days of the completion of final closure, the owner or operator must submit to the Regional Administrator, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by a qualified Professional Engineer. Documentation supporting the Professional Engineer's certification must be	II.N.7.

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	furnished to the Regional Administrator upon request until he releases the owner or operator from the financial assurance requirements for closure under §264.143(i).	
264.117	Post-closure care and use of property. (a)(1) Post-closure care for each hazardous waste management unit subject to the requirements of §§ 264.117 through 264.120 must begin after completion of closure of the unit and continue for 30 years after that date and must consist of at least the following:. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.O.
264.118	Post-closure plan; amendment of plan. (a) *Written Plan.* The owner or operator of a hazardous waste disposal unit must have a written post-closure plan . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.O.
264.119	Post-closure notices. (a) No later than 60 days after certification of closure of each hazardous waste disposal unit. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.O.
264.120	Certification of completion of post-closure care. No later than 60 days after completion of the established post-closure care period for each hazardous waste disposal unit . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.O.
Subpart H	Financial Requirements	
264.142	Cost estimate for closure. (a) The owner or operator must have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (b) During the active life of the facility, the owner or operator must adjust the closure cost	II.P.1. II.P.5. (b) - II.P.2.a. II.P.2.b. (c) - II.P.3. (d) - II.P.4.

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	estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with § 264.143. For owners and operators using the financial test or corporate guarantee, the closure cost estimate must be updated for inflation within 30 days after the close of the firm's fiscal year and before submission of updated information to the Regional Administrator as specified in § 264.143(f)(3). The adjustment may be made by . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (c) During the active life of the facility, the owner or operator must revise the closure cost estimate no later than 30 days after the Regional Administrator has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate must be adjusted for inflation as specified in § 264.142(b). (d) The owner or operator must keep the following at the facility during the operating life of the facility: The latest closure cost estimate prepared in accordance with § 264.142 (a) and (c) and, when this estimate has been adjusted in accordance with § 264.142(b), the latest adjusted closure cost estimate.	
264.143	Financial assurance for closure. An owner or operator of each facility must establish financial assurance for closure of the facility. He must choose from the options as specified in paragraphs (a) through (f) of this section. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.P.5. II.Q.
264.144	Cost estimate for post-closure care. (a) The owner or operator of a disposal surface impoundment, disposal miscellaneous unit, land treatment unit, or landfill unit, or of a surface impoundment or waste pile required under §§264.228 and 264.258 to prepare a contingent closure and post-closure plan, must	II.P.1.

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	have a detailed written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure regulations in §§264.117 through 264.120, 264.228, 264.258, 264.280, 264.310, and 264.603. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.147	Liability requirements. (a) *Coverage for sudden accidental occurrences.* An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - II.R.
264.148	Incapacity of owners or operators, guarantors, or financial institutions. (a) An owner or operator must notify the Regional Administrator by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.S.
264.151	Wording of the instruments. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.Q.
Subpart I	Use and Management of Containers	III.B.3.
264.170	Applicability. The regulations in this subpart apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as § 264.1 provides otherwise. [*Comment:* Under § 261.7 and § 261.33(c), if a hazardous waste is emptied from a container the residue remaining in the container is not	III.B.1.

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	considered a hazardous waste if the container is "empty" as defined in § 261.7. In that event, management of the container is exempt from the requirements of this subpart.]	
264.171	Condition of containers. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the requirements of this part.	II.E.4. III.C. III.F.2.d. III.H.1. IV.C.1.
264.172	Compatibility of waste with containers. The owner or operator must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.	III.D.1. III.D.2. III.D.4.
264.173	Management of containers. (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak. [*Comment:* Reuse of containers in transportation is governed by U.S. Department of Transportation regulations including those set forth in 49 CFR 173.28.]	III.E.3.c. (a) - III.E.1. (b) - III.E.2. III.E.3.b.
264.174	Inspections. At least weekly, the owner or operator must inspect areas where containers are stored, except for Performance Track member facilities, . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	III.H.3.
264.175	Containment. (a) Container storage areas must have a containment system that is designed and operated in accordance with paragraph (b) of this section, except as otherwise provided by paragraph (c) of this section. (b) A containment system must be designed and operated as follows: . . .	III.I.5.a. III.K.4. (b) III.F.1. III.F.2.c. (b)(3) - III.B.2. (b)(5) - III.F.2.a.

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	[The full text of this regulation is not included in this checklist for the sake of brevity.]	(c) - III.F.1. III.I.5.b.
264.176	Special requirements for ignitable or reactive waste. Containers holding ignitable or reactive waste must be located at least 15 meters (50 feet) from the facility's property line. [*Comment:* See § 264.17(a) for additional requirements.]	III.D.4. III.I.3. III.J.1. III.J.2.
264.177	Special requirements for incompatible wastes. (a) Incompatible wastes, or incompatible wastes and materials (see appendix V for examples), must not be placed in the same container, unless § 264.17(b) is complied with. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	III.D.4. III.I.4. (a) – III.J.2. III.K.1. (c) – III.K.3.
264.178	Closure. At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. [*Comment:* At closure, as throughout the operating period, unless the owner or operator can demonstrate in accordance with § 261.3(d) of this chapter that the solid waste removed from the containment system is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of parts 262 through 266 of this chapter].	III.B.4. III.L.1. III.L.2.
264.179	Air emission standards. The owner or operator shall manage all hazardous waste placed in a container in accordance with the applicable requirements of subparts AA, BB, and CC of this part.	III.G.1.
Subpart J	Tank Systems	IV.B.3.
264.191	Assessment of existing tank system's integrity. (a) For each existing tank system that does not have secondary containment meeting the requirements of §264.193, the owner or	I.K.8.a. I.K.8.b. IV.A.1. IV.J.1.

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	operator must determine that the tank system is not leaking or is unfit for use. Except as provided in paragraph (c) of this section, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by a qualified Professional Engineer, in accordance with §270.11(d) of this chapter, that attests to the tank system's integrity by January 12, 1988. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.192	Design and installation of new tank systems or components. (a) Owners or operators of new tank systems or components must obtain and submit to the Regional Administrator, at time of submittal of part B information, a written assessment, reviewed and certified by a qualified Professional Engineer, in accordance with § 270.11(d) of this chapter, attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment must show . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	IV.A.1. IV.B.2. IV.B.4.a. IV.B.4.b. (a) – IV.B.4.
264.193	Containment and detection of releases. (a) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided (except as provided in paragraphs (f) and (g) of this section): . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.K.7. IV.F.1. IV.F.6.a. (b)(1) – IV.F.3. (e) - IV.F.4. (e)(1) - IV.F.7. (e)(1)(i), (ii), (iii) and (iv) - IV.F.2. (e)(1)(iii) – IV.F.3. (e)(3) - IV.F.5. (i) - I.K.8.a. I.K.8.b. IV.F.6.b.i. IV.H.2.d.

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40 CFR Section	Requirement	Permit Condition(s)
		(i)(4) – IV.J.5. (i)(5) – IV.H.10.
264.194	General operating requirements. (a) Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail. (b) The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - IV.D.1. (b) - IV.E.1. IV.E.2.
264.195	Inspections. (a) The owner or operator must develop and follow a schedule and procedure for inspecting overfill controls. (b) The owner or operator must inspect at least once each operating day data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	IV.H.3. (b) - IV.H.4. (c)(1) - IV.H.2.a. (c)(2) - IV.H.2.b. (f) – IV.F.6.b.ii. (f)(1)-(4) – IV.H.2.c. (h) - IV.J.6.
264.196	Response to leaks or spills and disposition of leaking or unfit-for-use tank systems. A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the owner or operator must satisfy the following requirements: (a) *Cessation of use; prevent flow or addition of wastes.* . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - IV.I.1.a. (b) - IV.I.1.b. (c) - IV.I.1.c.ii. (d)(1) - IV.J.2. (d)(2) – IV.J.2. (d)(3) – IV.J.3.e. (e)(2) - IV.I.1.d.i. (e)(3) – IV.I.1.d.ii.

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		(e)(4) – IV.I.1.d.iii. (f) – IV.I.1.e. IV.J.4.
264.197	Closure and post-closure care. (a) At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless § 261.3(d) of this chapter applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in subparts G and H of this part. (b) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph (a) of this section, then . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - IV.M.1. (b) - IV.M.2. (c) – I.K.9. IV.F.6.b.iii. IV.M.3. (c)(3) – II.P.1. (c)(5) – II.P.1.
264.198	Special requirements for ignitable or reactive wastes. (a) Ignitable or reactive waste must not be placed in tank systems, unless: (1) The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a) - IV.K.1.iii. (a)(1)(i) & (ii) – IV.K.1.i. (b) - IV.K.2.
264.199	Special requirements for incompatible wastes. (a) Incompatible wastes, or incompatible wastes and materials, must not be placed in the same tank system, unless § 264.17(b) is complied with. (b) Hazardous waste must not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless § 264.17(b) is complied with.	(a) - IV.L.1. (b) - IV.L.2.
264.228	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (c) . . .	(c)(2) – II.P.1.

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40 CFR Section	Requirement	Permit Condition(s)
	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (2) The cost estimates calculated under §§264.142 and 264.144 for closure and post-closure care of an impoundment subject to this paragraph must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under paragraph (a)(1) of this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.258	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (c). . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) The cost estimates calculated under §§264.142 and 264.144 for closure and post-closure care of a pile subject to this paragraph must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under paragraph (a) of this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.P.1.
Subpart O	Incinerators	V.A.3.
264.341	Waste analysis. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (b) Throughout normal operation the owner or operator must conduct sufficient waste analysis to verify that waste feed to the incinerator is within the physical and chemical composition limits specified in his permit (under § 264.345(b)).	(b) - V.C.1.iii.

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40 CFR Section	Requirement	Permit Condition(s)
264.344	Hazardous waste incinerator permits. (a) The owner or operator of a hazardous waste incinerator may burn only wastes specified in his permit and only under operating conditions specified for those wastes under §264.345, except: (1) In approved trial burns under §270.62 of this chapter . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(a)(1) – I.K.1.b.
264.345	Operating requirements. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) Fugitive emissions from the combustion zone must be controlled by: (1) Keeping the combustion zone totally sealed against fugitive emissions; or (2) Maintaining a combustion zone pressure lower than atmospheric pressure; or (3) An alternate means of control demonstrated (with part B of the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(d) – V.E.1.
264.347	Monitoring and inspections. (a) The owner or operator must conduct, as a minimum, the following monitoring while incinerating hazardous waste: (1) Combustion temperature, waste feed rate, and the indicator of combustion gas velocity specified in the facility permit must be monitored on a continuous basis. (2) CO must be monitored on a continuous basis at a point in the incinerator downstream of the combustion zone and prior to release to the atmosphere. (3) Upon request by the Regional Administrator, sampling and analysis of the waste and exhaust emissions must be	(a)(3) – V.I. (b) – V.F.2. (c) – V.C.5.ix. (d) – V.C.5.ix. V.G.1

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40 CFR Section	Requirement	Permit Condition(s)
	conducted to verify that the operating requirements established in the permit achieve the performance standards of §264.343. (b) The incinerator and associated equipment (pumps, valves, conveyors, pipes, etc.) must be subjected to thorough visual inspection, at least daily, for leaks, spills, fugitive emissions, and signs of tampering. (c) The emergency waste feed cutoff system and associated alarms must be tested at least weekly to verify operability, unless the applicant demonstrates to the Regional Administrator that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, operational testing must be conducted at least monthly. (d) This monitoring and inspection data must be recorded and the records must be placed in the operating record required by § 264.73 of this part and maintained in the operating record for five years.	
264.351	Closure. At closure the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the incinerator site. . . [The comment accompanying this regulation is not included in this checklist for the sake of brevity.]	V.H.1.
Subpart X	Miscellaneous Units	
264.600	Applicability. The requirements in this subpart apply to owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units, except as § 264.1 provide[s] otherwise.	V.A.1. V.A.2. V.A.3.
264.601	Environmental performance standards. A miscellaneous unit must be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment. Permits for miscellaneous units are to contain such terms and provisions as necessary to protect human health and the environment, including, but not limited to, as	V.A.1. V.A.2. V.A.3.

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	appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit. Permit terms and provisions must include those requirements of subparts I through O and subparts AA through CC of this part, part 270, part 63 subpart EEE, and part 146 of this chapter that are appropriate for the miscellaneous unit being permitted. Protection of human health and the environment includes, but is not limited to: (a) Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in the ground water or subsurface environment, considering: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (b) Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in surface water, or wetlands or on the soil surface considering: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) Prevention of any release that may have adverse effects on human health or the environment due to migration of waste constituents in the air, considering: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.602	Monitoring, analysis, inspection, response, reporting, and corrective action. Monitoring, testing, analytical data, inspections, response, and reporting procedures and frequencies must ensure compliance with §§ 264.601, 264.15, 264.33, 264.75, 264.76, 264.77, and 264.101 as well as meet any additional requirements needed to protect human health and the environment as specified in the permit.	V.A.1. V.A.2. V.A.3.
264.603	Post-closure care.	V.A.1. V.A.2.

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	A miscellaneous unit that is a disposal unit must be maintained in a manner that complies with § 264.601 during the post-closure care period. In addition, if a treatment or storage unit has contaminated soils or ground water that cannot be completely removed or decontaminated during closure, then that unit must also meet the requirements of § 264.601 during post-closure care. The post-closure plan under § 264.118 must specify the procedures that will be used to satisfy this requirement.	V.A.3.
Subpart AA	Air Emissions Standards for Process Vents	
264.1031	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . Equipment means each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange or other connector, and any control devices or systems required by this subpart. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.4.
Subpart BB	Air Emissions Standards for Equipment Leaks.	I.K.10.a. II.H.4. IV.G.1. IV.G.2.b. IV.G.2.c. IV.G.3. Table IV-2.
264.1050	[The full text of this regulation is not included in this checklist for the sake of brevity.] (b) Except as provided in §264.1064(k), this subpart applies to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight that are managed in one of the following: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	III.G.6.
264.1060	Standards: Closed-vent systems and control devices. (a) Owners and operators of closed-vent systems and control devices subject to this subpart shall comply with the provisions of § 264.1033 of this part.	IV.J.8.

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40 CFR Section	Requirement	Permit Condition(s)
	. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.1063	Test methods and procedures. (a) Each owner or operator subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section. [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (d) In accordance with the waste analysis plan required by § 264.13(b), an owner or operator of a facility must determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds 10 percent by weight using the following: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (f) When an owner or operator and the Regional Administrator do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the procedures in paragraph (d)(1) or (d)(2) of this section can be used to resolve the dispute. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.C.8. (d) – I.K.10.b. I.K.10.c. III.G.6. (d)(1) – I.K.10.e. (d)(2) – I.K.10.e. (f) II.H.4.
264.1064	Recordkeeping requirements. (a)(1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (k) The following information shall be recorded in a log that is kept in the facility operating record for use in determining exemptions as provided in the applicability section of this subpart and other specific subparts: . . .	II.M.1.b. II.M.4. IV.J.8. (k) – III.G.6. (m) - I.K.10.d. IV.G.10. Table IV-2.

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40 CFR Section	Requirement	Permit Condition(s)
	[The full text of this regulation is not included in this checklist for the sake of brevity.] (m) The owner or operator of a facility with equipment that is subject to this subpart and to regulations at 40 CFR part 60, part 61, or part 63 may elect to determine compliance with this subpart either by documentation pursuant to § 264.1064 of this subpart, or by documentation of compliance with the regulations at 40 CFR part 60, part 61, or part 63 pursuant to the relevant provisions of the regulations at 40 part 60, part 61, or part 63. The documentation of compliance under regulations at 40 CFR part 60, part 61, or part 63 shall be kept with or made readily available with the facility operating record.	
264.1065	Reporting requirements. (a) A semiannual report shall be submitted by owners and operators subject to the requirements of this subpart to the Regional Administrator by dates specified by the Regional Administrator. The report shall include the following information: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.4.
Subpart CC	Air Emissions Standards for Tanks, Surface Impoundments and Containers	III.G.1. IV.G.8. Table IV-2.
264.1080	[The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (b) The requirements of this subpart do not apply to the following waste management units at the facility: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (7) A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63. For the purpose of complying with this paragraph, a tank for which the air emission control	(b)(7) – IV.G.6.

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	includes an enclosure, as opposed to a cover, must be in compliance with the enclosure and control device requirements of §264.1084(i), except as provided in §264.1082(c)(5). . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.1082	Standards: General. [The full text of this regulation is not included in this checklist for the sake of brevity.] (b) The owner or operator shall control air pollutant emissions from each hazardous waste management unit in accordance with standards specified in §§ 264.1084 through 264.1087 of this subpart, as applicable to the hazardous waste management unit, except as provided for in paragraph (c) of this section. (c) A tank, surface impoundment, or container is exempt from standards specified in § 264.1084 through § 264.1087 of this subpart, as applicable, provided that the waste management unit is one of the following: (1) A tank, surface impoundment, or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than 500 parts per million by weight (ppmw). . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) A tank, surface impoundment, or container for which the organic content of all the hazardous waste entering the waste management unit has been reduced by an organic destruction or removal process that achieves any one of the following conditions: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) The Regional Administrator may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface impoundment, or container exempted from	III.G.3. IV.G.6. Table IV-2. (c) – III.G.2. IV.G.8. (c)(1) – IV.G.6. IV.G.8.a.iv. Table IV-2. V.E.2. (c)(2) – III.G.4. (c)(2)(i)-(vi) – IV.G.7. (d) – II.C.9.

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40 CFR Section	Requirement	Permit Condition(s)
	using air emission controls under the provisions of this section as follows: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.1083	Waste determination procedures. (a) Waste determination procedure to determine average volatile organic (VO) concentration of a hazardous waste at the point of waste origination. [The full text of this regulation is not included in this checklist for the sake of brevity.] (b) Waste determination procedures for treated hazardous waste. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	III.G.3. III.G.4. IV.G.6. (a) - III.G.2. IV.G.6. (b) - IV.G.7.
264.1084	Standards: Tanks. (a) The provisions of this section apply to the control of air pollutant emissions from tanks for which §264.1082(b) of this subpart references the use of this section for such air emission control. (b) The owner or operator shall control air pollutant emissions from each tank subject to this section in accordance with the following requirements as applicable: (1) For a tank that manages hazardous waste that meets all of the conditions specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section, the owner or operator shall . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (2) For a tank that manages hazardous waste that does not meet all of the conditions specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section, the owner or operator shall . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) Owners and operators controlling air pollutant emissions from a tank using Tank Level 1 controls shall meet the requirements	IV.H.6. Table IV-2. (b)(1)(i) – (iii) – IV.G.8.a.i. IV.G.8.a.ii. (b)(2) – IV.G.8.a.ii. (c) – IV.G.8.a.i. (d) - IV.G.8.a.i. IV.G.8.a.ii. (g) - IV.G.8.a.iii. (j) - IV.G.8.a.iv. (k) - IV.I.2.

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40 CFR Section	Requirement	Permit Condition(s)
	specified in paragraphs (c)(1) through (c)(4) of this section: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) Owners and operators controlling air pollutant emissions from a tank using Tank Level 2 controls shall use one of the following tanks: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (g) The owner or operator who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in paragraphs (g)(1) through (g)(3) of this section. [The full text of this regulation is not included in this checklist for the sake of brevity.] (j) The owner or operator shall transfer hazardous waste to a tank subject to this section in accordance with the following requirements: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (k) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of paragraph (c)(4), (e)(3), (f)(3), or (g)(3) of this section as follows: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
264.1086	Standards: Containers. (a) The provisions of this section apply to the control of air pollutant emissions from containers for which §264.1082(b) of this subpart references the use of this section for such air emission control. (b) *General requirements.* (1) The owner or operator shall control air pollutant emissions from each container subject to this section in accordance with the following requirements, as	III.I.1. (b) - III.G.5.b. III.G.5.c. III.G.5.d. (c) - III.G.5.b. (c)(4) – III.H.5.a.iii.

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	applicable to the container, except when the special provisions for waste stabilization processes specified in paragraph (b)(2) of this section apply to the container. . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) *Container Level 1 standards.* (1) A container using Container Level 1 controls is one of the following: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) *Container Level 2 standards.* (1) A container using Container Level 2 controls is one of the following: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (e) *Container Level 3 standards.* (1) A container using Container Level 3 controls is one of the following: . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c)(4)(iii) – III.H.5.a.ii. (d) - III.G.5.c. (d)(4) – III.H.5.b. (e) - III.G.5.d. (e)(4) – III.H.5.c.
264.1087	Standards: Closed-vent systems and control devices. (a) This section applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of this subpart. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	IV.G.1. Table IV-2.
264.1088	Inspection and monitoring requirements. (a) The owner or operator shall inspect and monitor air emission control equipment used to comply with this subpart in accordance with the applicable requirements specified in § 264.1084 through § 264.1087 of this subpart. (b) The owner or operator shall develop and implement a written plan and schedule to perform the inspections and monitoring required by paragraph (a) of this section. The owner or operator shall incorporate this plan	III.H.4. IV.G.1.

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40 CFR Section	Requirement	Permit Condition(s)
	and schedule into the facility inspection plan required under 40 CFR 264.15.	
264.1089	Recordkeeping requirements. (a) Each owner or operator of a facility subject to requirements of this subpart shall record and maintain the information specified in paragraphs (b) through (j) of this section, as applicable to the facility. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.2. III.I.1. IV.G.1. (f)(1) – IV.G.4. Table IV-2. (j) – IV.G.10. Table IV-2.
264.1090	Reporting requirements. (a) Each owner or operator managing hazardous waste in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of § 264.1082(c) of this subpart shall report to the Regional Administrator each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions specified in § 264.1082 (c)(1) or (c)(2) of this subpart, as applicable. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.2. III.I.2. IV.G.1. (a) – IV.G.4. Table IV-2.

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40 CFR Section	Requirement	Permit Condition(s)
Part 270		VI.G.4.
Subpart A		
270.1	Purpose and scope of these regulations. (a) Coverage. (1) These permit regulations establish provisions for the Hazardous Waste Permit Program under Subtitle C of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (RCRA), (Pub. L. 94-580, as amended by Pub. L. 95-609 and by Pub. L. 96-482; 42 U.S.C. 6091 et seq.). They apply to EPA and to approved States to the extent provided in part 271. . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) *Scope of the RCRA permit requirement.* RCRA requires a permit for the "treatment," "storage," and "disposal" of any "hazardous waste" as identified or listed in 40 CFR part 261. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c) - I.A.1 II.A.2. II.A.5.
270.3	Considerations under Federal law. The following is a list of Federal laws that may apply to the issuance of permits under these rules. When any of these laws is applicable, its procedures must be followed. When the applicable law requires consideration or adoption of particular permit conditions or requires the denial of a permit, those requirements also must be followed. (a) *The Wild and Scenic Rivers Act.* 16 U.S.C. 1273 *et seq.* Section 7 of the Act prohibits the Regional Administrator from assisting by license or otherwise the construction of any water resources project that would have a direct, adverse effect on the values for which a national wild and scenic river was established. (b) *The National Historic Preservation Act of 1966.* 16 U.S.C. 470 *et seq.* Section 106 of the Act and implementing regulations (36 CFR part 800) require the Regional Administrator, before issuing a license, to adopt measures when feasible to mitigate potential adverse effects of the licensed activity and properties listed or eligible for listing in the National Register of Historic Places. The Act's requirements are to be implemented in cooperation with State Historic Preservation Officers and upon notice to, and	(a) EPA's analysis of the Wild and Scenic Rivers Act is described in Section 5.4.3. of this Statement of Basis. (b) EPA's National Historic Preservation Act (NHPA) Determination is described in Section 5.4.1. of this Statement of Basis, and included at Appendix C, hereto.

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	when appropriate, in consultation with the Advisory Council on Historic Preservation. (c) *The Endangered Species Act.* 16 U.S.C. 1531 *et seq.* Section 7 of the Act and implementing regulations (50 CFR part 402) require the Regional Administrator to ensure, in consultation with the Secretary of the Interior or Commerce, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat. (d) *The Coastal Zone Management Act.* 16 U.S.C. 1451 *et seq.* Section 307(c) of the Act and implementing regulations (15 CFR part 930) prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State Coastal Zone Management program, and the State or its designated agency concurs with the certification (or the Secretary of Commerce overrides the State's nonconcurrence). (e) *The Fish and Wildlife Coordination Act.* 16 U.S.C. 661 *et seq.* requires that the Regional Administrator, before issuing a permit proposing or authorizing the impoundment (with certain exemptions), diversion, or other control or modification of any body of water, consult with the appropriate State agency exercising jurisdiction over wildlife resources to conserve those resources. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(c) EPA's Endangered Species Act (ESA) Determination is described in Section 5.4.2. of this Statement of Basis, and included at Appendix D. (d) EPA's analysis of the Coastal Zone Management Act is described in Section 5.4.4. of this Statement of Basis. (e) EPA's analysis of the Fish and Wildlife Coordination Act is described in Section 5.4.5. of this Statement of Basis.
270.4	Effect of a permit. (a)(1) Compliance with a RCRA permit during its term constitutes compliance, for purposes of enforcement, with subtitle C of RCRA except for those requirements *not included* in the permit which: (i) Become effective by statute; (ii) Are promulgated under part 268 of this chapter restricting the placement of hazardous wastes in or on the land; (iii) . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . or (iv) Are promulgated under subparts AA, BB, or CC of part 265 of this chapter limiting air emissions. . .	I.A.1. (a)(1) – I.A.8. (a)(1)(i)-(iv) – I.A.4. II.A.2. II.A.5.

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40 CFR Section	Requirement	Permit Condition(s)
	[The full text of this regulation is not included in this checklist for the sake of brevity.] (2) A permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in §§ 270.41 and 270.43, or the permit may be modified upon the request of the permittee as set forth in § 270.42. (b) The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege. (c) The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.	(a)(2) - I.B.1. (b) - I.A.2. (c) - I.A.3.
270.10	General application requirements. (a) Applying for a permit. Below is information on how to obtain a permit and where to find requirements for specific permits . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (h) Reapplying for a permit. If you have an effective permit and you want to reapply for a new one, you have two options: (1) You may submit a new application at least 180 days before the expiration date of the effective permit, unless the Director allows a later date; or . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.E.3. (h) - I.E.2.
270.10(i)	*Recordkeeping.* Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under §§ 270.10(d), 270.13, 270.14 through 270.21 for a period of at least 3 years from the date the application is signed. [The full text of this regulation is not included in this checklist for the sake of brevity.]	II.M.5. Date application signed: April 8, 2016.
270.11	**Signatories to permit applications and reports.** (a) *Applications* . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.F. (d) – I.K.8.a. I.K.8.b. IV.I.1.e.

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40 CFR Section	Requirement	Permit Condition(s)
	(b) Reports. All reports required by permits and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d)(1) Any person signing a document under paragraph (a) or (b) of this section must make the following certification . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
270.12	Confidentiality of Information [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.H.
270.13	Contents of part A of the permit application. Part A of the RCRA application shall include the following information. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.E.3. VI.L.1.
270.14	Contents of part B: General requirements. (a) Part B of the permit application consists of the general information requirements of this section, and the specific information requirements in §§0.14 through 270.29 applicable to the facility. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.E.3. VI.L.1.
270.15	Specific part B information requirements for containers. Except as otherwise provided in §264.170, owners or operators of facilities that store containers of hazardous waste must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.16	Specific part B information requirements for tank systems. Except as otherwise provided in §264.190, owners and operators of facilities that use tanks to store or treat	VI.L.1.

40 CFR Section	Requirement	Permit Condition(s)
	hazardous waste must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
270.17	Specific part B information requirements for surface impoundments. Except as otherwise provided in §264.1, owners and operators of facilities that store, treat or dispose of hazardous waste in surface impoundments must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.18	Specific part B information requirements for waste piles. Except as otherwise provided in §264.1, owners and operators of facilities that store or treat hazardous waste in waste piles must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.19	Specific part B information requirements for incinerators. Except as §264.340 of this Chapter and §270.19(e) provide otherwise, owners and operators of facilities that incinerate hazardous waste must fulfill the requirements of paragraphs (a), (b), or (c) of this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.20	Specific part B information requirements for land treatment facilities. Except as otherwise provided in §264.1, owners and operators of facilities that use land treatment to dispose of hazardous waste must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.21	Specific part B information requirements for landfills. Except as otherwise provided in §264.1, owners and operators of facilities that dispose of hazardous waste in	VI.L.1.

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40 CFR Section	Requirement	Permit Condition(s)
	landfills must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
270.22	Specific part B information requirements for boilers and industrial furnaces burning hazardous waste. When an owner or operator of a cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace becomes subject to RCRA permit requirements after October 12, 2005, or when an owner or operator of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in part 63, subpart EEE, of this chapter (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance under §§63.1207(j) and 63.1210(d) of this chapter documenting compliance with all applicable requirements of part 63, subpart EEE, of this chapter), the requirements of this section do not apply. The requirements of this section do apply, however, if the Director determines certain provisions are necessary to ensure compliance with §§266.102(e)(1) and 266.102(e)(2)(iii) of this chapter if you elect to comply with §270.235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events; or if you are an area source and elect to comply with the §§266.105, 266.106, and 266.107 standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and non-mercury metals; or the Director determines certain provisions apply, on a case-by-case basis, for purposes of information collection in accordance with §§270.10(k), 270.10(l), 270.32(b)(2), and 270.32(b)(3) . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.
270.23	Specific part B information requirements for miscellaneous units. Except as otherwise provided in §264.600, owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units must provide the following additional information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	V.A.1. V.A.2. V.A.3. V.C.1.iii.

CHECKLIST FOR CARBON REGENERATION FACILITY, PARKER, AZ PERMIT

40 CFR Section	Requirement	Permit Condition(s)
Subpart C	**PERMIT CONDITIONS**	
270.30(a)	*Duty to comply.* The permittee must comply with all conditions of this permit, except that the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit. (See § 270.61). Any permit noncompliance, except under the terms of an emergency permit, constitutes a violation of the appropriate Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.	I.E.1.
270.30(b)	*Duty to reapply.* If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.	I.B.2. I.E.2.
270.30(c)	*Need to halt or reduce activity not a defense.* It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.	I.E.4.
270.30(d)	In the event of noncompliance with the permit, the permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.	I.E.5.
270.30(e)	*Proper operation and maintenance.* The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.	I.E.6.
270.30(f)	*Permit actions.* This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.	I.B.1.
270.30(g)	*Property rights.* The permit does not convey any property rights of any sort, or any exclusive privilege.	I.A.2.

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40 CFR Section	Requirement	Permit Condition(s)
270.30(h)	*Duty to provide information.* The permittee shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.	I.E.7.
270.30(i)	*Inspection and entry.* The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to: (1) Enter at reasonable times upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and (4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.	I.E.8.
270.30(j)	*Monitoring and records.* (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, the certification required by § 264.73(b)(9) of this chapter, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, certification, or application. This period may be extended by request of the Director at any time. The permittee shall maintain records from all ground-water monitoring wells and associated ground-water surface elevations, for the active life of the facility, and for disposal facilities for the post-closure care period as well. (3) Records for monitoring information shall include . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	(j)(1) I.E.9.a. (j)(2) I.E.9.b. (j)(3) I.E.9.c.

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40 CFR Section	Requirement	Permit Condition(s)
270.30(k)	*Signatory requirements.* All applications, reports, or information submitted to the Director shall be signed and certified (See § 270.11.)	I.F.
270.30(l)	*Reporting requirements* —(1) *Planned changes.* The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. (2) *Anticipated noncompliance.* The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. For a new facility, the permittee may not treat, store, or dispose of hazardous waste; and for a facility being modified, the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in § 270.42, until: (i) The permittee has submitted to the Director by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and (ii)(A) The Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or (B) Within 15 days of the date of submission of the letter in paragraph (l)(2)(i) of this section, the permittee has not received notice from the Director of his or her intent to inspect, prior inspection is waived and the permittee may commence treatment, storage, or disposal of hazardous waste. (3) *Transfers.* This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under RCRA. (See § 270.40) (4) *Monitoring reports.* Monitoring results shall be reported at the intervals specified elsewhere in this permit. (5) *Compliance schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. (6) *Twenty-four hour reporting.* (i) The permittee shall report any noncompliance which may endanger health or the environment orally within 24 hours from the time the permittee becomes aware of the circumstances, including:	(l)(1) I.E.10. (l)(2) I.E.11. (l)(3) I.E.12. (l)(5) I.E.14. (l)(6)(i) I.E.13.a. (l)(6)(ii) I.E.13.b. (l)(6)(iii) I.E.13.c. (l)(7) II.L.1., II.L.1.a. (l)(8) II.L.1., II.L.1.b. (l)(9) II.M.3. (l)(10) I.E.15. (l)(11) I.E.16.

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CHECKLIST FOR CARBON REGENERATION FACILITY, PARKER, AZ PERMIT

40 CFR Section	Requirement	Permit Condition(s)
	(A) Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies. (B) Any information of a release or discharge of hazardous waste or of a fire or explosion from the HWM facility, which could threaten the environment or human health outside the facility. (ii) The description of the occurrence and its cause shall include: (A) Name, address, and telephone number of the owner or operator; (B) Name, address, and telephone number of the facility; (C) Date, time, and type of incident; (D) Name and quantity of material(s) involved; (E) The extent of injuries, if any; (F) An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and (G) Estimated quantity and disposition of recovered material that resulted from the incident. (iii) A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Director may waive the five day written notice requirement in favor of a written report within fifteen days. (7) *Manifest discrepancy report:* If a significant discrepancy in a manifest is discovered, the permittee must attempt to reconcile the discrepancy. If not resolved within fifteen days, the permittee must submit a letter report, including a copy of the manifest, to the Director. (See 40 CFR 264.72.) (8) *Unmanifested waste report:* This report must be submitted to the Director within 15 days of receipt of unmanifested waste. (See 40 CFR 264.76.) (9) *Biennial report:* A biennial report must be submitted covering facility activities during odd numbered calendar years. (See 40 CFR 264.75.) (10) *Other noncompliance.* The permittee shall report all instances of noncompliance not reported under paragraphs (l)(4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (l)(6) of this section. (11) *Other information.* Where the permittee becomes aware that it failed to submit any relevant facts in a permit	

40 CFR Section	Requirement	Permit Condition(s)
	application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.	
270.30(m)	*Information repository.* The Director may require the permittee to establish and maintain an information repository at any time, based on the factors set forth in 40 CFR 124.33(b). The information repository will be governed by the provisions in 40 CFR 124.33(c) through (f).	I.J.1. I.J.2. I.J.3. I.K.12.
270.31	**Requirements for recording and reporting of monitoring results.** All permits shall specify: (a) Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate); (b) Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring; (c) Applicable reporting requirements based upon the impact of the regulated activity and as specified in parts 264, 266 and 267. Reporting shall be no less frequent than specified in the above regulations.	II.M See, also, Modules III through VI for more detail.
270.32	Establishing permit conditions. [The full text of this regulation is not included in this checklist for the sake of brevity.] . . . (c) For a State issued permit, an applicable requirement is a State statutory or regulatory requirement which takes effect prior to final administrative disposition of a permit. For a permit issued by EPA, an applicable requirement is a statutory or regulatory requirement (including any interim final regulation) which takes effect prior to the issuance of the permit. Section 124.14 (reopening of comment period) provides a means for reopening EPA permit proceedings at the discretion of the Director where new requirements become effective during the permitting process and are of sufficient magnitude to make additional proceedings desirable. For State and EPA administered programs, an applicable requirement is also any requirement which takes effect prior to the modification or revocation and reissuance of a permit, to the extent allowed in §270.41. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.A.8.

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CHECKLIST FOR CARBON REGENERATION FACILITY, PARKER, AZ PERMIT

40 CFR Section	Requirement	Permit Condition(s)
270.33(a)	The permit may, when appropriate, specify a schedule of compliance leading to compliance with the Act and regulations. [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.K.
Subpart D	**Changes to Permits**	
270.40	Transfer of permits. [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.E.12.
270.41	Modification or revocation and reissuance of permits [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.B.1. VI.A.4. VI.K. VI.L.3. VI.M.
270.42	Permit modification at the request of the permittee. (a) Class 1 modifications. (1) Except as provided in paragraph (a)(2) of this section, the permittee may put into effect Class 1 modifications listed in appendix I of this section under the following conditions . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (b) Class 2 modifications. (1) For Class 2 modifications, listed in appendix I of this section, the permittee must submit a modification request to the Director that . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (c) Class 3 modifications. (1) For Class 3 modifications listed in appendix I of this section, the permittee must submit a modification request to the Director that . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] (d) Other modifications. (1) In the case of modifications not explicitly listed in appendix I of this section, the permittee may submit a Class 3 modification request to the Agency, or he or she may request a determination by the Director that the modification should be reviewed and approved as a Class 1 or Class 2 modification. If the permittee requests that the	I.B.1. I.E.10. I.G.6.a. I.G.6.b. I.G.6.c. I.G.7.a. I.K.5.c. II.A.4. II.K.3.b. II.N.3.b II.N.3.c. II.N.5. IV.B.2. VI.E.2. VI.K. (c) – VI.L.1. (d) – I.G.7.b. Appendix I – I.G.7.a.

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40 CFR Section	Requirement	Permit Condition(s)
	modification be classified as a Class 1 or 2 modification, he or she must provide the Agency with the necessary information to support the requested classification. (2) The Director shall make the determination described in paragraph (d)(1) of this section as promptly as practicable. In determining the appropriate class for a specific modification, the Director shall consider the similarity of the modification to other modifications codified in appendix I and the following criteria . . . [The full text of this regulation is not included in this checklist for the sake of brevity.] Appendix I to §270.42—Classification of Permit Modification [The full text of this regulation is not included in this checklist for the sake of brevity.]	
270.43	Termination of permits. [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.B.1. VI.A.6.
Subpart E	**Expiration and Continuation of Permits**	
270.50	Duration of permits. (a) RCRA permits shall be effective for a fixed term not to exceed 10 years. (b) Except as provided in § 270.51, the term of a permit shall not be extended by modification beyond the maximum duration specified in this section. (c) The Director may issue any permit for a duration that is less than the full allowable term under this section. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.E.3.
270.51	Continuation of expiring permits. (a) *EPA permits.* When EPA is the permit-issuing authority, the conditions of an expired permit continue in force under 5 U.S.C. 558(c) until the effective date of a new permit (see § 124.15) if: (1) The permittee has submitted a timely application under § 270.14 and the applicable sections in §§ 270.15 through 270.29 which is a complete (under § 270.10(c)) application for a new permit; and (2) The Regional Administrator through no fault of the permittee, does not issue a new permit with an effective date	I.E.3.

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40 CFR Section	Requirement	Permit Condition(s)
	under § 124.15 on or before the expiration date of the previous permit (for example, when issuance is impracticable due to time or resource constraints). . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
Subpart F	**SPECIAL FORMS OF PERMITS**	
270.62	Hazardous waste incinerator permits. When an owner or operator of a hazardous waste incineration unit becomes subject to RCRA permit requirements after October 12, 2005, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in part 63, subpart EEE, of this chapter (i.e., by conducting a comprehensive performance test and submitting a Notification of Compliance under §§63.1207(j) and 63.1210(d) of this chapter documenting compliance with all applicable requirements of part 63, subpart EEE, of this chapter), the requirements of this section do not apply, except those provisions the Director determines are necessary to ensure compliance with §§264.345(a) and 264.345(c) of this chapter if you elect to comply with §270.235(a)(1)(i) to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the Director may apply the provisions of this section, on a case-by-case basis, for purposes of information collection in accordance with §§270.10(k), 270.10(l), 270.32(b)(2), and 270.32(b)(3). (a) For the purposes of determining operational readiness following completion of physical construction, the Director must establish permit conditions, including but not limited to allowable waste feeds and operating conditions, in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to bring the incinerator to a point of operational readiness to conduct a trial burn, not to exceed 720 hours operating time for treatment of hazardous waste. The Director may extend the duration of this operational period once, for up to 720 additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to §270.42 of this chapter. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	I.K.1.b. VI.L.1. (b)(2) – I.K.1.c.

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40 CFR Section	Requirement	Permit Condition(s)
	(b) For the purposes of determining feasibility of compliance with the performance standards of §264.343 of this chapter and of determining adequate operating conditions under §264.345 of this chapter, the Director must establish conditions in the permit for a new hazardous waste incinerator to be effective during the trial burn. (1) Applicants must propose a trial burn plan, prepared under paragraph (b)(2) of this section with a part B of the permit application. (2) The trial burn plan must include the following information . . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	
270.63	Permits for land treatment demonstrations using field test or laboratory analyses. (a) For the purpose of allowing an owner or operator to meet the treatment demonstration requirements of §264.272 of this chapter, the Director may issue a treatment demonstration permit. The permit must contain only those requirements necessary to meet the standards in §264.272(c). The permit may be issued either as a treatment or disposal permit covering only the field test or laboratory analyses, or as a two-phase facility permit covering the field tests, or laboratory analyses, and design, construction operation and maintenance of the land treatment unit. . . [The full text of this regulation is not included in this checklist for the sake of brevity.]	VI.L.1.

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Appendix C

National Historic Preservation Act Determination

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Final Report: Finding of No Historic Properties Affected
Siemens Industry Inc. Facility, Parker, AZ
National Historic Preservation Act Section 106 Review
May 25, 2012

1. Introduction

This report summarizes the findings made by the U.S. Environmental Protection Agency Region 9 ("EPA") in conducting a National Historic Preservation Act ("NHPA") Section 106 review of the Resource Conservation and Recovery Act ("RCRA") hazardous waste permitting action at the Siemens Industry, Inc. ("Siemens") facility located in Parker, Arizona. EPA considers this permitting process to be a federal undertaking under which the Section 106 review is mandated, pursuant to NHPA regulations at 36 C.F.R. § 800.16(y).

2. Background

Since 1992, Siemens has operated a carbon reactivation plant in Parker, Arizona on the Colorado River Indian Tribes ("CRIT") Reservation in La Paz County. At the facility, Siemens uses thermal treatment to regenerate spent carbon so that it may be reused. Annually, Siemens receives about 5,000 tons of spent carbon from 30 - 35 states from across the United States. Less than 15% of this material is considered hazardous waste under RCRA.

2.1 Description of Federal Action

EPA is responsible for regulating waste treatment facilities on tribal lands that handle RCRA-regulated hazardous wastes to ensure that facilities comply with federal regulations and, ultimately, that no unreasonable risks are posed to human health and the environment; one means to achieve these goals is through the permitting process.

Although the Siemens facility has not yet been issued an EPA permit, it is currently operating under 'interim status' conditions which allow facilities to legally operate until a permit decision has been reached on a permit application. The original RCRA Permit application was submitted to EPA in 1995 and, although a permit has not yet been issued, EPA has conducted several inspections of the facility since then. EPA is currently reviewing the facility's application in preparation for proposing a draft permit decision. The issuance of a permit would not bring about any major changes in the current facility operations and the waste streams received at the facility, nor would it involve any ground disturbance or new construction.

2.2 Facility Location

The Siemens facility is located at 2523 Mutahar Street, Parker, AZ 95344, in an undeveloped parcel of land just southeast of Parker. In geographic coordinates this is 34° 07' 55.25" N, and 114° 16' 19.86 W. For general reference, the following figures depict a map of the facility location (Figure 2-1), facility area photographs (Figure 2-2), and a facility photograph (Figure 2-3).

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Figure 2-1. *Facility Location*

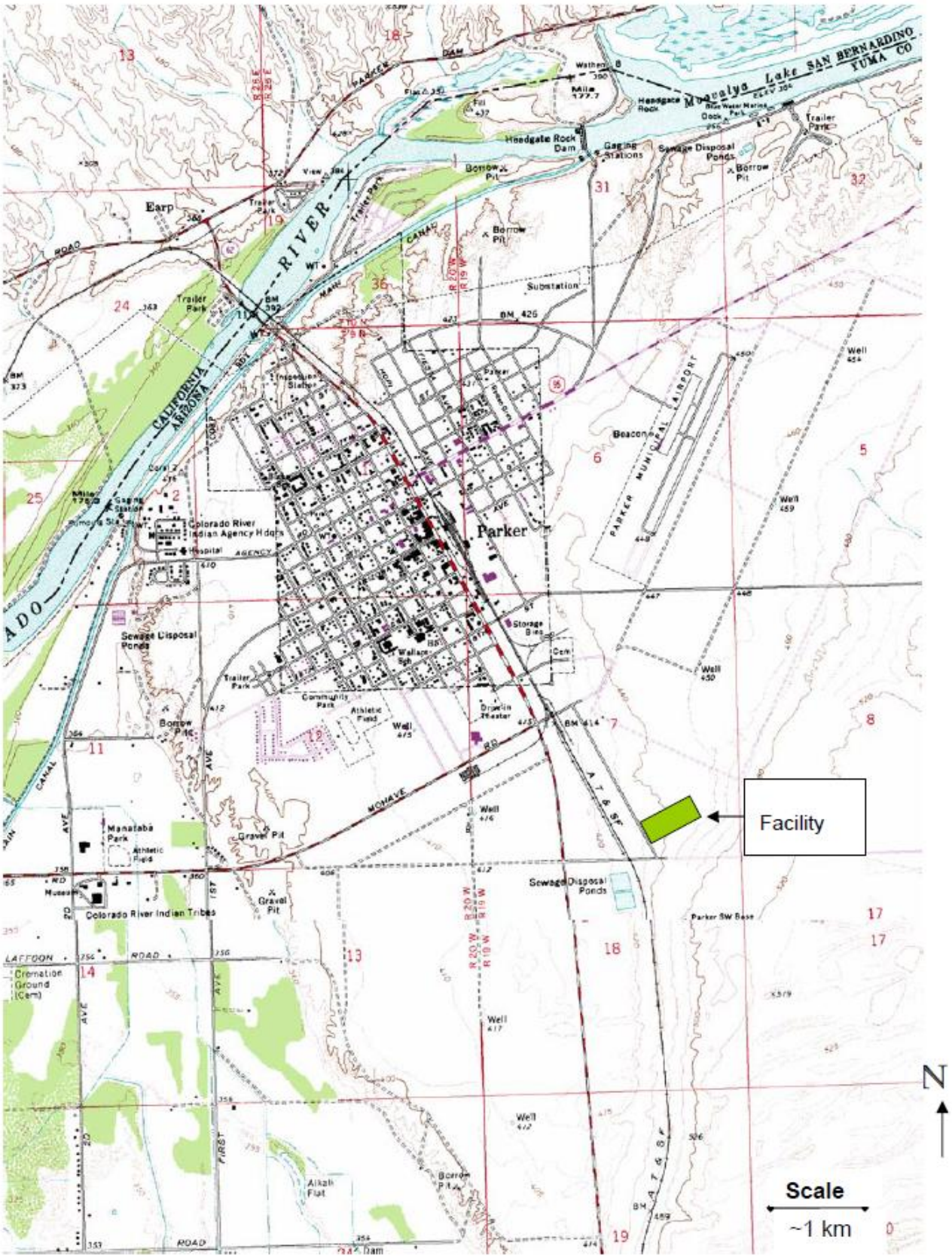

Figure 2-2. *Facility Area Photographs*



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Figure 2-3. *Photograph of Facility*



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2.3 Area of Potential Effects

As discussed in a February 28, 2012 EPA letter to the Arizona State Historic Preservation Office ("SHPO"), EPA has established a one-mile-radius circle around the facility as the Area of Potential Effects ("APE"). The APE is defined in 36 C.F.R. § 800.16(d) as:

> *"the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking."*

A recommendation for a one-mile-radius APE was submitted in February 2006 by former Colorado River Indian Tribes ("CRIT") Museum Director Dr. Michael Tsosie, who was designated as the NHPA point of contact for the Tribe to EPA. EPA designated the one-mile-radius Area of Potential Effect in a January 2007 Public Notice. This area is denoted in Figure 2-4 below by the dotted red circle around the facility.

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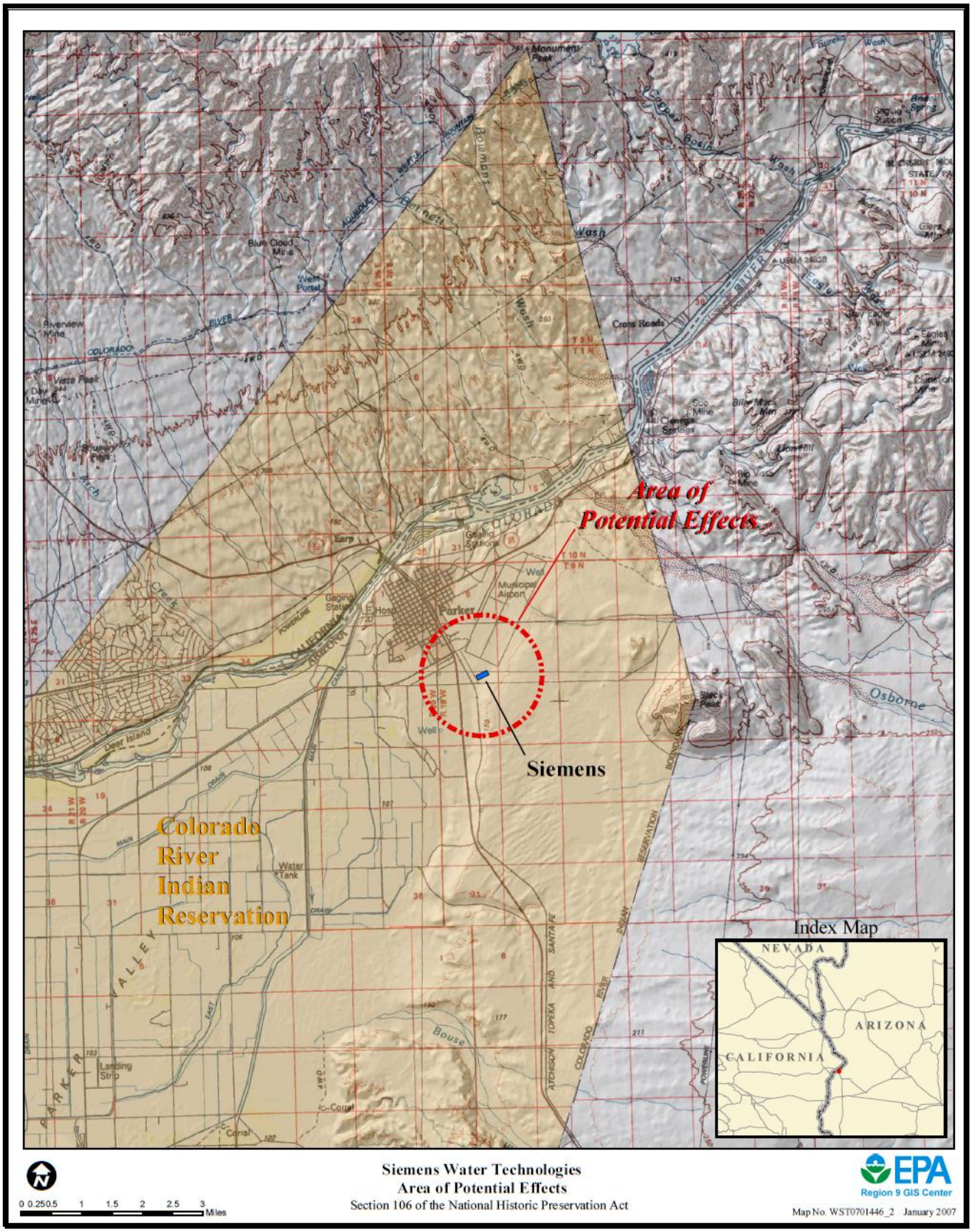
Figure 2-4. *Designated Area of Potential Effect (Dotted Red circle)*



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2.4 Section 106 Review History at Siemens

EPA initiated the NHPA Section 106 Review Process in late 2003, meeting with then CRIT Chairman Daniel Eddy, Arizona State Historic Preservation Officer ("SHPO") James Garrison, Town of Parker Mayor D. L. Wilson, and representatives from Siemens. These four parties are consulting parties for this Section 106 review; EPA also invited the Advisory Council on Historic Preservation, 12 Indian Tribes, and 6 additional parties, all of whom declined to participate as consulting parties. A list of these parties is provided in Appendix A. Chairman Eddy designated the CRIT Museum Director as the main point of contact for CRIT regarding the NHPA process. A timeline has been included in Appendix B for a summary of the steps that EPA has taken during this process.

3. Search for Historic Properties

The following sections summarize EPA's actions in searching for historic or tribal culturally significant properties within the APE. Historic locations identified or considered are shown in Figure 3-1.

3.1 Site Walk-Over in 1989

In 1989, an Archaeologic Walk-Over of the Facility area was performed by Weldon Johnson, Sr., Assistant Director of the CRIT Museum as part of an Environmental Assessment for the not-yet constructed Westates Carbon facility. A copy of this document, as well as supplemental letters by the office of the Colorado River Agency of the Bureau of Indian Affairs and the Arizona SHPO's office, is attached in Appendix C. In summary, neither a records search of the CRIT Museum's archaeological files nor an archaeologic walk-over revealed any historic sites at that time.

3.2 Public Comment Periods in 2006 and 2007

EPA reached out to the public regarding the NHPA process via public notices and public comment periods in 2006 and 2007. The first public comment period, which ran from May 31, 2006 to September 1, 2006, solicited comments on the proposed APE. The second comment period ran from January 31, 2007 to April 12, 2007, and requested information on Historic Properties. The public notice for this second public comment period can be found in Appendix D.

None of the comments received during either comment period identified any specific historic properties within the APE. Nevertheless, EPA is addressing the substantive issues raised in the public comments through this document.

A number of comments questioned whether the APE was too small. Most of these comments focused on the fact that the APE did not include Black Peak, which is a little over four miles west of the Siemens facility. The comments described the significance of Black Peak and other mountains to the traditional Mohave peoples in this area, and incorporated the idea that *all* land is sacred.

Although the comments focused on Black Peak itself as a culturally significant property*, EPA has considered any areas within the APE where Black Peak may be viewed or from whence prayers to Black Peak may be directed in considering areas within the APE that may be historic or culturally significant properties*. Effectively, this means that EPA has assessed the potential impacts of the permit decision on the entire APE, not only specific locations of known historic properties. EPA believes that this approach to evaluating the potential impacts of the permit decision would also apply to locations outside the APE.

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3.3 National Register of Historic Places Database Search

On August 16, 2011, a search of the National Register of Historic Places Database was performed. Three sites were found in the vicinity of the facility:

- Midvale Archaeological Site (#85003430) - east of Chandler, AZ in Town 1 South, Range 7 East
- The Old Presbyterian Mission Church (#71000122) - 2nd Avenue in Parker, AZ
- The Parker Jail (#75000369) - North side of Agency Road in Pop Harvey Park, Parker, AZ

However, none of these sites are within the APE. Further information about the locations of these sites may be confidential and will not be disclosed on a map.

3.4 AZSITE Search (Arizona's Cultural Resource Inventory)

Through email correspondence dated September 7, 2011, Erick Laurila of the Arizona SHPO's office helped to identify a historic road alignment in the vicinity of the facility using AZSITE (Arizona's Cultural Resource Inventory). Near Parker, this road, Historic Route 72 ("SR-72"), is now known as State Route 95, and at its closest point passes approximately one-third of a mile from the facility. An Arizona Department of Transportation information sheet for SR-72 has been attached in Appendix E. This part of the route, as described in the information sheet, is approximately 12 miles south of the facility on State Route 95. To qualify the road segment as a contributing resource to the historic significance of the alignment, the road near the facility would need to retain sufficient historical integrity to convey significance under any of the National Register criteria. EPA's assessment of this road segment was accomplished using Google Maps Street View, and can be found with photographs in Attachment E. In Figure 3-1 on the following page, the road is denoted by the yellow line running from Parker, south through the APE.

EPA concludes that the SR-95 is *not* eligible for inclusion in the National Register since the historic integrity, specifically the setting and feeling of the road segment near the facility, is no longer intact – the road has been paved into a four-lane route with power lines and it accommodates an estimated daily traffic of approximately 6,300 vehicles.[1]

3.5 Parker Cemetery

Through correspondence with the former CRIT Museum Director E. George Ray and Doug Bonamici of the CRIT Attorney General's office in August 2011, the Parker Cemetery was identified as a potential historic property within the APE. The Parker Cemetery is located approximately 2/3 of a mile from the Siemens facility and 3/10 of a mile northeast of California Avenue along Mohave Road, in Parker, AZ. Though not listed in the National Register of Historic Places, a cemetery may be considered a historic property for the purposes of the NHPA process if it meets the 'Criteria Consideration' conditions as described in National Register Bulletin 41 and stated in 36 C.F.R. §800.4(c)(1). A discussion of the qualifying characteristics of the Parker Cemetery is in the following Section 3.5.1.

[1] Arizona. Department of Transportation. *LA PAZ COUNTY Planning Assistance for Rural Areas, Working Paper 1, Current Conditions*. Lima and Associates, 2009. Figure 29, Page 90. Web. <http://www.azdot.gov/mpd/systems_planning/PDF/PARA/lapaz/LaPazWorkingPaper1CurrentConditions.pdf>.

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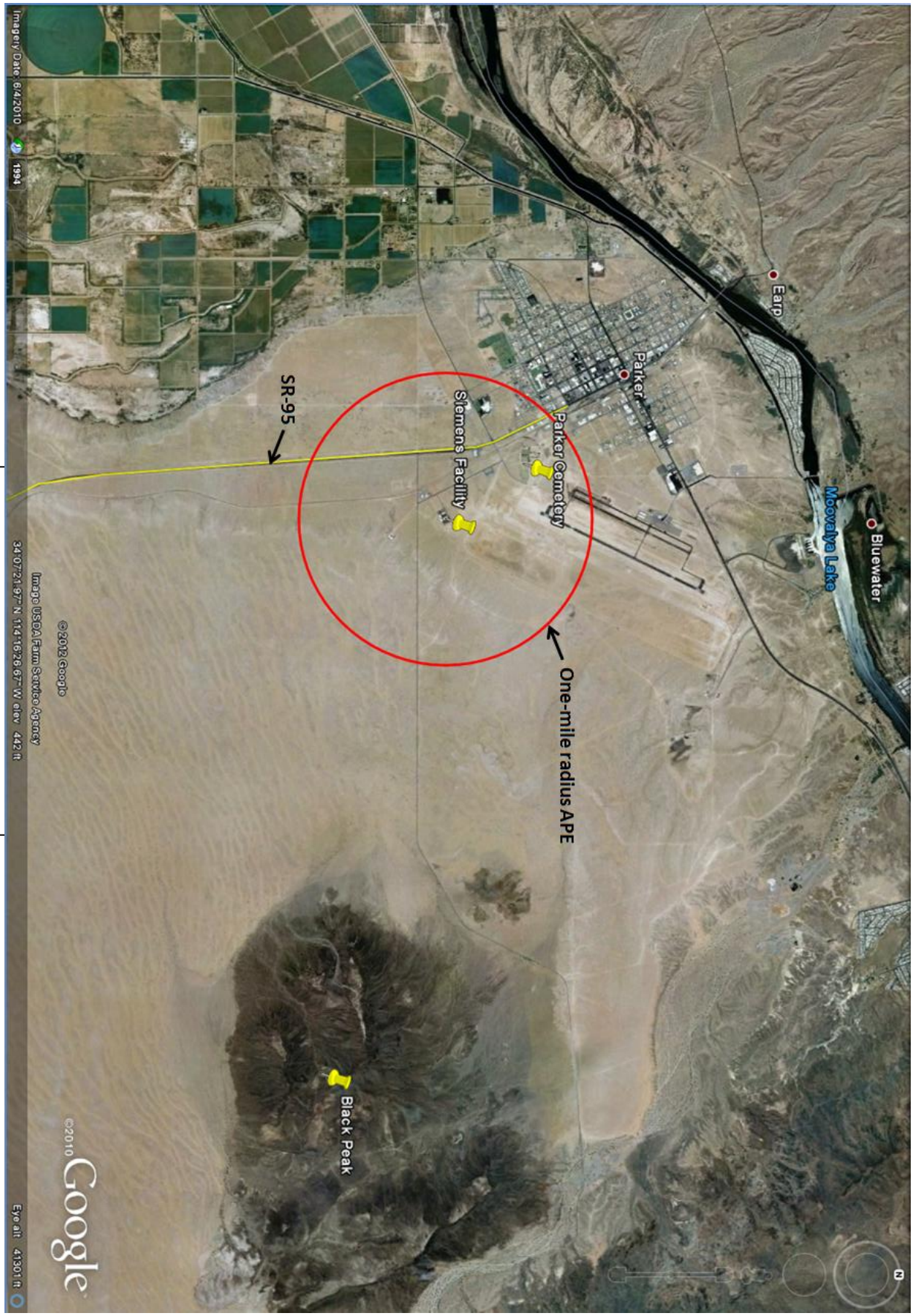

Figure 3-1. *Identified Historic Properties*

3.5.1 Assessment of Parker Cemetery under National Register Criteria Considerations

According to a phone conversation with the Parker Town Clerk on July 27, 2011, the cemetery is approximately as old as the town, which was incorporated in 1948. In assessing the Parker Cemetery for the Criteria Considerations, EPA elicited the assistance of CRIT due to potential sensitivity issues and confidentiality concerns that may arise from researching burial sites. As described in an August 29, 2011 email, Mr. Ray and Mr. Bonamici of CRIT performed an archival search for the Parker Cemetery and confirmed that Navajo Code Talkers from World War II are buried at the site. Thus, EPA, in consultation with CRIT, has determined that the cemetery may be eligible under Criterion A or B:

Properties can be eligible for the National Register if they are *'associated with events that have made a significant contribution to the broad patterns of our history'* or *'associated with the lives of persons significant in our past.'*

While further archival research is necessary to formally determine the eligibility of the Parker Cemetery under this Criterion, EPA has decided to leave the Cemetery unevaluated, due to the aforementioned sensitivity concerns. For the purposes of moving forward with the Section 106 Review, EPA has *assumed* that the Parker Cemetery is eligible for the National Register, and has assessed possible effects of the permitting project on that property.

4. Evaluation of Potential Effects on Historic Properties

This section provides a discussion of EPA's efforts to evaluate the potential effects of EPA's permit decision on identified historic properties within the APE. Within the context of the Section 106 review, EPA considers the following to be historic properties and/or properties of traditional religious and cultural importance:

- Parker Cemetery
- All areas within the APE where Black Peak may be viewed or from whence prayers may be directed to Black Peak

In this evaluation, EPA has only considered those effects that could be attributable to EPA's permit decision, and not included the impacts of facility operations which are not dependent on that decision. Thus, the scope of the federal action must be taken into account by first defining what the permit decision will entail:

- the permit decision *will* determine whether or not the facility can accept and treat certain wastes classified under RCRA as hazardous waste
- the issuance of a permit *will not* allow for any new construction or ground disturbing activities without further review
- the facility *will* be able to continue operations whether or not EPA grants a RCRA permit to the facility

With this understanding of the project scope, the Agency assessed concerns raised through public comments as well as comments received at public meetings.

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These comments raised concerns that the facility could potentially obstruct views of sacred mountains, thus interfering with traditional rites such as prayer ceremonies and cremations, through the following possible effects from the facility:

(1) the sounds of the Siemens facility's operations
(2) the visual presence of the facility
(3) hazardous air emissions from the facility

An evaluation of these effects follows in the sections below.

4.1 Sounds of the Siemens Facility's Operations and the Visual Presence of the Facility

Background: The Agency acknowledges that the presence of the facility could have a potential adverse impact on a tribal member's ability to pray or otherwise exercise the members' religion in close proximity to the facility. However, EPA's decision would not make a difference whether the facility remains standing or not, only whether it can handle specific wastes. Similarly, a decision not to issue a permit would not require that Siemens cease all operations at the facility, but only the management of hazardous waste it received from off-site facilities. Operations involving materials which do not constitute hazardous waste could continue or begin and, since there would be no anticipated change in equipment for facility operation with or without a permit, sounds from operations would not be affected.

Finding: At no location in the APE, including the Parker Cemetery and *any* areas within the APE where Black Peak may be viewed or from whence prayers may be directed towards Black Peak, will the visual or auditory impacts of the facility be affected by the permit decision.

4.2 Presence of Chemicals in Facility Emissions

Background: Based on the comments received, some community members appear to be concerned that hazardous air emissions from the facility will interfere with Tribal spiritual practices and cultural beliefs. In evaluating facility emissions, EPA's first and foremost priority is to protect human health and the environment; through the permitting process, EPA works towards this goal by ensuring the safe handling of hazardous materials at industrial facilities. With respect to the Siemens facility, EPA has taken the additional steps of evaluating the emissions from the facility and reviewing a human health and ecological risk assessment based on those emissions. The Agency has concluded that the facility operations, including emissions, will not pose an unacceptable risk to either. However, EPA has also evaluated the concern that *any* hazardous air emissions will interfere with spiritual and religious practices, regardless of their impact on human health or the environment.

The Agency recognizes that some individuals' religious beliefs and practices may be adversely affected by the emission of any chemicals from the facility, even if such emissions pose little or no risk to human health in the environment. Thus the question becomes: Would a denial of the permit, along with the continued processing of waste not classified as 'hazardous,' eliminate the presence of chemical constituents from the facility emissions? The simple answer is no. EPA anticipates that, if the agency were to deny Siemens a hazardous waste permit, chemicals would still be released in the facility's emissions. This straightforward but admittedly unsatisfying answer partially stems from the nature of chemicals which may be considered hazardous or toxic at one concentration and not hazardous or toxic at another. For example, the chemical benzene, below a certain concentration, is not considered RCRA hazardous waste. However, regardless of its concentration, benzene remains a potentially offensive

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chemical compound. Similarly, whether or not the permit is issued to Siemens, both incoming waste streams and the facility emissions will likely still contain similar chemicals.

Finding: EPA's permit action will not, in and of itself, have a discrete impact on the spiritual or religious practices of tribal members in the vicinity of the facility.

4.3 Facility Emissions at Parker Cemetery

Background: EPA has assessed potential impacts of facility emissions on the Parker Cemetery. After researching air emissions impacts on cemeteries, EPA has decided that sulfur and nitrogen oxides ("SOx and NOx") are the only chemicals in the facility emissions that have the potential to impact cemeteries over time. In general, SOx and NOx have been known to cause acid weathering of tombstone/memorial lettering and engravings. Both SOx and NOx are emitted during combustion processes (such as those at the facility), and major sources usually include gas-powered vehicles such as cars and trucks as well as coal-fired power plants.

Using conservative assumptions, EPA estimates that total SOx and NOx deposition rates at the cemetery due to facility emissions are two orders of magnitude lower than those attributable to other sources, such as car emissions on Hwy 95 south of the facility. Data supporting this finding was based on a 2005 emissions test at Siemens in which air dispersion and deposition models were developed and NOx and SOx emissions (in addition to 168 other chemical constituents) were measured.

Furthermore, EPA has determined that the release of SOx and NOx from the facility through stack emissions is determined by the sulfur or nitrogen content of incoming waste streams. However, the presence and/or concentration of these two compounds in the waste does *not* determine the RCRA hazardous or non-hazardous classification of the waste, nor does it correlate with such a classification. Thus, whether or not the permit is denied, the facility could continue operating and SOx and NOx emissions rates would not be affected by the permit decision.

Finding: Deposition of SOx and NOx at the Parker Cemetery due to facility emissions is insignificant when compared to other local sources. More importantly, EPA does not believe that the issuance of a RCRA permit will result in an increase in emissions of SOx and NOx above what would be released were the permit to be denied.

5.0 Conclusion

With assistance from public comments and through efforts of its own, EPA has identified possible effects of the facility on historic properties including visual and auditory impacts, as well as the impacts stemming from the presence of hazardous constituents and acid-generating chemicals in its emissions. However, EPA has narrowed its evaluation of potential effects on historic properties to the scope of the permit action: a permit decision will not affect facility operations except in the waste streams handled, nor allow for construction or ground-disturbing activities at the site.

In this context, EPA is making a finding, pursuant to 36 C.F.R. § 800.4(d)(1), that a permit decision relating to Siemens' management of RCRA Hazardous Waste will have No Effect on Historic Properties.

US EPA ARCHIVE DOCUMENT

Appendix A: List of Invited Consulting Parties

List of parties included in mass mailing of 'Activities Conducted pursuant to NHPA Section 106 Process' notification, sent in December 2003 and January 2004.

Tribes:
Cahuilla Band of Mission Indians
Chemehuevi Tribal Council
Cocopah Tribal Council
Fort Mojave Indian Tribe
Hopi Cultural Preservation Office
Hualapai Tribal Council
Morongo Band of Mission Indians
Quechan Tribe
Salt River Pima-Maricopa Indian Community
Torres-Martinez Desert Cahuilla Indians
Twenty-nine Palms Band of Mission Indians
Yavapai-Apache Nation

Governmental Organizations:
Advisory Council on Historic Preservation
Assistant Coordinator for Archaeological Info of San Bernardino County
Bureau of Indian Affairs
Bureau of Land Management
Bureau of Reclamation of the Lower Colorado River Regional Office
California Department of Parks and Recreation
County Board of Supervisors of La Paz County

US EPA ARCHIVE DOCUMENT

Appendix B: Timeline of NHPA at Siemens 2003 – 2007

2003

Mar 20	EPA staff visits CRIT Reservation for a cultural tour
Jun 17	EPA Initiates undertaking of Section 106 Review through letters to CRIT and Arizona SHPO
Jul 25	EPA notifies Town of Parker and Siemens about NHPA
Sep 10	CRIT recommends Initial Area of Potential Effects ("APE")
Dec 17	EPA issues a Public Notice for Proposed APE in Parker Pioneer *(no comments received)*

2004

Jan 23	EPA invites additional parties to participate in NHPA process *(none express interest)*
Jan-Jun	CRIT Museum Director Betty Cornelius requests that EPA enter into a Programmatic Agreement with CRIT on NHPA process
Feb 11	EPA holds a public meeting on Stack Emissions Test (receives comments on alleged cultural and spiritual effects of Siemens facility)
Apr	Website makes NHPA information available
Aug 13	EPA provides draft Programmatic Agreement to CRIT Acting Museum Director *(no written comments received)*

2005

Feb 9	EPA requests comments from CRIT on draft Programmatic Agreement *(no written comments received)*
Apr 12	EPA requests comments from CRIT on final Programmatic Agreement *(written responses received from both agencies)*
Nov 1	EPA staff meets with new CRIT Museum Director

2006

Feb 27	CRIT advises EPA that there is no need for a Programmatic Agreement which was never finalized, and recommends a new APE
May 31	EPA issues public notices for the new Proposed APE in the Parker Pioneer and Manataba Messenger *(comments received)*
Aug 1	EPA issues a public notice for an extension to the period for the Proposed APE
Oct 26	CRIT submits photos to document visibility of Siemens from various points on the Reservation
Oct- Dec	EPA meets with CRIT Museum Director twice to discuss APE

2007

Jan 31	EPA issues public notice designating APE and requesting information on historic properties *(comments received)*
Feb 16	EPA finalizes APE and requests information on historic properties from consulting parties

US EPA ARCHIVE DOCUMENT

Appendix C: Pre-Construction Site Walk-over

file

Page 1 of 3

RECEIVED

89-8-1

RECEIVED: 08-03-89
REVIEWED: 08-08-89

C.R.I.T. MUSEUM
ARCHAEOLOGIC WALK-OVER PRE-APP. FORM

PROPOSAL: Westates Carbon TWP: 9N R: 20W SEC: ;

S/W 1/4 OF S/E 1/4

LOCATION: Industrial Park

SUBMITTED BY: Weldon B. Johnson, Sr., Asst. Mus. Dir./Cult.Arch.
THROUGH: Curtiss Martin, Sr., Museum Director

PREVIOUS DESIGNATIONS: A records search of the C.R.I.T. Museum's archaeologic files revealed no sites previously recorded at this location.

SITE DESCRIPTION: Site consists of compacted blow sand with creosote, sage and some cholla cactus, ORV impacts also occur at this location.

WALK-OVERS RESULTS: The archaeologic walk-over revealed no sites identified.

RECOMMENDATIONS/REMARKS: Due to the absence of cultural material and no sites previously recorded, I recommend waiver of the Cultural Resource portion within the C.R.I.T. L.U.O. 85-2 as amended.

ATTACHMENTS:

US EPA ARCHIVE DOCUMENT

Appendix C
Page 2 of 3

westates carbon file

RECEIVED JAN 1 0 1990

JAN 1991
RECEIVED
COLORADO RIVER
INDIAN TRIBES
Parker, Ariz.

JAN 02 1990

ACTIN:
Phoenix Area Office
Environmental Services

Determination for Purposes of Section 106 of the National Historic Preservation Act

Superintendent, Colorado River Agency

As the certifying authority at Supplement 2, 30 BIAM 1.5B(1), I have determined that the report, C.R.I.T. Museum Archaeologic Walk-over Pre-app. Form - Westates Carbon (#89-8-1) (August 1989) is accurate in its findings of survey for purposes of compliance with identification provisions of 36 CFR 800 and do herewith adopt its findings.

I find that the proposed undertaking contains no historic properties listed in or eligible for the National Register of Historic Places and invoke 36 CFR 800.4(d). For these purposes, approval may be granted for the proposed undertaking with the proviso that should cultural materials be encountered in the course of construction, work cease at that location and the Indian land owner and the Area Archeologist be notified immediately. Please note that the 106 determination should be incorporated into the Final Environmental Assessment (EA) for the proposed Westates Carbon, Inc. reactivation plant site on the Colorado River Indian Reservation.

/s/ BARRY W. WELCH

cc: Chairman, Colorado River Tribal Council

COLORADO RIVER INDIAN TRIBES
PARKER, ARIZONA

ATTN	ACTIVITY	DATE	INITIAL
	CHAIRMAN		
	VICE CHAIRMAN		
	SECRETARY		
	TREASURER		
	Comm. Tribal Council, Lead, Museum, Terrick Gatt, Ken Moore, Sylvia Mike		
	FILE 1/9/91		

rec'd

US EPA ARCHIVE DOCUMENT

Appendix C
Page 3 of 3

VOS 1.00 17/4
~~400~~
450

ARIZONA STATE PARKS

800 W. WASHINGTON
SUITE 415
PHOENIX, ARIZONA 85007
TELEPHONE 602-542-4174

ROSE MOFFORD
GOVERNOR

STATE PARKS
BOARD MEMBERS

WILLIAM G. ROE
CHAIR
TUCSON

RONALD PIES
VICE CHAIR
TEMPE

DEAN M. FLAKE
SECRETARY
SNOWFLAKE

DUANE MILLER
SEDONA

ELIZABETH TEA
DUNCAN

ELIZABETH RIEKE
PHOENIX

M. JEAN HASSELL
STATE LAND COMMISSIONER

KENNETH E. TRAVOUS
EXECUTIVE DIRECTOR

COURTLAND NELSON
DEPUTY DIRECTOR

November 29, 1990

DEC 1990
RECEIVED
PHOENIX AREA OFFICE
ENVIRONMENTAL
SERVICES

Wilson Barber, Area Director
DOI Bureau of Indian Affairs
Phoenix Area Office
P.O. Box 10
Phoenix, AZ 85001

ATTN: C. Randall Morrison

RE: Colorado River Indian Reservation, Westates Carbon Regeneration Lease, DOI-BIA/PAO

Dear Mr. Barber:

Thank you for notifying us about the above project and sending us a copy of the cultural resources documentation prepared by Weldon Johnson from the CRIT Museum. I have reviewed the documentation that you submitted and have the following comments pursuant to 36 CFR Part 800:

1. The documentation that was submitted is not consistent with the Secretary of the Interior's standards for archaeological inventories and we request that future surveys be more consistent with these standards and presented to us in a format per our memorandum of February 5, 1988 to all Federal agencies and consulting archaeologists.

2. Regardless, we have no reasons to doubt Mr. Johnson's findings and note that he did not locate any cultural material.

3. Therefore, we concur with the agency that this project should have no effect on any National Register or eligible properties.

4. One conditional comment is that should archaeological remains be encountered during project ground disturbing activities, work should cease in the area of the discovery and this office be notified immediately, pursuant to 36 CFR 800.11.

We appreciate your continued cooperation with this office in complying with the historic preservation requirements for federally assisted undertakings. If you have any questions, please contact me.

Sincerely,

Robert E. Gasser
Compliance Coordinator

for Shereen Lerner, Ph.D.
State Historic Preservation Officer

BUREAU OF INDIAN AFFAIRS
RECEIVED
DEC 4 12 56 PM '90
PHOENIX AREA DIRECTOR

US EPA ARCHIVE DOCUMENT

Appendix D

2007
Public Notice:

APE Designation

PUBLIC NOTICE

Designation of Area of Potential Effects on Historic Properties and Request for Information about Historic Properties for Siemens Water Technologies (formerly US Filter Westates)

Under Section 106 of the National Historic Preservation Act

Siemens Water Technologies is a hazardous waste treatment facility on the Colorado River Indian Reservation near Parker, Arizona. The U.S. Environmental Protection Agency (EPA) is in the process of making a permit decision at Siemens.

Designation of Area of Potential Effects

As part of the permit decision, EPA must comply with the National Historic Preservation Act (NHPA). In compliance with the NHPA, EPA is designating an Area of Potential Effects on historic properties for its permit decision at Siemens.

The map to the right shows the Area of Potential Effects on historic properties. EPA is designating this Area of Potential Effects after consultation with the Colorado River Indian Tribes, the Arizona State Historic Preservation Office, the Town of Parker, and Siemens, and with consideration of public comments on a proposed Area of Potential Effects. You may find information about the comments EPA received and the basis for our designating this Area of Potential Effects on EPA's website, at local public repositories listed to the right, or by contacting EPA. Contact information is noted to the right.

Please note that this Area of Potential Effects is for potential effects only on historic properties from EPA's permit decision regarding the Siemens facility. Under a separate authority, EPA is also requiring Siemens to conduct a human health and ecological risk assessment which will evaluate potential human health and ecological effects up to 30 miles from the facility due to Siemens' operations. In the future, EPA will publish separate public notices regarding the risk assessment and other EPA actions at Siemens, such as the draft permit decision. If you would like to receive future public notices in the mail, please let us know by phone, email, or mail, and we'll put you on our mailing list.

Determining Whether There May Be Adverse Effects to Historic Properties

EPA must now determine whether a hazardous waste permit decision at Siemens may cause adverse effects to any historic properties within the Area of Potential Effects. EPA will make this determination after researching public records, consulting with the consulting parties noted above, and considering comments from the public. Therefore, EPA would like to hear from you about any historic properties that you know of within the Area of Potential Effects and about any adverse effects you believe a Siemens permit may cause to the historic properties. For each historic property, please describe why you believe it to be a historic property and please describe the specific adverse effects you believe a Siemens permit may cause.

Criteria for Identifying Historic Properties and Adverse Effects

EPA will use NHPA criteria in determining whether a site or structure within the Area of Potential Effects is a historic property and whether a Siemens permit may cause adverse effects to the historic properties. Under the NHPA, a historic property may be a building, structure, site, object, or district that is important in American history, architecture, archeology, engineering or culture. The term "historic property" also includes properties of traditional religious and cultural importance to an Indian Tribe. Under the NHPA, an adverse effect to a historic property is any effect that would diminish the integrity of certain aspects of the property such as location, design, setting, or feeling.

To learn more about the NHPA process and criteria for identifying historic properties and adverse effects you may access "Citizen's Guide to Section 106 Review" at www.achp.gov/citizensguide.html and "How to Apply the National Register Criteria for Evaluation" at www.cr.nps.gov/nr/publications/bulletins/nrb15/. You may also obtain these documents by contacting EPA or visiting the public repositories.

Next Steps

EPA must take possible adverse effects to historic properties into consideration in making its permit decision. If EPA determines that there are no historic properties within the Area of Potential Effects, or that a Siemens permit will not cause adverse effects to any historic properties, then EPA will issue a public notice making this determination, and this will complete the NHPA process. If EPA determines that there are historic properties within the Area of Potential Effects and that a Siemens permit may cause adverse effects to the historic properties, then EPA will consult with the consulting parties to determine whether mitigation measures are necessary. EPA will then issue a public notice either proposing mitigation measures, or making a determination that mitigation measures are not necessary.

We are interested in any information you may have on historic properties within the Area of Potential Effects

If you have information on historic properties within the Area of Potential Effects, including possible adverse effects from a Siemens permit to the historic properties, please let EPA know by March 5, 2007. Any information you submit will become part of the public record. However, if there is information that you would like to provide, but that you believe should remain confidential either for your anonymity or to protect the historic property, please contact us by phone, and we will explore options for keeping the information confidential. You may contact EPA at any time during the process to advise us of concerns or comments you may have regarding the NHPA process at Siemens.



A detailed map and additional documents regarding the steps leading up to this determination are available at public repositories at the Parker Public Library and the Colorado River Indian Tribes Museum. You may also obtain these documents and information, as well as information about Siemens and the National Historic Preservation Act, at the public repositories, by contacting EPA at the address or phone number to the right, and at EPA's website at http://www.epa.gov/region9/waste/siemens/.

To comment, or for more information, you may write, email, or call Karen Scheuermann at:

Karen Scheuermann
US EPA Region 9 (WST-4)
75 Hawthorne Street
San Francisco, CA 94105

scheuermann.karen@epa.gov

Phone: (415) 972-3356

Toll-free number: (800) 231-3075

Appendix E: Assessment of Historical Integrity of Historic Route 72 (State Route 95)
Page 1 of 2

Pictures from: Google Maps Street View Feature



Observations:

- Paved over three- four lane Highway
- Power lines on eastern side of road
- 6,344 Estimated Daily Traffic by MPSI Solutions – Google Earth

US EPA ARCHIVE DOCUMENT



State Route 72
Junction SR 95 to Hope Highway

Location: Yuma District; La Paz County
Length: 37 miles
Begins: Junction SR 95 (MP 13.11)
Ends: Hope (MP 49.91)

State Route 72 (SR 72) is a 37-mile long road that was incorporated into the state highway system in 1932. Prior to the construction of US 95 between Quartzite and Parker, SR 72 was the main access road to a crossing over the Colorado River at Parker. It also was the Territorial-period (1863–1912) route that reached the Colorado River Indian Reservation, which was established in 1865 for several tribal groups, including the Chemehuevi and Mohave. During the period of construction for the Parker Dam (1934–1938), highway workers improved SR 72 by widening and paving. It remains a useful route to reach Parker Dam and its recreational reservoir—Lake Havasu.

For more information please visit www.azdot.gov/Highways/Arizona_Historic_Roads

Accessed online on 4/9/12 at:
http://www.azdot.gov/azhistoricroads/Media/HighwayHistories/SR72_HighwayHistory.pdf

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Wilene Holt
Colorado River Indian Tribes
26600 Mohave Road
Parker, Arizona 85344

Re: Determination of No Historic Properties Affected by a Hazardous Waste permit decision at the Siemens Industry, Inc. facility in Parker, Arizona

Dear Ms. Holt:

The U.S. Environmental Protection Agency Region 9 ("EPA") is seeking your concurrence on a No Historic Properties Affected finding, pursuant to 36 C.F.R. § 800.4(d)(1), regarding a federal permit action at the Siemens Industry, Inc. facility ('Siemens") located in Parker, Arizona. Currently, EPA is reviewing a Resource Conservation and Recovery Act ('RCRA') permit application that, if issued, would allow the facility to regenerate spent carbon that is classified as hazardous waste. EPA considers this permit action to be a "federal undertaking" under the National Historic Preservation Act ("NHPA"). Please find enclosed a final report detailing the steps EPA has taken in making this determination.

In separate letters, EPA is notifying and seeking concurrence from the following consulting parties regarding our finding of effect:

- Arizona State Historic Preservation Office
- Siemens Industry, Inc.
- Town of Parker

Thank you for your assistance throughout the NHPA process for the Siemens permit decision. Please let us know within 30 days of receipt of this letter if you object to this determination. If you have any questions, please feel free to have your staff contact Nathan Dadap at (415) 972-3654 or by email at dadap.nathan@epa.gov.

Sincerely,

Caleb Shaffer, Manager
RCRA Facilities Management Office

Enclosure:
Final Report: Finding of No Historic Properties Affected

cc w/ Enclosure: Guthrie Dick, Environmental Director
Doug Bonamici, Office of the Attorney General (electronic copy only)

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Lori Wedemeyer
Town of Parker
1314 11th Street Town Hall
Parker, Arizona 85344

Re: Determination of No Historic Properties Affected by a Hazardous Waste permit decision at the Siemens Industry, Inc. facility in Parker, Arizona

Dear Ms. Wedemeyer:

The U.S. Environmental Protection Agency Region 9 ("EPA") is seeking your concurrence on a No Historic Properties Affected finding, pursuant to 36 C.F.R. § 800.4(d)(1), regarding a federal permit action at the Siemens Industry, Inc. facility ('Siemens") located in Parker, Arizona. Currently, EPA is reviewing a Resource Conservation and Recovery Act ('RCRA') permit application that, if issued, would allow the facility to regenerate spent carbon that is classified as hazardous waste. EPA considers this permit action to be a "federal undertaking" under the National Historic Preservation Act ("NHPA"). Please find enclosed a final report detailing the steps EPA has taken in making this determination.

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- Colorado River Indian Tribes
- Siemens Industry, Inc.
- Arizona State Historic Preservation Office

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Sincerely,

Caleb Shaffer, Manager
RCRA Facilities Management Office

Enclosure:
Final Report: Finding of No Historic Properties Affected

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Monte McCue
Siemens Industry, Inc.
P.O. Box 3308
Parker, Arizona 85344

Re: Determination of No Historic Properties Affected by a Hazardous Waste permit decision at the Siemens Industry, Inc. facility in Parker, Arizona

Dear Mr. McCue:

The U.S. Environmental Protection Agency Region 9 ("EPA") is seeking your concurrence on a No Historic Properties Affected finding, pursuant to 36 C.F.R. § 800.4(d)(1), regarding a federal permit action at the Siemens Industry, Inc. facility ('Siemens") located in Parker, Arizona. Currently, EPA is reviewing a Resource Conservation and Recovery Act ('RCRA') permit application that, if issued, would allow the facility to regenerate spent carbon that is classified as hazardous waste. EPA considers this permit action to be a "federal undertaking" under the National Historic Preservation Act ("NHPA"). Please find enclosed a final report detailing the steps EPA has taken in making this determination.

In separate letters, EPA is notifying and seeking concurrence from the following consulting parties regarding our finding of effect:

- Arizona State Historic Preservation Office
- Colorado River Indian Tribes
- Town of Parker

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Sincerely,

Caleb Shaffer, Manager
RCRA Facilities Management Office

Enclosure:
Final Report: Finding of No Historic Properties Affected

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

James Garrison
State Historic Preservation Officer
Arizona State Parks
1300 West Washington Street
Phoenix, Arizona 85007

Attn: Erick Laurila

Re: Determination of No Historic Properties Affected by a Hazardous Waste permit decision at the Siemens Industry, Inc. facility in Parker, Arizona, **SHPO-2003-1385 (94222)**

Dear Mr. Garrison:

The U.S. Environmental Protection Agency Region 9 ("EPA") is seeking your concurrence on a No Historic Properties Affected finding, pursuant to 36 C.F.R. § 800.4(d)(1), regarding a federal permit action at the Siemens Industry, Inc. facility ('Siemens") located in Parker, Arizona. Currently, EPA is reviewing a Resource Conservation and Recovery Act ('RCRA') permit application that, if issued, would allow the facility to regenerate spent carbon that is classified as hazardous waste. EPA considers this permit action to be a "federal undertaking" under the National Historic Preservation Act ("NHPA"). Please find enclosed a final report detailing the steps EPA has taken in making this determination.

In separate letters, EPA is notifying and seeking concurrence from the following consulting parties regarding our finding of effect:

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- Siemens Industry, Inc.
- Town of Parker

Thank you for your assistance throughout the NHPA process for the Siemens permit decision. Please let us know within 30 days of receipt of this letter if you object to this determination. If you have any questions, please feel free to have your staff contact Nathan Dadap at (415) 972-3654 or by email at dadap.nathan@epa.gov.

Sincerely,

Caleb Shaffer, Manager
RCRA Facilities Management Office

Enclosure:
Final Report: Finding of No Historic Properties Affected

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

75 Hawthorne Street
San Francisco, CA 94105-3901

July 12, 2012

MEMORANDUM

Subject: Change in National Historic Preservation Act Finding for Hazardous Waste Permit Decision at Siemens Industry, Inc.

FROM: Nathan Dadap
RCRA Facilities Management

TO: Mahfouz "Mike" Zabaneh
Siemens Project Manager

On May 25, 2012, EPA issued a Final Report with a finding of *No Historic Properties Affected* under Section 106 of the National Historic Preservation Act (NHPA). This Report was sent to the four consulting parties for the project: the Arizona State Historic Preservation Office (SHPO), the Town of Parker, Siemens Industry, Inc., and the Colorado River Indian Tribes (CRIT). EPA received a response from the SHPO via letter dated June 19, 2012. In that correspondence, the SHPO offered the opinion that a *No Adverse Effect* finding is warranted in place of a *No Historic Properties Affected* finding, and this memorandum serves to document that I have no objections to such a modification.

The SHPO's letter provided concurrence on all other conclusions of the Final Report, and I believe that the information presented in the Report addresses the necessary documentation to support a *No Adverse Effect* finding. In short, this new finding acknowledges the reality that continued operation at the facility under a hazardous waste permit may have an effect on the Parker Cemetery. However, an application of the criteria of adverse effect reveals that since a permit issuance would not result in any significant changes to the facility or its current operations, the permit decision will not result in any adverse effects to historic properties.

Since consulting parties have been provided a copy of the Report and none have provided any objections to the original finding, it is my opinion that this change in the final finding will not require the Agency to pursue any further actions under Section 106 of the NHPA.

US EPA ARCHIVE DOCUMENT

Appendix D

Endangered Species Act Determination

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

75 Hawthorne Street
San Francisco, CA 94105-3901

August 4, 2016

MEMORANDUM

SUBJECT: Evoqua RCRA TSDF Permit EPA ID No. AZD 982 441 263 - Update to Prior EPA Endangered Species Act Determinations

FROM: Sara Ziff
Environmental Engineer Sara Ziff

TO: Mike Zabaneh
EPA Permit Writer

On February 25, 2009, EPA determined that federal action comprised by the subject permit will not affect threatened or endangered species or designated critical habitat. Such a determination must be made using a species list that is not more than 180 days old. Accordingly, today I obtained a list of threatened and endangered species and designated critical habitat for the area of the subject project. I have reviewed that list and the basis for the earlier determination that the subject permit will not affect threatened or endangered species or designated critical habitat and determined that the species and conditions have not changed and, accordingly, the subject permit will not affect threatened or endangered species or designated critical habitat.

By making this no effect determination, EPA completes its obligation under Section 7 of the Endangered Species Act and does not need to consult with the US Fish and Wildlife Service in order to issue the permit.

Please contact me if you have any questions.

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

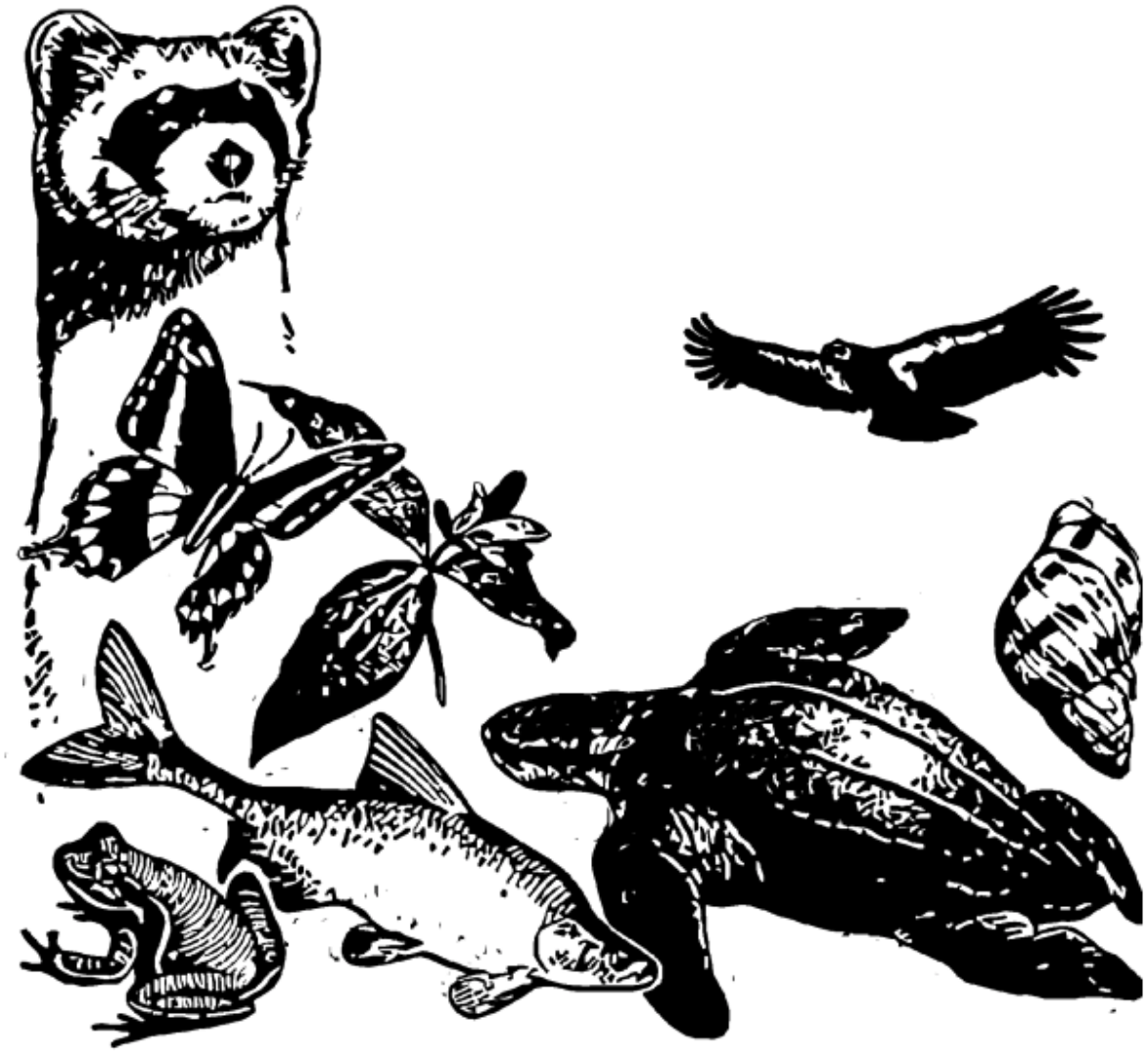
U.S. Fish & Wildlife Service

Evoqua

IPaC Trust Resources Report

Generated August 04, 2016 11:31 AM MDT, IPaC v3.0.8

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

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IPaC Trust Resources Report 1
Project Description 1
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Refuges & Hatcheries 7
Wetlands 8

US EPA ARCHIVE DOCUMENT

U.S. Fish & Wildlife Service

IPaC Trust Resources Report

NAME

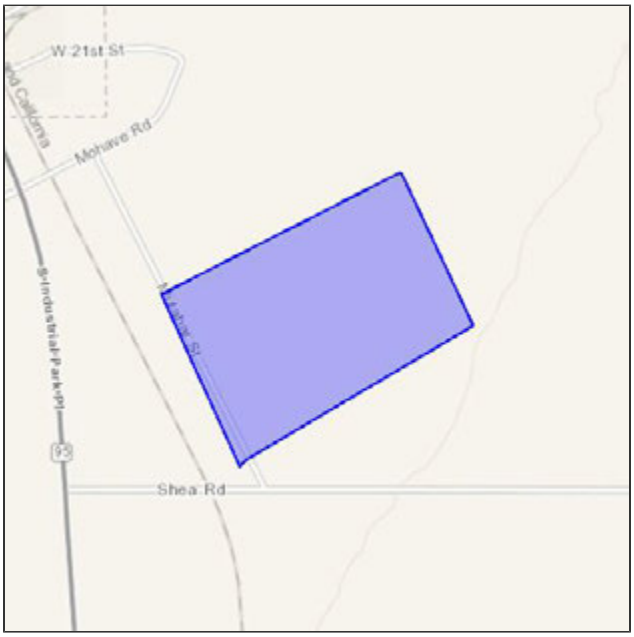
Evoqua

LOCATION

La Paz County, Arizona

IPAC LINK

https://ecos.fws.gov/ipac/project/LATIS-233AF-FSXA5-IBKNZ-E3UNME



U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Arizona Ecological Services Field Office
2321 West Royal Palm Road, Suite 103
Phoenix, AZ 85021-4915
(602) 242-0210

US EPA ARCHIVE DOCUMENT

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Birds

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B094

Sprague's Pipit Anthus spragueii — Resolved Taxon

CRITICAL HABITAT
No critical habitat has been designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0GD

Yellow-billed Cuckoo Coccyzus americanus — Threatened

CRITICAL HABITAT
There is **proposed** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06R

Yuma Clapper Rail Rallus longirostris yumanensis — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B00P

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Fishes

Bonytail Chub Gila elegans — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E020

Razorback Sucker Xyrauchen texanus — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E054

Roundtail Chub Gila robusta — Proposed Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E02Z

Reptiles

Northern Mexican Gartersnake Thamnophis eques megalops — Threatened

CRITICAL HABITAT

There is **proposed** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=C04Q

Critical Habitats

There are no critical habitats in this location

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Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

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1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The following species of migratory birds could potentially be affected by activities in this location:

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Bell's Vireo Vireo bellii — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JX

Bendire's Thrasher Toxostoma bendirei — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IF

Black Rail Laterallus jamaicensis — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09A

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Black-chinned Sparrow Spizella atrogularis — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IR

Brewer's Sparrow Spizella breweri — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HA

Burrowing Owl Athene cunicularia — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC

Costa's Hummingbird Calypte costae — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JE

Elf Owl Micrathene whitneyi — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0GV

Gila Woodpecker Melanerpes uropygialis — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EH

Gilded Flicker Colaptes chrysoides — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EG

Golden Eagle Aquila chrysaetos — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DV

Lawrence's Goldfinch Carduelis lawrencei — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0J8

Le Conte's Thrasher toxostoma lecontei — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0GE

Least Bittern Ixobrychus exilis
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B092

Lesser Yellowlegs Tringa flavipes — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MD

Loggerhead Shrike Lanius ludovicianus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY

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Long-billed Curlew Numenius americanus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S

Lucy's Warbler Vermivora luciae — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DL

Mountain Plover Charadrius montanus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B078

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Prairie Falcon Falco mexicanus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0ER

Short-eared Owl Asio flammeus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Sonoran Yellow Warbler Dendroica petechia ssp. sonorana — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F7

Swainson's Hawk Buteo swainsoni — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B070

Western Grebe aechmophorus occidentalis — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA

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Wildlife refuges and fish hatcheries

Refuge and fish hatchery data is unavailable at this time.

US EPA ARCHIVE DOCUMENT

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands in this location

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

75 Hawthorne Street
San Francisco, CA 94105-3901

March 21, 2016

MEMORANDUM

SUBJECT: Evoqua RCRA TSDF Permit EPA ID No. AZD 982 441 263 - Update to Prior EPA Endangered Species Act Determinations

FROM: Sara Ziff
Environmental Engineer

TO: Mike Zabaneh
EPA Permit Writer

On February 25, 2009, EPA determined that federal action comprised by the subject permit will not affect threatened or endangered species or designated critical habitat. Such a determination must be made using a species list that is not more than 180 days old. Accordingly, today I obtained a list of threatened and endangered species and designated critical habitat for the area of the subject project. I have reviewed that list and the basis for the earlier determination that the subject permit will not affect threatened or endangered species or designated critical habitat and determined that the species and conditions have not changed and, accordingly, the subject permit will not affect threatened or endangered species or designated critical habitat.

With this determination, EPA completes its obligation under Section 7 of the Endangered Species Act and does not need to consult with the US Fish and Wildlife Service in order to issue the permit.

Please contact me if you have any questions.

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

75 Hawthorne Street
San Francisco, CA 94105-3901

July 30, 2015

MEMORANDUM

SUBJECT: Evoqua RCRA TSDF Permit EPA ID No. AZD 982 441 263 - Update to prior EPA Endangered Species Act determinations

FROM: John Beach
Environmental Scientist

TO: Mike Zabaneh
EPA Permit Writer

On February 25, 2009, EPA determined that Federal action comprised by the subject permit will not affect threatened or endangered species or designated critical habitat. Such a determination must be made using a species list that is not more than 180 days old. Accordingly, I today obtained a list of threatened and endangered species and designated critical habitat for the area of the subject project. I have reviewed that list and the basis for the earlier determination that the subject permit will not affect threatened or endangered species or designated critical habitat and determine that the species and conditions have not changed and, accordingly, the subject permit will not affect threatened or endangered species or designated critical habitat.

With this determination, EPA completes is obligation under Section 7 of the Endangered Species Act and does not need to consult with the US Fish and Wildlife Service in order to issue the permit.

Please contact me if you have questions.

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IPaC **U.S. Fish & Wildlife Service**

My project La Paz County, Arizona

EPQUA 2523 Mohave St. Parker, AZ

This project potentially impacts **28 resources** managed or regulated by the U.S. Fish & Wildlife Service

Endangered species

Proposed, candidate, threatened, and endangered species that are managed by the Endangered Species Program and should be considered as part of an effect analysis for this project.

Birds

Southwestern Willow Flycatcher Empidonax traillii extimus

Endangered (A species in danger of extinction throughout all or a significant portion of its range) ERA addresses

Sprague's Pipit Anthus spragueii Grassland species - habitat absent

Candidate (A species under consideration for official listing for which there is sufficient information to support listing)

Yellow-billed Cuckoo Coccyzus americanus MOIST riparian habitat ERA addresses

Threatened (A species likely to become endangered within the foreseeable future throughout all or a significant portion of its range)

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Yuma Clapper Rail Rallus longirostris yumanensis

Endangered (A species in danger of extinction throughout all or a significant portion of its range)

Fishes

Bonytail Chub Gila elegans

Endangered (A species in danger of extinction throughout all or a significant portion of its range)

Razorback Sucker Xyrauchen texanus

Endangered (A species in danger of extinction throughout all or a significant portion of its range)

Roundtail Chub Gila robusta

Candidate (A species under consideration for official listing for which there is sufficient information to support listing)

Reptiles

Northern Mexican Gartersnake Thamnophis eques megalops

Threatened (A species likely to become endangered within the foreseeable future throughout all or a significant portion of its range)

Sonoran Desert Tortoise Gopherus morafkai

Candidate (A species under consideration for official listing for which there is sufficient information to support listing)

Critical habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

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THERE IS NO CRITICAL HABITAT WITHIN THIS PROJECT AREA

Migratory birds

previously addressed

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity which results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

Bald Eagle Haliaeetus leucocephalus

Season: Wintering

Bell's Vireo Vireo bellii

Season: Breeding

Black Rail Laterallus jamaicensis

Season: Breeding

US EPA ARCHIVE DOCUMENT

Black-chinned Sparrow Spizella atrogularis

Season: Wintering

Brewer's Sparrow Spizella breweri

Season: Wintering

Burrowing Owl Athene cunicularia

Year-round

Costa's Hummingbird Calypte costae

Season: Breeding

Elf Owl Micrathene whitneyi

Season: Breeding

Gila Woodpecker Melanerpes uropygialis

Year-round

Golden Eagle Aquila chrysaetos

Year-round

Le Conte's Thrasher toxostoma lecontei

Season: Breeding

Least Bittern Ixobrychus exilis

Year-round

Loggerhead Shrike Lanius ludovicianus

Year-round

Long-billed Curlew Numenius americanus

Season: Wintering

US EPA ARCHIVE DOCUMENT

Lucy's Warbler Vermivora luciae

Season: Breeding

Mountain Plover Charadrius montanus

Season: Wintering

Prairie Falcon Falco mexicanus

Year-round

Snowy Plover Charadrius alexandrinus

Season: Migrating

Sonoran Yellow Warbler Dendroica petechia ssp. sonorana

Season: Wintering

Wildlife refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

REFUGE INFORMATION IS NOT AVAILABLE AT THIS TIME

TRY AGAIN

US EPA ARCHIVE DOCUMENT

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

THERE ARE NO WETLANDS IDENTIFIED IN THIS PROJECT AREA

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Informational Notice

Online Processing of Requests for Official Endangered Species Act Species List

For Consultation and Conservation Partners of the U.S. Fish and Wildlife Service

Arizona Ecological Services Office

Dear Consultation and Conservation Partners:

As of March 2014, the Arizona Ecological Services Office of the U.S. Fish and Wildlife Service (Service) will no longer be maintaining the County Species List, and is directing your agency, agents, and designated non-Federal representatives to an automated Environmental Conservation Online System-Information, Planning and Conservation (ECOS-IPaC) system (System) accessed via the internet. The purpose of this System is to identify species designated via the Endangered Species Act of 1973, as amended (Act) as candidates, proposed, threatened, or endangered; and habitats proposed and designated as critical habitat, which *may* occur in the action areas that you will define.

The output provided by the System is intended, in part, to fulfill the requirements under section 7(c) of the Act (16 U.S.C. 1531 et seq.). The lists pertaining to species and habitats designated via the Act are to be used in the development of biological assessments/evaluations that you will prepare for future proposed projects. Use the link http://ecos.fws.gov/ipac/, to input your project's polygon, upload a shapefile (if your project is over a large area but with segments), or to select the county in which your project occurs to view and request a species list. If your team decides to input your project's polygon, please bear in mind that the species generated in your list are delineated in grids that cover a minimum of 49 square miles. Please check each species' information page found at http://www.fws.gov/southwest/es/arizona/Docs_Species.htm or http://www.fws.gov/southwest/es/arizona/Documents/MiscDocs/AZSpeciesReference.pdf for a quick reference, to determine if suitable habitat for the species on your list occurs for the species on your list in your project area.

A generated 'Official List' can be renewed through the following steps:

1. Re-entering the shapefile used or requesting the shapefile be sent back to you (IPaC saves the shapefiles used when an Official List is requested);
2. Proceed through the steps;
3. Save the Preliminary Species List as a PDF. Please do not click 'Request Official List';
4. Send this PDF to the incomingazcorr@fws.gov address with the subject line and text requesting a renewed list. Please provide the file number that was given with the original Official Species List in the email too;

The Service is currently working on automating the renewal process, but until this is available we recommend that you use IPaC and these renewal steps as necessary.

The Service asks that you aid us in sharing this notice with your affected staff, agents, clients, or non-Federal representatives. Your assistance with dissemination of this notice is appreciated. If you have questions or comments regarding the use and operation of the automated ECOS-IPaC System, please contact the ECOS-IPaC help desk at 970-226-9468, 8am - 4pm Mountain Time, M-F or via email at http://ecos.fws.gov/ecos/helpDeskPublicForm.do. If you have questions or comments regarding the content of the Preliminary or Official Lists supplied to you by the System, please contact Brenda Smith at 928/556-2157 for projects in Northern Arizona, our general Phoenix number 602/242-0210 for central Arizona, or Jean Calhoun at 520/670-6150 (x223) for projects in southern Arizona.

Activities that involve streams and/or wetlands are regulated by the U.S. Army Corps of Engineers (Corps). We recommend that you contact the Corps to determine their interest in proposed projects in these areas. For activities within a National Wildlife Refuge, we recommend that you contact refuge staff for specific information about refuge resources. If your action is on Indian land or has implications for off-reservation tribal interests, we encourage you to contact the tribe(s) and the Bureau of Indian Affairs (BIA) to discuss potential tribal concerns, and to invite any affected tribe and BIA to participate in the section 7 consultation. In keeping with our tribal trust responsibility, we will notify tribes that may be affected by proposed actions when section 7 consultation is initiated. For more information, please contact our tribal coordinator, John Nystedt at (928) 556-2160 or John_Nystedt@fws.gov. We also recommend that you coordinate your project with the Arizona Game and Fish Department, and utilize their Environmental Review On-Line Tool that can be accessed at http://www.azgfd.gov/hgis/.

Thank you.

W:\Nichole Engelmann\IPaC\Website IPaC Notices\IPaC Website Cover letter June 2014.docx

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

75 Hawthorne Street
San Francisco, CA 94105-3901

MEMORANDUM

SUBJECT: Ecological Risk Assessment and Special Status Species Evaluation
Seimens Water Technologies Corporation Carbon Reactivation Facility Parker, AZ facility EPA ID No. AZD 982 441 263
RCRA Part B permit application

FROM: John Beach

TO: John Moody
EPA Project Manager

DATE: February 25, 2009

This memorandum summarizes the status of the subject permit application with respect to the requirements for the protection of individual species and/or ecosystems set forth in:

- The Endangered Species Act of 1973, as amended (ESA)
- The Migratory Bird Treaty Act of 1918, as amended (MBTA)
- Current Arizona state laws
- Other laws or regulations imposing requirements specific to Colorado River fisheries

The Section 7(a)(1) of the ESA requires that each Federal agency shall insure that any action that they authorize is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. The "Action Agency", EPA in this case, must determine whether such jeopardy may occur, and if it does, must consult with the U.S. Fish and Wildlife Service.

The MBTA prohibits the "taking" of (bird) species identified in any of several treaties among the U.S. and foreign governments. Federal agencies taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations are required to take specified mitigating actions in conjunction with the U.S. Fish and Wildlife Service.

My research did not identify any current Arizona state laws or other laws or regulations specific to Colorado River fisheries that imposed requirements for the protection of individual species and/or ecosystems in addition to those listed above.

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I have reviewed the human health and ecological risk assessment dated July 30, 2007 provided to EPA by Seimens in support of their Part B permit application and Seimens' response to EPA comments dated March 13, 2008. Based on that review, I conclude that the results of the ecological risk assessment demonstrate:

- The action that EPA is considering, i.e., the issuance of the RCRA Part B permit to Seimens, is expected to not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat.
- The action that EPA is considering is expected to not result in the taking or endangerment of any species protected by the MTBA and is expected to not have any measurable negative effect on migratory bird populations.

Accordingly, I conclude that:

- No consultation with, or other action in conjunction with, the United States Fish and Wildlife Service is required for EPA's action.
- No additional evaluation of endangered or other special status species is needed for EPA's action.

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

75 Hawthorne Street
San Francisco, CA 94105-3901

MEMORANDUM

SUBJECT: Ecological risk assessment status
Seimens Water Technologies Corporation Carbon Reactivation Facility Parker, AZ facility EPA ID No. AZD 982 441 263
RCRA Part B permit application

FROM: John Beach

TO: John Moody
EPA Project Manager

DATE: December 23, 2008

This memorandum summarizes the status of the ecological risk assessment activities for the subject permit application. The Resource Conservation and Recovery Act (RCRA), as implemented in 40 CFR §270.10, requires that RCRA Part B permits for the operation of treatment, storage and disposal facilities be protective of human health and the environment.

Seimens submitted a human health and ecological risk assessment dated July 30, 2007 in support of their Part B permit application. Mary Blevins reviewed that document and submitted her comments to Seimens on December 7, 2007 (attached). Seimens submitted a response to those comments on March 13, 2008.

On April 3, 2008 Mary Blevins sent an e-mail to Cheryl Nelson, the EPA project manager, stating that she had reviewed Seimens' response to comments and found no significant ecological concerns. Mary concluded that, based on the risk metrics used to evaluate the potential for adverse ecological effects and the very low values of those metrics, operation of the facility under the proposed permit conditions was protective of the environment.

Based on my review of Mary Blevins' correspondence and the documents submitted by Seimens, I conclude that the ecological risk assessment provides an adequate basis for EPA to conclude that the permit, as proposed, is protective of the environment.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

December 7, 2007

MEMORANDUM

TO: Mary Blevins, Project Manager, WST-4

FROM: Mary Blevins, Environmental Scientist/Ecological Risk Assessor, WST-4

SUBJECT: Review of *"Draft Risk Assessment for the Siemens Water Technologies Corporation Carbon Reactivation Facility, Parker, Arizona"*, prepared by CPF Associates, Inc., July 30, 2007

EPA has completed its review of the ecological risk assessment portion of the subject document, which was submitted to EPA Region 9 as part of Siemens' Resource Conservation and Recovery Act (RCRA) Part B Permit Application. Risk assessment is a tool consisting of a series of scientific studies designed to conservatively evaluate the likelihood and magnitude of adverse human and ecological impacts from exposures to chemical releases.

The Siemens Water Technologies Corporation (Siemens) operates a carbon reactivation facility on lands owned by the Colorado River Indian Tribes near Parker, Arizona. Facility operations revolve around the reactivation of spent or chemically-contaminated carbon with thermal energy generated from an on-site carbon reactivation furnace. Newly reactivated carbon is a product that can be reused for the removal of toxic contaminants from various environmental media or waste streams. The Siemens Parker facility is currently regulated as an interim status facility under RCRA regulations. Siemens is seeking a RCRA permit for the treatment, storage and disposal of RCRA-regulated hazardous waste.

EPA's Office of Solid Waste has developed a comprehensive set of guidelines and strategies to evaluate putative human and ecological impacts associated with combustion facilities that manage hazardous wastes. These

guidelines are primarily captured in the August 1999 EPA document titled "*Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*" and September 2005 document titled "*Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities*". Other EPA guidance documents used to support the evaluation of putative ecological impacts in this risk assessment include "*Guidelines for Ecological Risk Assessment*" (USEPA 1998) and "*Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments*" (USEPA 1997).

The combustion risk assessment guidance documents contain overarching risk assessment strategies and procedures that support assessment of potential human health and ecological impacts from routine operation and fugitive releases from industrial treatment units designed to manage, treat or destroy hazardous wastes. EPA has incorporated the results from this level of analyses to establish facility-specific, operational permit conditions which are sufficiently conservative to protect public and ecological health. Should Siemens' Part B Permit Application be deemed "technically complete", the hazardous waste treatment unit's operational parameters and standardized procedures, which were optimized in the comprehensive performance test (CPT or trial burn), would then be used to establish unit-specific and risk-based permit conditions designed to ensure protection of human and ecological health.

The 2003 risk assessment work plan identified conservative assumptions for evaluating putative risk from stack emissions to ecological receptors within the Siemens Parker facility area. The ecological risk assessment evaluated potential impacts to wildlife that may be of greatest risk based on habitat use, exposure potential, ecological significance, and population status. For this ecological risk assessment, the habitat types evaluated were representative of the environmental setting around the facility and included creosote bush scrub, agricultural areas, riparian corridors and backwaters, the Colorado River, and the Main Drain. Species selected for evaluation included aquatic life, plants, badger, Gambel's quail, great horned owl, burrowing owl, southwestern willow flycatcher, double-crested cormorant, Yuma clapper rail and mule deer. For Federally listed species, such as the Yuma clapper rail, assessment endpoints were protective at the individual level as opposed to population level.

In general, this review finds that the methods and strategies used to quantify the likelihood and magnitude of environmental impacts from Siemens' releases are consistent with the recommended procedures and strategies articulated in EPA's guidance reference. The methods which were used are largely consistent with the 2003 Agency-approved risk assessment work plan. The results of the evaluation of putative ecological risk from facility operations to ecological receptors were below ecotoxicologically based levels and below a conservative target level of Hazard Quotient = 0.25. This target level was chosen to be consistent with other combustion risk assessments conducted in Region 9

US EPA ARCHIVE DOCUMENT

and to be protective of endangered and threatened species that must be evaluated at the individual level versus population level. As ecotoxicologically based levels were not available for desert tortoise, the evaluation of ecological risk to this species consisted of a qualitative discussion of factors relevant to the health of the desert tortoise and qualitative discussion of results from the evaluation of stack emissions on plants that might be consumed by this herbivorous species. The results of the evaluation of stack emissions on plants were below conservative target levels.

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Appendix E

Environmental Justice Findings

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Evoqua Environmental Justice Analysis

Introduction

Executive Order 12898 entitled "Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations" states in relevant part that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." Section 1-101 of Exec. Order 12898, 59 Fed. Reg. 7629, (Feb. 16, 1994) further states that "Federal agencies are required to implement this order consistent with, and to the extent permitted by, existing law." Id. at 7632. As outlined in the U.S. EPA Administrator's Memorandum signed on July 24, 2014, "…U.S. EPA seeks to be responsive to the environmental justice concerns of federally recognized tribes, indigenous peoples throughout the United States, and others living in Indian country." U.S. Environmental Protection Agency's "Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples" (July 24, 2014)

The U.S. EPA is proposing to issue a Resource Conservation and Recovery Act ("RCRA") hazardous waste permit for the Evoqua Water Technologies, Inc. ("Evoqua") facility near Parker, AZ (the "Facility"). Evoqua, previously known as Siemens Industries, Inc., Siemens Water Technologies, US Filter and Westates, operates a carbon regeneration facility located on the Colorado River Indian Tribes ("CRIT") Reservation. The U.S. EPA Regional Offices, including U.S. EPA Region 9, have for several years incorporated environmental justice considerations into their review of permit applications for RCRA permits and other permits. In addition, the Environmental Appeals Board has reinforced the importance of undertaking an environmental justice analysis in its opinions.

This environmental justice analysis attempts to identify communities and vulnerable populations that may be impacted by a proposed permit decision for the Facility. It also documents that U.S. EPA has incorporated environmental justice considerations into its permit application review and surveyed publicly available environmental and demographic data for the communities located near the Facility. In fulfilling its RCRA permitting obligations, the U.S. EPA also conducted a National Historic Preservation Act ("NHPA") Section 106 review and evaluated a human health and ecological risk assessment ("risk assessment") submitted by the permit applicant for the Evoqua Facility. The risk assessment demonstrates that, even with conservative assumptions, the potential risks associated with the Facility operations are below regulatory and target levels for human health impacts (both carcinogenic and non-cancer) and ecological impacts.

Regulatory Background

The U.S. EPA promulgated rules regulating carbon regeneration furnaces in 1991. Several facilities were already operating or had begun construction on carbon regeneration furnaces, including Evoqua (then known as US Filter Westates). Some of these existing facilities

achieved “interim status” to operate under the hazardous waste provisions of RCRA Subtitle C, while applying for a RCRA hazardous waste permit. The Evoqua Facility achieved interim status in August of 1991, and was thus required to be operated in compliance with the U.S. EPA RCRA interim status regulations for thermal treatment units.

The original Part B permit application for the Evoqua Facility was submitted to U.S. EPA in January 1996. Since then, several revisions to the application have been submitted and U.S. EPA has reviewed and commented on those revisions. CRIT, the landowner, signed as co-applicant on the permit application in 2009. In August 2011 U.S. EPA met with the CRIT Tribal Council (“Council”) and provided a presentation on the status of the Evoqua Facility permit application. On September 22, 2014, the U.S. EPA briefed the Council and initiated formal tribal consultation. On March 12, 2015 the U.S. EPA conducted a second presentation for the Council as part of its consultation process. The Council informed U.S. EPA on April 25, 2016 that it approved the endorsement of its 2009 signature on the RCRA Hazardous Waste Part B Permit Application Certification. The first phase of tribal consultation (the application phase) was completed on May 20, 2016. U.S. EPA will continue consulting with the Council and will initiate an additional formal consultation in advance of a final permit decision.

The Evoqua Facility is also subject to the Clean Air Act, the Clean Water Act, and the Emergency Planning and Community Right-to-Know Act (“EPCRA”). Under the Clean Air Act, the Facility must report estimated air emissions of certain contaminants annually to the U.S. EPA. Under the Clean Water Act, the Facility must treat waste waters before discharging them to the local waste water treatment system, and must have a storm water management plan. Under EPCRA, the Facility must provide information to local emergency response agencies about hazardous materials stored at the Facility. Under the Toxic Release Inventory (which is part of EPCRA), the Facility must report to U.S. EPA releases of certain contaminants.

Local Area and Environmental Data

Local Area

The Evoqua Facility is located at 2523 Mutahar Street near Parker, Arizona on the Colorado River Indian Reservation. Parker is located within La Paz County. The Colorado River Indian Reservation spans the Colorado River and occupies land in Arizona (La Paz County) and California (San Bernardino and Riverside counties). The Reservation covers 284,691 acres, 241,995 acres (85%) of which are in Arizona and 42,696 acres (15%) of which lie across the river in California. The Reservation is located in an area known as the Sonora Desert. Along the Colorado River, riparian habitat supports stands of trees. Sparse shrub land and bare desert soil become more predominant further away from the river.

Approximately one-third of the Reservation land is used for agriculture. Agricultural production on the Reservation is focused in the fertile lands found along the Colorado River. Irrigation water from the Colorado River is delivered through a network of canals and allows the production of agricultural commodities such as cotton, alfalfa, wheat, feed grains, lettuce, and melons.

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The primary residential and commercial areas on the Reservation are Parker, Big River, and Poston. Many areas along the Colorado River are used for camping, fishing, and water sports. Recreational and subsistence fishing occurs both along the river and in the 250 miles of irrigation canals on the Reservation. The Evoqua Facility represents an industrial land use area on the Reservation and is approximately 2.5 miles from the Colorado River.

The U.S. EPA conducted a survey within a five-mile area around the Facility using NEPAssist to identify healthcare facilities, schools and community gathering places. Two hospitals and four schools were identified within that area. The schools consisted of two elementary schools, one junior high school and one high school. A few churches that may be used as community gathering places were also identified.

Environmental Data

La Paz County is currently designated as Unclassifiable/Attainment for all Clean Air Act National Ambient Air Quality Standards. Neither the city of Parker nor the Evoqua Facility are located near any major highways or freeways. However, there is a five-lane avenue that runs through the center of the city of Parker.

Portions of the Colorado River near Parker, Arizona have been identified on the Clean Water Act Section 303(d) list[1]. The State of Arizona's *2012/14 Status of Water Quality: Arizona's Integrated 305(b) Assessment and 303(d) Listing Report* identifies the portion of the Colorado River from Bill Williams River to Osborne Wash as impaired due to selenium pollution. (See Appendix C at https://www.azdeq.gov/environ/water/assessment/index.html.) The State of California's *Final California 2012 Integrated Report (303(d) List/ 305(b) Report)* identifies the portion of the Colorado River and associated lakes and reservoirs from Lake Havasu Dam to Imperial Dam as impaired due to toxicity pollution (see http://www.waterboards.ca.gov/water_issues/programs/tmdl/2012state_ir_reports/01862.shtml#30666)

The 2015 *Consumer Confidence Report* from the CRIT Utility Services indicates that there was a violation of the drinking water standard for total coliform in May through June 2015. According to the CRIT Utility Services *Consumer Confidence Report*, the water treatment plant has been meeting the Safe Drinking Water Act since July 2015 and continues to monitor bacteria monthly to ensure drinking water safety. The 2014 *Consumer Confidence Report* from the Big River Water Company indicates that none of the drinking water contaminants detected during

[1] The term "303(d) list" refers to the list of impaired and threatened waters (stream/river segments, lakes) that the Clean Water Act requires all states to submit for EPA approval every two years. The states identify all waters where required pollution controls are not sufficient to attain or maintain applicable water quality standards, and establish priorities for development of Total Maximum Daily Loads ("TMDLs") based on the severity of the pollution and the sensitivity of the uses to be made of the waters, among other factors (40 Code of Federal Regulations ("CFR") §130.7(b)(4)). States then provide a long-term plan for completing TMDLs within 8 to 13 years from first listing. Although the data EPA currently has about any threats to or impairment of the Colorado River comes from Arizona and California, EPA is currently undertaking consultation and coordination with federally recognized Indian tribes on a proposed rulemaking to provide more opportunities to fully engage tribes in the Clean Water Act Section 303(d) Impaired Water Listing and TMDL Program.

that calendar year exceeded or violated federal standards.

Demographics and Health Data

Demographic Information

For this environmental justice analysis, the U.S. EPA collected available demographic data for a five-mile radius from the Evoqua Facility and La Paz County, and compared that with data available for the state of Arizona, U.S. EPA Region 9 and nationally.

Demographic Information for La Paz County, Arizona and 5 mile radius from Evoqua Facility

Metric	5 mile	La Paz County	State	Region	USA
Total population	7,463	20,460	6,410,979	46,370,806	309,138,709
Population density	91	5	56	NA	88
Minority (%)	54	NA	42	57	36
Tribal or Indigenous (%)	24	13	4.4	NA	0.8
Low income (average per family income; % below 200% of poverty line)	58	53	37	35	34
Population ≤ 5 years of age (%)	7	4	7	7	7
Population ≤ 18 years of age (%)	26	17	24	NA	24
Population ≥ 65 years of age (%)	16	36	14	12	13
Over 25 years of age with less than high school diploma (%)	26	25	16	19	15
Linguistically Isolated (%)	4	4	6	10	5
Unemployment Rate	NA	7.1	5.4	NA	5.6

The population within a five-mile radius of the Evoqua Facility is above both the State and national average for percent minority (54%) and low income (58%). In addition, both the population within a five-mile radius of the Evoqua Facility and La Paz County contain significantly higher percentages of Tribal or Indigenous populations than in the State or nationally.

The U.S. EPA also reviewed data regarding linguistic isolation, which may limit a household's capacity for civic engagement in the regulatory process. A linguistically isolated household is defined by the U.S. Census Bureau as a household in which no member 14 years old and over: (1) speaks only English; or (2) speaks a non-English language and speaks English "very well." In other words all members 14 years old and older have at least some difficulty with English. The percent of linguistically isolated households within the five mile radius of the Evoqua Facility and in the County of La Paz was similar to that of the State and nationally. However, the U.S. EPA has determined that a substantial portion of the population, approximately 24%, speak a language other than English at home.

Approximately 25% of people over the age of 25 do not hold a high school diploma within a five-mile radius of the Evoqua Facility or within La Paz County. This is a higher percentage within the five-mile radius or within the County as compared to the percentage of such persons within the State overall or nationally. Education level is another factor that may

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influence susceptibility and vulnerability to environmental pollution. Limited formal education is a barrier to employment, health care and social resources, and can increase the risk of poverty, stress, and impacts from environmental stressors. The U.S. EPA has also determined that the population of La Paz County had a higher rate of average monthly unemployment during the month of March 2015, as compared to the rates of average monthly unemployment at the State level and nationally.

Health Information

The U.S. EPA has also reviewed health data information for the population of La Paz County and compared that with available data for the State and nationally. Health data for CRIT was not available. The county data collected is summarized below.

Community Health Information

Health Metric	La Paz County	State	USA
Incidence of Asthma (%)	19.81	13.81	13.36
Infant Mortality (per 1,000 births)	8.3	6.3	6.52
Low Birth Weight	6.3	7.1	8.2
Adults with Diabetes (%)	10.1	8.25	9.09
Adults with Heart Disease (%)	12.04	3.97	4.4
Adults Uninsured (%)	16.12	16.95	14.87
Total Population Uninsured (%)	30	23.39	20.76
Access to Primary Care (primary care physicians per 100,000 people)	34.52	65.25	74.5

The data organized in the table shows that La Paz County has higher incidences of asthma, infant mortality, diabetes and heart disease than the State and country. In addition, La Paz County has less access to primary care, as indicated by the number of primary care physicians per 100,000 people. Moreover, the percentage of the total population without health insurance is higher than the state and national percentages.

Evoqua Facility Emissions and Compliance Information

Annually, Evoqua Facility receives over 5,000 tons of spent carbon from 30- 35 states across the United States. According to Evoqua's estimates, less than approximately 11% of this spent carbon is considered hazardous waste. On average, spent carbon is fed through the system at a rate of about 2,700 pounds per hour.

Permit Condition V.C. of the permit (part of which is reproduced below) contains performance and emission limits for the furnace.

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PERFORMANCE AND EMISSION LIMITS FOR FURNACE AND AIR POLLUTION CONTROL EQUIPMENT

Parameter	Purpose	Limit (1)
Destruction and Removal Efficiency (DRE)	Limit organic emissions	99.99%
Particulate Matter (PM)	Limit PM emissions	0.013 gr/dscf (2)
HCl/Chlorine	Limit HCl/chlorine combined emissions	32 ppmdv (3)
SO_2	Limit SO_2 emissions	30.01 tons per consecutive 12 month period
NO_x	Limit NO_x emissions	22.22 tons per consecutive 12 month period
Mercury	Limit mercury emissions	130 μg/dscm (4)
Semi volatile metals (5)	Limit Pb and Cd emissions	230 μg/dscm
Low volatile metals (6)	Limit As, Be and Cr emissions	92 μg/dscm
Dioxin and furans	Limit dioxin and furan emissions	0.4 ηg TEQ/dscm (7)(10)
Carbon monoxide (8)	Ensure good combustion	100 ppmdv (3)
Total hydrocarbons (9)	Limit organic emissions	10 ppmdv (3)

(1) All values except DRE are corrected to 7% oxygen in the stack gas.
(2) "gr/dscf" is grains per dry standard cubic foot of stack gas.
(3) "ppmdv" is parts per million on a dry volumetric basis in the stack gas.
(4) "μg/dscm" is micrograms per dry standard cubic meter of stack gas.
(5) Semi-volatile metals are lead and cadmium.
(6) Low volatile metals are arsenic, beryllium and chromium.
(7) "ηgTEQ/dscm" is nanograms TEQ per dry standard cubic meter.
(8) 100 ppm by volume on a dry gas basis using a one hour rolling average.
(9) Measured only during the Comprehensive Performance Test.
(10) *TEQ* means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.

The Evoqua Facility has been inspected by the U.S. EPA regularly since 1992, its first year of operation. Most recently, U.S. EPA conducted a physical inspection of the Evoqua Facility on March 3-4, 2015 and reviewed records related to Evoqua Facility's permitted operating units, financial assurance, inspections and training. U.S. EPA determined that the Evoqua Facility was in compliance with applicable RCRA requirements.

A collection of previous inspection reports are available for review at http://www.epa.gov/region09/waste/evoqua/frequent.html#WhatisEvoquacompliancehistory

Human Health and Ecological Risk Assessment

As part of the RCRA permitting process, Evoqua completed and submitted a risk assessment to the U.S. EPA for review in July 2007. The risk assessment was updated in April

2012 and July 2014. Its purpose was to estimate the Evoqua Facility's current and possible future impacts on the health of local residents and the surrounding environment. The risk assessment is designed to be protective of sensitive individuals, such as children, the elderly, those with predispositions, and communities with unique exposure patterns.

The risk assessment consisted of a scientific study of the various ways toxic or hazardous substances from the Facility might come into contact with individuals and/or the ecosystem and a calculation of how likely it would be for adverse human health and/or ecological impacts to occur because of such toxic or hazardous substances at the Facility. The risk assessment considered a broad range of constituents, including approximately 160 compounds that have the potential to be emitted or released from the Facility. The health-based threshold for systemic health impacts in this assessment was reduced by 75% in an effort to account for cumulative exposures from any other facilities in the surrounding area.

More information on the risk assessment for the Facility can be found at https://www3.epa.gov/region9/waste/evoqua/risk.html.

The risk assessment made the following conclusions:

1. The potential risks associated with air emissions from both the Facility's carbon reactivation furnace and from spent carbon unloading are below regulatory and other target risk levels, for both human health and ecological receptors;
2. The incremental contribution of effluent from the Facility's wastewater treatment plant and the Main Drain does not pose unacceptable risks to either aquatic life or human health; and,
3. Both concentrations of fugitive emissions from carbon unloading at the Facility and measured worker breathing zone concentrations are below occupational exposure limits.

Historic Preservation and Sacred Sites

As part of this permitting process, the U.S. EPA conducted a NHPA Section 106 review at the Facility, in formal consultation with the Town of Parker, Evoqua, CRIT, and the Arizona State Historic Preservation Office. U.S. EPA also met with the CRIT Tribal Elders at the CRIT Senior Center to discuss the NHPA Section 106 review. As part of this review, the U.S. EPA designated an Area of Potential Effects ("APE"), solicited input from the public and the consulting parties, identified potential historic or culturally significant properties within the APE, and considered potential effects of Facility operations to those properties, including visual and auditory impacts, as well as impacts stemming from the presence of chemicals in the Facility's emissions.

EPA noted that the Facility can continue operating and processing spent carbon that does not constitute a hazardous waste, even if the hazardous waste permit is denied. Under this premise, EPA determined that the issuance of a RCRA permit would not result in a change in the visual or auditory impacts from the Facility, the cessation of emissions that contain the presence of chemicals, or an increase in NO_x or SO_x emissions. Thus, U.S. EPA made a determination

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that no historic properties would be affected by the issuance of a RCRA hazardous waste permit. Evoqua, CRIT Environmental Protection Office, and Arizona State Historic Preservation Office concurred with U.S. EPA's no affect determination.[2]

More information regarding U.S. EPA's National Historic Preservation Act determination can be found at https://www3.epa.gov/region9/waste/evoqua/national.html.

Outreach Activities for the Proposed Permit Action

The U.S. EPA Region 9 has posted extensive information related to the Evoqua Facility on its public website at https://www3.epa.gov/region9/waste/evoqua/index.html. The website contains information about the Evoqua Facility, including the complete RCRA application, the Facility's air emissions, a summary of the risk assessment for the Facility, a discussion explaining the RCRA permitting process for the Facility, the NHPA consultation process, the public participation process for this permitting action and personnel at the U.S. EPA Region 9 for interested parties to contact. In addition to this information, the website also contains fact sheets summarizing many of the decisions the U.S. EPA has made throughout the permitting process.

The U.S. EPA strives for open communication and meaningful involvement with indigenous peoples and communities and also encourages an appropriate level of involvement by other federal and non-federal government agencies in matters in which the U.S. EPA is involved, as is called for in the U.S. EPA's "Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples" (July 24, 2014). Consistent with this policy, the U.S. EPA held several public meetings and conducted interviews with community members about the Evoqua Facility. Interviews were conducted in October 2011. Members of the public and the CRIT Environmental Protection Office were also consulted in order to select meeting locations and schedules that could accommodate interested community members and facilitate community involvement. The CRIT Environmental Protection Office was also contacted for information regarding the publication of advertisements notifying the community of pending public meetings. Informational public meetings were held in March 2015 and August 2011. During these public meetings members of the public were informed of the RCRA permitting process and specific information relating to the Facility, including this proposed action.

As a part of this specific permitting action, the U.S. EPA Region 9 has also attempted to notify members of the public of its proposed action. The U.S. EPA has mailed and emailed public notices of its proposed permitting action to other government agencies, members of the public, and other organizations interested in the permitting action. Notices were mailed and emailed in both English and Spanish. A copy of the full public notice is available online at: **www.epa.gov/region9/waste/evoqua.**

The U.S. EPA has posted the draft proposed permit, draft statement of basis and other supporting

[2] The town of Parker did not object to U.S. EPA's no affect determination. The town of Parker was notified of U.S. EPA's NHPA Section 106 determination and provided an opportunity to object to the determination within 30 days of the notification. The town of Parker did not respond.

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documentation at **www.epa.gov/region9/waste/evoqua**.

For this proposed decision, any interested person may submit written comments regarding the proposed RCRA permit. All written comments regarding this permit action must be received or postmarked by November 15, 2016. Comments must be sent or delivered in writing to the Land Division at one of the following address:

Written comments must be postmarked or posted by November 15, 2016 and sent to:

"Mike" Mahfouz Zabaneh, P.E.	Phone:	415-972-3348
US EPA Region 9	Fax:	415-947-3530
75 Hawthorne Street, LND 4-2	Email:	zabaneh.mahfuoz@epa.gov
San Francisco, CA 94105		

The proposed draft permit, the Statement of Basis, and the most recent Part B application, can be found at the addresses provided below or by visiting our website:

US EPA 75 Hawthorne St. 3rd Floor San Francisco, CA 94105 (415) 974-4597	Colorado River Indian Tribes Museum and Library CRIT Administrative Complex (At 2nd Avenue and Mohave Road) 26600 Mohave Road Parker, AZ 85344 (928) 669-1332	Parker Public Library 1001 South Navaho Ave. Parker, AZ 85344 (928) 669-2622

These libraries also have additional information and fact sheets about Evoqua.

In addition, U.S. EPA will hold a Public Information Meeting for the purpose of providing interested parties with additional information and an opportunity for informal discussion of the proposed RCRA permit.

Immediately following the Public Information Meeting, the U.S. EPA will hold a Public Hearing, pursuant to 40 CFR Section 124.12, to provide the public with further opportunity to comment on the draft proposed RCRA permit. At the Public Hearing, any interested person may provide written comments, and relevant data pertaining to the draft proposed RCRA permit.

The Public Meeting/Public Hearing will be held on November 1, 2016 at the Mohave Conference Room at the Bluewater Resort and Casino, located at 11300 Resort Drive in Parker, Arizona. The Public Meeting/Public Hearing time is at 7:00 pm.

Before taking final action, the U.S. EPA will consider all written and oral comments submitted during the public comment period, including those provided at the public hearing, before taking final action on the Facility's RCRA permit application.

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The U.S. EPA will send notice of the final decision to each person who provides contact information and who: (i) submits comments during the public comment period, including oral comments provided at the public hearing; or (ii) requests notice of the final permit decision. The U.S. EPA will summarize the contents of all substantive comments and provide written responses in a document accompanying the U.S. EPA's final permit decision. The U.S. EPA will also make a transcript of the Public Hearing Proceedings available to the public.

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Appendix F

Administrative Record File List

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Evoqua Admin Record Part A
1981 03 12 RCRA Online 9487_1981_01_ with marginalia 1993 08 04.pdf
1985 07 10 Skinner Ltr re Carbon Regen.pdf
1986 04 02 _9441_1986_26 Carbon Regeneration Facilities 1.pdf
1986 07 15 OSWER 9441_1986_54 activated carbon cannisters saturated with spent solvents.pdf
1986 07 XX _9441_1986_59 reclaimed sludges.pdf
1986 XX XX RCRA Online 9528_1986_01_ with marginalia 1993 Aug 4.pdf
1987 07 09 RO 9483_1987_10_ Secondary Containment Piping.pdf
1987 08 03 RO 9483.1987_14_ Pressurized Piping auto shut off.pdf
1987 09 23 RO 9483_1987_17_ 2ndary containment above grd flanges valves.pdf
1988 06 09 RO 9483_1988_11 Pump Exemption Secondary Containment.pdf
1988 07 01 Highway System Map - Colorado River Indian Reservation Scan 24B - 6 pages.pdf
1989 08 24 Letter Info related to Air Quality Permit w o encls.pdf
1989 09 12 Letter Re_CRIT_Concerns_1989.pdf
1989 11 30 9483_1989_04 Response to October 30 Letter re Secondary Containment.pdf
1990 02 16 Letter EEI retained for Env Assessment.pdf
1990 03 01 Response to 02061990 Letter for List of Species.pdf
1990 03 03 Spent Carbon Flow Control Scheme.jpg
1990 03 08 Letter Request_Info_to_complete_Environmental Assessment.pdf
1990 06 12 Transmittal of All Info Compiled from co approached the CRIT -06121990.pdf
1990 06 22 Process Flow Diagram.jpg
1990 06 25 Certificate of Disclosure.pdf
1990 07 26 excerpts of Business Lease CRIT and Westates.pdf
1990 08 03 Letter Request for Review of Draft NEPA Document.pdf
1990 09 07 EPA Review of BIA Draft EA.pdf
1990 09 14 Notification of Intent to Construct Facility for Activated Carbon.pdf
1990 09 14 Re Review of Environmental Assessment.pdf
1990 09 XX EPA comments on BIA draft EA.pdf
1990 10 25 Response to Letter of Determination.pdf
1990 11 05 Letter Regarding Preliminary Review of Discharge.pdf
1990 11 29 Letter Re_Cultural_Resources_Determination.pdf

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1990 12 01 Westates Maps and Photos.pdf
1990 12 18 Topographic Survey.jpg
1991 02 21 CFR Regulation of Carbon Regeneration Units.pdf
1991 04 02 Transmittal Letter w_o attchmt Environmental Assessment.pdf
1991 06 24 Letter re Determination that Proposed Proj does not discharge dredge.pdf
1991 08 02 EPA OSW PPC 9489_1991_04 Reg Status Carbon Regen Units.pdf
1991 08 05 RCRA Part A Permit Application.pdf
1991 08 12 Aerial Photo.jpg
1991 08 12 Letter re Part A Permit Application.pdf
1991 08 12 Part A Application Form 8700 reduced size.pdf
1991 08 12 Part A Application_Cover_Letter_1991.pdf
1991 08 12 Topographic Map 1 of 2.jpg
1991 08 12 Topographic Map 2 of 2.jpg
1991 08 12 Topographic Map.jpg
1991 08 12 Westates Arial Photo scan 16_jpg - OneDrive_aspx.mht
1991 08 12 Westates Arial Photo scan 20_jpg - OneDrive_aspx.mht
1991 08 12 Westates Arial Photo scan 23_jpg - OneDrive_aspx.mht
1991 08 12 Westates Arial Photo scan3_jpg - OneDrive_aspx.mht
1991 08 12 Westates Arial Photo scan4_jpg - OneDrive_aspx.mht
1991 08 12 Westates Topo Map Scan 1_jpg - OneDrive_aspx.mht
1991 08 12 Westates Topo Map scan 17_jpg - OneDrive_aspx.mht
1991 08 12 Westates Topo Map scan 18_jpg - OneDrive_aspx.mht
1991 08 12 Westates Topo Map scan 21_jpg - OneDrive_aspx.mht
1991 08 12 Westates Topo Map scan 22_jpg - OneDrive_aspx.mht
1991 08 12 Westates Topo Map scan2_jpg - OneDrive_aspx.mht
1991 08 12 Westates Topo Map scan5_jpg - OneDrive_aspx.mht
1991 08 12 Westates Topo Map scan6_jpg - OneDrive_aspx.mht
1991 08 12 Westates Topo Map Sheet 1 of 2 scan 14_jpg - OneDrive_aspx.mht
1991 08 12 Westates Topo Map Sheet 2 of 2 scan 15_jpg - OneDrive_aspx.mht
1991 10 10 HQ Delegation 8-6 RCRA TSDF Permits.pdf
1991 11 06 Parker Pioneer Article of Westates Breaking Ground.pdf

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1991 est Date not legible Westates Flow Diagram scan 19_jpg - OneDrive_aspx.mht
1992 02 14 Interim Status Eligibility _incl portions of lease.pdf
1992 09 23 letter re revise Part A w_o encl.pdf
1992 10 01 Process Code T04 Top Section.pdf
1992 11 30 Revised RCRA Part A Permit Application.pdf
1993 01 01 1992 Annual Report.pdf
1993 01 05 RCRA Preliminary Assessment 1.pdf
1993 04 13 EAB Decision in GE matter reduced size.pdf
1993 04 25 Aug 1993 CEI_8.pdf
1993 05 11 Westates Diagram Tree.pdf
1993 06 10 Current Corporate Status of Facility.pdf
1993 07 26 Tank Inspection and Certification Per 40 CFR.pdf
1993 07 29 2nd page of fax of Draft Proposed Meeting Agenda for Aug 4 1993.pdf
1993 08 04 Aug 1993 CEI_5.pdf
1993 08 04 Letter Jeffrey Walsh Inquiry.pdf
1993 08 08 Case Conclusion Data Sheet 1.pdf
1993 08 14 Aug 1993 CEI_4.pdf
1993 08 17 Aug 1993 CEI_1.pdf
1993 08 19 Inspection Memo US EPA R9 Ray Fox to Larry Bowerman.pdf
1993 08 19 Memo re site visit 1993 08 17.pdf
1993 08 30 Request of Documents.pdf
1993 09 02 Aug 1993 CEI_7.pdf
1993 09 03 Letter re Site Inspection.pdf
1993 09 20 Transmittal Letter w_o attchmts of Employee Personal Training Records.pdf
1993 09 24 Intended Change Sole Shareholder.pdf
1993 10 XX Response to Requests in 10141993 Letter w_o attchmts.pdf
1993 11 22 Aug 1993 CEI_2.pdf
1993 12 08 ltr re EPA Inspection Report.pdf
1993 12 17 Revised RCRA Part A Permit Application.pdf
1993 Aug 1993 CEI_3.pdf
1993 site plan Aug 1993 CEI_3.pdf

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1994 01 01 BIA and BLM maps - Cover.pdf
1994 02 03 Waste Analysis and Contingency Plan.pdf
1994 02 16 Determination of Violation.pdf
1994 02 18 EPA Proposes Fine Against Westates.pdf
1994 02 18 Press Release EPA Proposes Fine Against Westates.pdf
1994 02 25 Response to EPA Information Request.pdf
1994 03 04 Compliance Tasks.pdf
1994 03 04 Letter re Compliance Tasks.pdf
1994 03 10 EPA Letter re formal enforcement action.pdf
1994 03 15 CEI Report_2.pdf
1994 03 16 CRIT response to USEPA Letter.pdf
1994 03 18 Letter re phone call on deadlines.pdf
1994 03 18 Memo re call regarding deadlines 1.pdf
1994 03 21 Answer and Request for Hearing.pdf
1994 03 21 Letter Phase II Environmental Assessment.pdf
1994 03 21 Letter re Answer and Request for Hearing.pdf
1994 03 21 Re Assignment of Admin Law Judge.pdf
1994 03 21 Transmittal for Answer and Request for Hearing.pdf
1994 03 29 Items SAIC requested.pdf
1994 04 12 RCRA CEI March 15 1994 Report.pdf
1994 04 15 Order of Designation.pdf
1994 04 21 Site View Overall Arrangement Map.jpg
1994 04 29 Notice and Order.pdf
1994 05 03 Memo re May 18 Conference.pdf
1994 05 19 Annual Report Certificate of Disclosure.pdf
1994 05 19 Status Report.pdf
1994 05 26 Prelim Assessment Review Waste Div USEPA R9.pdf
1994 07 05 Guidance on Trial Burn Failures 9498_1994_04.pdf
1994 07 13 Warning Letter Mar 1994 Insp w_o attchmts.pdf
1994 08 10 Response to 07151994 Letter.pdf
1994 09 07 Corrective Action Stabilization Questionnaire.pdf

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1994 09 13 corrected violation.pdf
1994 11 09 OSWER 9441_1994_29 reg status waste reclamation.pdf
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Appendix G

RCRA Facility Assessment

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REVISED DRAFT
RCRA FACILITY ASSESSMENT
REPORT

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1.0 EXECUTIVE SUMMARY

The owner or operator of a facility seeking a Resource Conservation and Recovery Act (RCRA), (42 U.S.C. §§6901 *et seq.*) permit must institute corrective action operations as necessary to protect human health and the environment. The RCRA corrective action process includes development of a RCRA Facility Assessment (RFA). The RFA is conducted by the United States Environmental Protection Agency (EPA or Agency) to determine the presence or potential release of hazardous constituents into the environment from any hazardous waste management units (HWMUs), solid waste management units (SWMUs), or areas of concern (AOCs) at a facility.

In 2001, EPA began the process of developing an RFA for the Evoqua Water Technologies LLC (Evoqua or facility) facility located on the Colorado River Indian Tribes (CRIT) reservation near Parker, Arizona which is located at 2523 Mutahar Street
Parker, Arizona (AZD 982 441 263). This facility was formerly known as Siemens Water Technologies LLC, Siemens Industries Inc., U.S. Filter-Westates, and Westates Carbon-Arizona, Inc. For ease of reference, the facility operator is referred to throughout this RFA as "Evoqua." Prior names remain in older documents, maps, and diagrams that are used or referenced in this document.

A Draft RFA was prepared by EPA's contractor, Booz Allen Hamilton, Inc. (Booz Allen Hamilton), in September 2003. Additional information used in this RFA was provided by Evoqua in more recent versions of the Part B Permit Application, and this 2016 revision includes that information.

The first visual site inspection (VSI) at the facility was conducted in September 2003 by Booz Allen Hamilton. During the VSI 35 SWMUs were identified at the Evoqua facility. As a result of an EPA request for information dated September 2011, Evoqua re-categorized its SWMUs and AOCs as HWMUs, SWMUs, and AOCs. A follow-up VSI was conducted in March 2014 by EPA. The second VSI identified 25 HWMUs, 19 SWMUs, and 14 AOCs.

The findings of this revised draft RFA show that there is no need for immediate corrective action at this facility. The waste management units and AOCs at this facility will be further investigated and, if needed, will be cleaned up at the time of the facility closure, in accordance with the procedures documented in the Facility's closure plan.

2.0 INTRODUCTION

2.1 Purpose of the RCRA Facility Assessment

The 1984 Hazardous and Solid Waste Amendments (HSWA) to RCRA provide EPA with the authority to require corrective action at RCRA facilities. Corrective action is the process through which areas of a facility that could have received hazardous waste or constituents are evaluated and, if necessary, cleaned up. RCRA facilities include all facilities that currently treat, store, or dispose of RCRA-regulated hazardous waste or constituents (or have done so in the past). HSWA refocused the corrective action program from detecting and correcting future releases from regulated units, to cleaning up problems resulting from current and past waste management

practices at RCRA facilities. The HSWA corrective action program addresses releases to all media including: groundwater, surface water, the atmosphere, surface soils and subsurface soils, both on and off-site; and sources across the entire facility.

The RCRA corrective action process consists of an appropriate combination of the following activities: a Preliminary Review (PR) of regulatory files for the site; conducting a Visual Site Inspection (VSI); conducting a Sampling Visit (SV), if deemed necessary; and preparation of an RFA Report. RFAs compile existing information on environmental conditions at a given facility, including information on actual or potential releases. The RFA focuses on obtaining information on the potential that a release has occurred from any HWMU, SWMU or any other AOC where wastes containing hazardous constituents have been managed or released at the facility.

EPA Region 9 requested Booz Allen Hamilton conduct an RFA of the Evoqua facility located in Parker, Arizona on the Colorado River Indian Reservation. The first phase of the RFA was a file search at the EPA Region 9 office in San Francisco, California and at the Arizona Department of Environmental Quality (ADEQ) office in Phoenix, Arizona. Brief interviews with ADEQ staff regarding the Evoqua facility records were conducted during the PR file search. The ADEQ interviews resulted in no file material different from what was found at EPA Region 9. The results of the file search were summarized in a PR Report dated March 2001.

The second phase of the RFA was a VSI conducted at the facility on July 12, 2001. The purpose of the VSI was to visually inspect SWMUs and AOCs at the Evoqua facility, to identify additional SWMUs, and to fill site characterization information gaps identified during the PR by interviewing facility personnel and reviewing on-site records. The CRIT was invited to attend the VSI by EPA Region 9 but declined to send a representative. Based on the findings and conclusions of the PR/VSI portion of the RFA, an SV at the facility was not deemed necessary.

On February 4, 2002, following the VSI, a letter was sent to the CRIT by Booz Allen Hamilton requesting relevant information and data from their files to complete the RFA investigation. A verbal response was received from a CRIT representative on February 8, 2002, indicating that no additional information or data relevant to the RFA is in the CRIT files.

The Draft RFA was prepared by Booz Allen Hamilton in September 2003. The RFA was more recently updated by the EPA Project Manager using information that was provided by Evoqua in the more recent Part B Permit Application's References 1 through 5 listed on page vi of the Table of Contents.

The Part B permit application was submitted on the following dates:

- January 1996 (Part B Permit Application Reference 1);
- February 2007 (Part B Permit Application Reference 2);
- April 2012 (Part B Permit Application Reference 3);
- July 2014 (Part B Application Reference 4); and
- April 2016 (Part B Permit Application Reference 5).

A follow-up VSI was conducted by the EPA Project Manager in March 2014 (Appendix A). EPA invited the CRIT Environmental Protection Office (EPO) to participate in the VSI, however the CRIT EPO declined and requested a debriefing of the EPA findings. The debriefing took

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place on the last day of the VSI at the EPO on Friday, March 14, 2014. During the VSI, EPA inspected the facility and documented the conditions of the SWMUs, HWMUs, and AOCs. The EPA Project Manager reviewed the last three (3) years of the facility's operating records, inspection records, and calibration records. The new VSI photographic documentation can be found in Appendix A.

2.2 General Procedures Used for Gathering Information

Each of the steps to the RFA requires the collection and analysis of data to support release determinations. During the PR process, existing documents, such as inspection reports and permit applications, are evaluated; and interviews are conducted with Federal, State, and Tribal personnel who are familiar with the facility. Additional site characterization information is gathered during the VSI, including visual observation of the site, interviews with the representatives of the facility, and review of requested file material from the facility and Tribal representatives.

2.3 Facility Information

The EPA Identification (ID) number for Evoqua is AZD982441263. The Standard Industrial Codes (SIC) for the facility are 4953 (refuse systems) and 9999 (otherwise unclassifiable establishments). The facility is located within the CRIT reservation lands.

The facility is divided into three main areas: (1) the receiving, unloading, and drum storage area; (2) the tank storage area and process (treatment) area; and (3) the reactivated carbon storage, packaging, and shipping area. The areas where hazardous waste is managed includes: (1) a container and bulk receiving and unloading area; (2) a container storage warehouse area; (3) four spent carbon slurry storage tanks; (4) and the carbon reactivation furnaces: RF-1 (used between 1992-1996) and RF-2 (1996-present) and the associated air pollution control equipment. Facility layout maps are included in Appendices D1 and D2 to this RFA report, and a process flow diagram is provided in Appendix E. This diagram is from the Permit Application Reference 5.

The facility operates 24 hours per day, seven days per week, and therefore is staffed continuously by operating personnel. The facility employs approximately 24 people.

3.0 SITE DESCRIPTION

3.1 Site Location

The facility is located within the CRIT Industrial Park, an area zoned for commercial and industrial uses on the Colorado River Indian Reservation. The facility is adjacent to US 95 with access to I-8, I-10, and I-40. The site is about one mile southeast of Parker, Arizona, in the county of La Paz in Township 9 North, Range 19 West, and Section 7, at the Gila and Salt River Base Line and Meridian. The latitude of the facility is 34˚07'55", and the longitude is 114˚16'19.7". The facility is located on approximately 10 acres of land. One entrance to the facility for all vehicles exists from Mutahar Street. A delivery truck of spent carbon must pass through one gate to get to the unloading area of the facility. The gates to the facility are chain

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link and topped with barbed wire. Appendix C to this RFA report presents the site location map for the Evoqua facility.

The physical address for the facility is:

2523 Mutahar Street
Parker, Arizona 85344

3.2 Owner/Operator History

In May 1989, Evoqua approached the CRIT with a request to build a carbon reactivation facility in the CRIT Industrial Park in Parker, Arizona. On July 14, 1990, the CRIT approved the request for the land lease and facility construction on tribal lands. The agreement between Evoqua and the CRIT was then submitted to the U.S. Department of Interior, Bureau of Indians Affairs (BIA) for final approval. Final approval and a land lease agreement was signed effective April 1, 1991.

In February 1991, an Environmental Assessment (EA) was performed by Evoqua to comply with the National Environmental Policy Act (NEPA). The EA was required since the proposed carbon reactivation plant was to be constructed and operated on Indian Trust Lands. The Superintendent of the BIA determined that through implementation of the proposed action and environmental mitigation measures specified in the EA, the proposed Evoqua reactivation plant site would have no significant impact on the quality of the environment. The EA states that an Environmental Impact Statement (EIS) was not required.

The facility began operation on August 23, 1992. It is currently owned and operated by:

Evoqua Water Technologies, LLC.
2523 Mutahar Street
Parker, Arizona 85344

The address of the property owner (*i.e.*, the beneficial owner of the trust lands) is as follows:

Colorado River Indian Tribes
Route-1, Box 23-B
Parker, Arizona 85344

3.3 Processes and Waste Management

The following process and waste management descriptions are based on information and data provided to EPA in the facility's 1995 RCRA Part B permit application and in EPA's Compliance Evaluation Inspection (CEI) Reports, and information gathered during the VSI. The spent carbon reactivation processes are depicted in the carbon reactivation process flow diagram in Appendix E.

The facility receives spent (used) activated carbon from off-site customers who use activated carbon in equipment to adsorb organic compounds from aqueous and vapor processes and waste

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streams. At the facility, the spent carbon is thermally reactivated in reactivation furnace RF-2. The reactivated carbon is checked for its reusability and shipped off-site for reuse.

The facility's revised October 1996 Part A application identifies 449 hazardous waste codes acceptable for treatment at the facility (See Appendix I of Part B Permit Application Reference 5). The list of hazardous constituents that may be adsorbed to the spent carbon is extensive, and may include, but is not limited to, volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), phthalates, amines, pesticides, and metals. Activated carbon is typically used to remove organic constituents from a liquid or gas stream. It is not customarily used to remove metals from a waste stream, although low concentrations of metals may be present in spent carbon. Analytical results in 1994 and 1995 of monthly composite spent carbon samples indicated that the carbon contained traces of several metals, including arsenic, beryllium, cadmium and chromium (See Appendix I of Part B Permit Application Reference 5). Spent carbon characterized as corrosive or reactive is not accepted at the Evoqua facility. Less than eleven percent of the carbon the facility receives is classified as RCRA hazardous waste.

At the Evoqua facility, two types of spent carbon are received, inspected, sampled, unloaded, and processed by thermal reactivation. The first type of carbon is known as wet carbon because it is used in aqueous systems. The amount of hazardous constituents in the wet carbon is typically less than five percent by weight. The particle size used in wet carbon is generally smaller than the type used in vapor phase applications. The second type of carbon is used in vapor phase applications and is called dry carbon. Dry carbon may contain five to ten percent by weight of hazardous constituents. Wet and dry spent carbons are mixed before processing in the reactivation furnace. The facility also reactivates nonhazardous spent carbon and combines hazardous and nonhazardous spent carbon for processing in the reactivation furnace.

Spent carbon is delivered by truck to the Evoqua facility in containers (55-gallon drums or filter canisters) and in bulk-load tank trucks and roll-off bins. About half of the spent carbon received at the facility comes in containers. Upon arrival at the Evoqua facility, the truck drivers provide the manifests for the load and Land Disposal Restriction (LDR) forms to a facility representative.

The facility takes samples of each shipment of waste arriving on site. For incoming drums, the square root of the number of drums in the shipment plus one is sampled. Spent carbon is typically received in bulk loads that comprise of either 10,000-pound (lb) roll-off bins or 20,000-lb slurry trucks. Samples are collected from each roll-off bin and from representative locations in slurry truckloads. The samples are tested for pH, ignitability, and water reactivity.

Evoqua personnel review the hazardous waste manifests, laboratory results, and other information concerning the incoming spent carbon and check this information against the waste profiles. Any discrepancies in manifests, LDR forms, or waste profile information are addressed before the waste is accepted for treatment. The spent carbon is rejected if it cannot be appropriately treated at the operating conditions of the reactivation furnace.

Following receipt, inspection, and acceptance at the spent carbon transfer area concrete pad, spent carbon received in bulk load is typically transferred directly to one of the four spent carbon slurry storage tanks. The transfer occurs through the spent carbon unloading hopper H-1 and a pipe conveyance system, known as the spent carbon slurry and recycle water transfer system.

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Recycled water is added to the spent carbon to flush it out of the trucks and into the unloading hopper. Excess water falls through a screen and goes through a filter, making the water reusable by the facility, and the water is recycled via piping to Tank T-9. The trapped materials in the carbon filter are fed through the reactivation furnace.
Spent carbon received in smaller containers, such as drums, is typically moved to the spent carbon storage warehouse in the container in which it was received, and subsequently transferred to one of the four slurry storage tanks via unloading hopper H-2 and the spent carbon slurry and recycle water transfer system.

The spent carbon received at the Evoqua facility requires a slurry system to move it from unloading hoppers to storage tanks and from storage tanks to the reactivation furnace. In the slurry system, an eductor/extractor at the bottom of the unloading hopper (H-1 or H-2) facilitates removal of the spent carbon from the hopper by adding water to the carbon.

From the slurry storage tanks, the water-carbon slurry is transferred via a piping system to the reactivation furnace RF-2 feed tank, T-18, and then to the reactivation furnace RF-2. Prior to introduction into the reactivation furnace, the water-carbon slurry is fed from Tank T-18 via a pipe system, to a dewatering screw at the top of RF-2 where the carbon is dewatered. The water from the dewatering screw is routed to the recycle motive water tank, T-9 where it is then recycled through the spent carbon slurry and recycle water transport system. The dewatered spent carbon is then fed into the top hearth of the reactivation furnace by a weigh belt conveyor. The weigh belt weighs the spent carbon as it enters the furnace to ensure feed rate limits are not exceeded.

The dewatered spent carbon is thermally reactivated in RF-2. RF-2 is a multiple hearth furnace consisting of five hearths. The spent carbon is introduced into the top hearth and flows downward through the remaining four hearths. Reactivated carbon exits the bottom hearth through a cooling screw. Prior to being shut down, RF-1 was operated in a fashion similar to RF-2 but had four hearths instead of five. The spent carbon was introduced into the top hearth and flowed downward through the remaining three hearths. Reactivated carbon exited the bottom hearth also through a cooling screw.

Inside the reactivation furnace (RF-2), the spent carbon is exposed to high temperatures. The high temperatures remove moisture from the spent carbon, desorb organic contaminants, and reactivate the carbon.

According to air emissions tests conducted by Evoqua and overseen by the EPA, the system achieves destruction and removal efficiency for organic compounds of greater than 99.99% (Appendix V of Part B Permit Application Reference 5).

The hot gases generated in RF-2 during the reactivation process then enter the RF-2 air pollution control equipment, which includes an afterburner, venturi scrubber, packed bed scrubber, wet electrostatic precipitator, and emissions stack. The afterburner is designed for combustion of organic constituents that were desorbed in the reactivation furnace. If the afterburner malfunctions, safety shut-down devices will stop all processing activity to minimize the release of contaminants to the atmosphere. From the afterburner, the hot gases are routed through a venturi scrubber for particulate matter removal. From the venturi scrubber, the gases are routed to a packed bed scrubber for acid gas control. From the packed bed scrubber, the gases are

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routed to a wet electrostatic precipitator for additional particulate matter removal. From the wet electrostatic precipitator, the gases are routed to the emissions stack.

The wet scrubbers employ a dual loop scrubbing system. The scrubber water is supplied to the wet scrubbers via a closed loop cycling system. A pump is used to route the scrubber water from scrubber water equalization tank T-19 to the upper section of the packed bed scrubber. A pump is also used to route the scrubber water from a tank in the bottom section of the packed bed scrubber to the venturi scrubber. From the wet scrubbers, the scrubber water is returned to Tank T-19 or periodically discharged to the local publicly owned treatment works (POTW).

Adjustment of scrubber water pH occurs twice, once prior to introduction into the scrubbers, and again prior to discharge to the POTW. The pH of the scrubber water is controlled by the introduction of caustic (via a metering pump) into the scrubber water line just prior to introduction into the venturi and packed bed scrubbers. A continuous portion of the scrubber water is removed from the system (blow down) and discharged to the POTW. This discharge (blow down) limits the buildup of total dissolved solids (TDS) and it is pH adjusted and cooled prior to discharge. Scrubber water discharge (blow-down) from the former RF-1 air pollution control equipment was treated in the wastewater treatment and storage tank, Tank T-11 prior to discharge to the POTW. Scrubber blowdown from RF-2 air pollution control equipment is treated in a wastewater treatment unit, or discharged directly to the POTW. The discharge to the POTW is continuously monitored for pH, total dissolved solids, flow and temperature to ensure compliance with the discharge limitations found in the facility's industrial wastewater discharge permit.

A baghouse and a carbon adsorber have been installed to collect the carbon dust (particulates) from the incoming spent carbon hoppers during unloading. Particulates collected in the baghouse are returned to the furnace feed system for treatment or are disposed in the facility hazardous debris bin. The particulate collection system is inspected for leaks or improper operation by facility personnel at least once each work shift.

All hazardous waste storage and treatment areas at the facility are surrounded by containment systems. All rainwater that falls within these containment systems is collected and routed to the recycle/motive water tanks T-9, where it is used as make-up water to the spent carbon slurry and recycled water system.

Reactivated carbon is removed from the bottom of the reactivation furnace and transported to three product storage tanks at the reactivated carbon, storage, packaging, and shipping area of the facility. Reactivated carbon is moved via a dense phase transporter conveyor to the product packaging building where it goes through screens to separate the reactivated carbon into different sizes, and is placed in an appropriate container (either a drum or a bag) for shipment to customers. All steps in this process are performed under a particulate control system. The nonhazardous product particulates are captured by a hood, bagged as a product, and sold to industry.

A map depicting the HWMUs, SWMUs, and AOCs locations that were verified during the VSI, is provided as Appendix D1. These figures are from the Permit Application Reference 5, Figures J-1 to J-7 of Permit Application Section J.

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4.0 REGULATORY INVOLVEMENT

The following discussion is based on correspondence and documents cited in the references and appendices of this RFA Report.

4.1 EPA, CRIT, and State Regulatory Status, and Environmental Regulations

The facility is subject to federal environmental laws administered by EPA Region 9 and is subject to the authority of the CRIT.

Federal environmental laws that the facility must comply with include: the Clean Water Act (CWA), the Clean Air Act (CAA), the RCRA, and the Emergency Planning and Community Right-to-Know-Act (EPCRA).

CRIT Authority

The 10 acres of land on which the facility was constructed are part of tribal trust lands of the CRIT. A lease issued to the operator by the CRIT and the BIA on April 1, 1990 (Lease No. B-1122-CR) governs the operator's facility activities on the tribal trust lands. The primary term of the original lease was 20 years. The lease also had an option to renew the lease for an additional 20 years. The lease renewal for the additional 20 years took place in 2010. Under the lease agreement, the operator pays lease rental fees to the CRIT for the 10 acres of land on which the facility is located.

Clean Water Act

EPA Region 9 has authority for implementing the CWA on the Colorado River Indian Reservation. Wastewater discharges from the facility are subject to new pretreatment standards under the CWA, Section 307, which restricts pollutant discharges for certain facilities that discharge wastewater indirectly through sewers flowing to POTWs. The facility meets the definition of a "centralized waste treatment (CWT) facility."

Colorado River Sewage System Joint Venture (CRSSJV) was issued a National Pollutant Discharge Elimination System (NPDES) permit (No. AZ0021415, dated May 2015) to authorize the discharge of the treated effluent from the existing CRSSJV wastewater treatment plant to the Irrigation Return Canal which flows to the Colorado River in Arizona.

The POTW started operations in 1974 and has a design flow of 1.2 million gallons per day (MGD). The average daily discharge is 630,000 gallons per day (GPD) and the recent maximum daily discharge is 800,000 GPD.

CRSSJV has reported one significant industrial discharger – Evoqua. Evoqua's average daily volume of process wastewater is 140,000 GPD, which represents approximately 22 percent of the POTW's total flow of 630,000 GPD.

Wastewater discharged to the POTW is generated from the following areas within the facility: (1) domestic wastewater; (2) scrubber water discharge (blow-down) from the furnace off-gas system; (3) blow-down of boiler feed water; (4) wastewater from the cooling tower and cooling

screw; (5) recycled water (contact motive water); (6) rain water falling within concrete containment area; and (7) facility wash-down water.

Clean Air Act

The CAA Title III-Maximum Achievable Control Technologies (MACT) Standards set emission limits for hazardous pollutants. Subpart EEE of the MACT standards reflect the maximum degree of hazardous air pollution reduction that can be achieved at hazardous waste combustion facilities, considering the availability and impacts of emissions control technologies. The Evoqua facility uses a furnace to regenerate waste carbon. The furnace is not included in the list of units in the definition of "hazardous waste combustor" under 40 CFR § 63.1201. This CAA definition includes "hazardous waste incinerators," as defined in 40 CFR § 260.10. That RCRA regulatory definition of an "incinerator" specifically excludes an enclosed device that uses controlled flame combustion and that is a carbon regeneration unit. As a result, the furnace is not regulated as a hazardous waste combustor under 40 CFR Part 63's Maximum Achievable Control Technology (MACT) standards.

While not a hazardous waste combustor, the carbon regeneration furnace at the Evoqua facility is defined as a "Miscellaneous Unit" under RCRA's regulations. RCRA's Miscellaneous Unit provisions authorize the Agency to impose appropriate requirements from Subpart EEE of the MACT standards on the furnace and its air pollution control equipment under RCRA's permitting regulations. Please see the further discussion of Subpart EEE below, under "Resource Conservation and Recovery Act."

The facility treats waste generated by facilities subject to the National Emission Standard for Hazardous Airborne Pollutants (NESHAP) for Benzene Waste Operations (Subpart FF in 40 CFR §§ 61.340, et seq.). As such, NESHAP Subpart FF for fugitive emissions applies to the spent carbon storage and treatment processes within the facility (See Appendix XXIII of Part B Permit Application Reference 5). Sources of potential benzene emissions from Subpart FF waste include the carbon adsorbers which control VOC emissions from spent carbon storage and furnace feed tanks; emissions associated with the reactivation furnace RF-2 and the afterburner; fugitive emissions from the unloading of spent carbon into hoppers H-1 and H-2; and fugitive emissions from containers of Subpart FF waste stored in the spent carbon storage warehouse.

NESHAP periodic visual inspection records document the integrity of the process equipment for prevention of emissions of benzene. The facility submits an Annual Report summarizing the total fugitive emissions monitoring that was performed by the operator annually at specific locations on flanges, piping, and other equipment. According to previous annual reports no instrument reading exceeded 500 parts per million by volume (ppmv) over the background concentrations, demonstrating an absence of leaks (Appendix M).

RCRA also requires controlling fugitive emissions from similar sources where hazardous waste is managed. RCRA provides for the facilities that have already installed air pollution control equipment under the NESHAP Subpart FF requirements to continue to use that equipment rather than undergo costly changes to comply with the RCRA air emission standards. Please see the further discussion of Subpart FF below, under "Resource Conservation and Recovery Act."

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Resource Conservation and Recovery Act

The facility qualified for interim status under RCRA permitting requirements because it was an existing hazardous waste facility at the time that the first regulations that applied to the facility's hazardous waste management activities became effective. In a letter dated March 25, 1992, EPA confirmed that the facility had qualified for interim status.

Operations at the facility are currently regulated under RCRA interim status. The furnace and associated air pollution control equipment at the facility are regulated as a thermal treatment unit under 40 CFR Part 265, Subpart P.

RF-2 does not qualify as an incinerator and instead is designated by Subpart X of the RCRA regulations as a Miscellaneous Unit. According to 40 CFR § 264.601 of the Subpart X regulations, permit terms and provisions for a Miscellaneous Unit must include appropriate requirements of 40 CFR Part 264, Subparts I through O and Subparts AA through CC, 40 CFR Part 270, and 40 CFR Part 63, Subpart EEE. Testing of RF-2 was conducted in accordance with the requirements of the Subpart EEE MACT standards and an EPA-approved test plan. The testing consisted of a Performance Demonstration Test (PDT) of the RF-2 unit and a Continuous Emissions Monitoring Systems (CEMS) test. The CEMS testing was conducted just prior to the RF-2 PDT. The formal PDT was conducted on March 27 through March 30, 2006.

As noted above under the section discussing the CAA, many units at the facility are subject to the NESHAP for Benzene Waste Operations (40 CFR Part 61 at Subpart FF). Many units at the facility are also subject to regulation under RCRA's air emission control provisions (40 CFR Part 264 [and Part 265 during interim status], Subpart CC). The facility has three carbon adsorbers and an after-burner installed on certain units as air pollution control devices in order to meet the CAA Subpart FF Benzene NESHAP requirements. While these units might typically be subject to RCRA's Subpart CC Air Emissions Control requirements, the preamble to the Subpart CC regulations indicates:

> "The EPA has decided that it is not justified to require owners and operators to replace these relatively new control devices, which were installed pursuant to EPA regulation, and is therefore adding an exemption for control devices installed on such systems." 61 Fed. Reg. 59941/3, Nov. 25, 1996.

Because the facility's three carbon adsorbers and the after-burner were installed prior to the December 6, 1996 effective date of EPA's RCRA Subpart CC Air Emissions Control requirements, these emission control devices currently satisfy EPA's RCRA emission control requirements and the CAA Benzene NESHAP. However, any new control devices installed on the regulated units after December 6, 1996, would be required to meet the RCRA Subpart CC Air Emissions Control requirements in addition to the CAA Benzene NESHAP.

Emergency Planning and Community Right-to-Know Act

The facility is subject to the emergency planning and notification requirements of Superfund Amendments and Reauthorization Act (SARA) Title III under the Emergency Planning and Community Right to Know Act (EPCRA). The facility must immediately notify the local emergency planning committee and the CRIT Tribal Environmental Protection Office if there is

a release of a reportable quantity (RQ) of the listed hazardous chemicals that result in off-site exposure. During both VSI, no reports were found in the facility file material of a release of a RQ of a hazardous substance at or from the facility.

The facility files Toxic Release Inventory (TRI) Report (Form R) for source reduction and recycling activities for benzene and other constituents. The reports are bi-annual for the reporting in odd years, as required by Section 313 of EPCRA. Further information can be found online under the EPA website for TRI reporting.

Following is EPA's TRI web address:
http://www2.epa.gov/toxics-release-inventory-tri-program

Following is Evoqua's TRI information on the EPA TRI website:
http://iaspub.epa.gov/triexplorer/release_fac_profile?TRI=85344WSTTS2523M&TRILIB=TRIQ1&FLD=&FLD=RELLBY&FLD=TSFDSP&OFFDISPD=&OTHDISPD=&ONDISPD=&OTHOFFD=&YEAR=2013

4.2 EPA Enforcement Actions

In 1994, a civil administrative enforcement action was instituted pursuant to Section 3008 (a)(1) of RCRA, based on violations observed during an EPA inspection of the facility in August 1993. Alleged violations of RCRA's interim status standards were specified in the "Consent Agreement and Final Order, Evoqua Industries Inc., Docket No. RCRA-09-04-0001," issued to the facility on February 16, 1994. These included allegations of violations such as failure to obtain hazardous waste tank assessments prior to beginning operations, as well as numerous record-keeping deficiencies. The facility returned to compliance and a civil penalty was paid as part of the settlement of the action.

On March 15, 1994, EPA conducted a hazardous waste investigation at the facility. Pursuant to Section 3008 of RCRA, EPA required the facility to correct the identified areas of noncompliance and to submit documentation of their correction to EPA. The facility's subsequent response, dated August 10, 1994, adequately addressed the violations, and documented the facility's return to compliance with the regulations cited in the inspection report.

A RCRA Closure Plan has been submitted to EPA as part of the application. This closure plan describes eventual closure of the hazardous waste portion of the facility including all hazardous waste management units described in the facility's Permit Application Reference 5. The RCRA Facility Closure Plan is Appendix XV of the permit application. Although the first thermal treatment unit (RF-1) was shut down in June 1996, and will not be restarted, closure has not occurred. The closure of RF-1 is in a separate closure plan in Appendix XVI of the permit application.

EPA conducted a series of inspections dated June 19-20, 2001, January 24, 2002, August 29, 2002, March 6-7, 2003, and February 12, 2004. EPA inspectors, accompanied by personnel from the CRIT EPO, conducted RCRA compliance evaluation inspections and found some alleged violations.

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On June 30, 2006, EPA entered into a Consent Agreement and Final Order (CA/FO) with Evoqua Water Technologies, , resolving EPA's claims against the facility with respect to three alleged violations. The CA/FO required the operator to pay a fine and make various safety upgrades.

Full text of the Consent Agreement / Final Order (CA/FO) dated June 30, 2006 (PDF) can be found on the EPA website for this facility online at:

https://www3.epa.gov/region9/waste/evoqua/pdf/april2012/siemens-signed-CAFO-jun-15-2006-with-attachments.pdf

4.3 Inspection History

Since the time that hazardous waste management operations at the facility began in 1992, EPA conducted periodic compliance inspections at the facility, and prepared reports for most of those inspections.

This is a list of the facility's recent inspection reports that can be obtained from the EPA website for this facility online:

https://www3.epa.gov/region9/waste/evoqua/frequent.html

- EPA's Inspection Report from the June 2001 Inspection
- EPA's Inspection Report from the January 2002 Inspection
- EPA's Inspection Report from the August 2002 Inspection
- EPA's Inspection Report from the March 2003 Inspection
- EPA's Inspection Report from the February 2004 Inspection
- EPA Inspection Report from the September 2007 Inspection
- EPA Inspection Report from the June 2009 Inspection
- EPA Inspection Report from the April 2011 Inspection
- EPA Inspection Report from the March 2012 Inspection
- EPA Inspection Report from the March 2015 Inspection

4.4 Performance Demonstration Test

Evoqua tested the RF-2 unit under the oversight of EPA to demonstrate the performance and to establish operating parameter limits in accordance with the standards of 40 CFR 63 Subpart EEE. The regulations at 40 CFR 63 Subpart EEE are often referred to as the Hazardous Waste Combustor Maximum Achievable Control Technology (HWC MACT) standards. The testing was conducted in accordance with the requirements of the HWC MACT standards and the approved Performance Demonstration Test (PDT) plan. The testing consisted of a PDT of the RF-2 unit and a CEMS test. The CEMS testing was conducted just prior to the RF-2 PDT. The formal PDT was conducted on March 27 through March 30, 2006.

The purpose of the PDT was to:
1. Demonstrate Compliance with Applicable EPA Regulatory Performance Standards (Based on HWC MACT Standards for Existing Hazardous Waste Incinerators).
2. Establish Operating Limits.

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3. Gather Information for Use in a Site-Specific Risk Assessment.

The PDT determined that continued operation of the Carbon Reactivation Furnace RF-2 under the conditions established by the PDT will result in effective destruction of organic compounds and control of emissions in accordance with the applicable performance requirements.

4.5 Summary of Risk Assessment

On July 30, 2007, Evoqua submitted its Human Health and Ecological Risk Assessment Report to EPA. The risk assessment uses the results from the Final March 2006 air emissions test, conducted at the facility in accordance with EPA regulations for this type of facility.

The risk assessment demonstrates that even using conservative assumptions:

• The potential risks associated with air emissions from both the facility's carbon reactivation furnace and from spent carbon unloading are below regulatory and other target risk levels, for both human health and ecological receptors;

• The incremental contribution of effluent from the facility's wastewater treatment plant drainage does not pose unacceptable risks to either aquatic life or human health; and,
• Both concentrations of fugitive emissions from carbon unloading at the facility and measured worker breathing zone concentrations are below occupational exposure limits.

In conclusion, this risk assessment demonstrates that even with conservative assumptions, the potential risks associated with facility operations are below regulatory and target levels.

Potential risks from stack air emissions at the facility were evaluated for over 170 compounds. These were selected for detailed assessment based on a comprehensive PDT. This test was approved in advance by EPA and conducted at the facility by an independent testing firm. The PDT involved several days of stack gas sampling and sophisticated chemical analysis.

The list of chemicals selected for evaluation included both compounds that were detected in stack emissions, as well as over 80 other compounds not detected, but included in the calculations just to be safe. Stack emission rates for all the selected compounds were calculated based on either PDT results, proposed permit limits, or for a few chemicals, long-term average chemical feed rates. A conservative value was also used for the furnace's destruction and removal efficiency in the calculations.

Potential risks from fugitive air emissions (rather than stack emissions) were evaluated for 21 compounds. These were selected for evaluation based on their spent carbon concentrations, number and amount of deliveries to the facility, chemical toxicity, and volatility. Air dispersion and deposition modeling was conducted using a model developed and approved by EPA. This model calculated chemical concentrations in the air and ground deposition rates within a 154 square mile study area surrounding the facility. The mathematical equations used to calculate the fate and transport of each chemical in the environment, environmental concentrations for each chemical, human exposures and risks, were based on current EPA guidance and solved using the Industrial Risk Assessment Program software. At EPA's request, and as part of the permit process, the operator completed a human health and ecological risk assessment (risk assessment)

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in July 2007. The purpose of the risk assessment was to estimate the facility's current and possible future impacts on the health of local residents and the surrounding environment.

Based on the risk assessment results, EPA concluded that likelihood of human health impacts (both carcinogenic and non-cancer) and ecological impacts from operations at the facility are low or insignificant are below levels of concern.

EPA cannot deny a permit for the facility based upon results of this risk assessment, because the analysis determined that the likelihood of human health or ecological impacts from facility operations are below the Agency's thresholds of concern. However, if EPA decides to issue the permit, it will not allow the facility to operate under conditions that could have a greater impact than the conditions evaluated by the risk assessment. For example, the permit would prescribe operational conditions such as the temperature to which the carbon is heated and the amount of carbon processed.

4.5.1 Categories of impacts the risk assessment studied:

- Human health impacts from air emissions: Long-term ("chronic") and short-term ("acute") human health impacts, as well as both carcinogenic (cancer) and non-carcinogenic (non-cancer) effects.
- Water and fish impacts due to wastewater discharge from the facility and consumption of potentially impacted fish.
- Ecological impacts from air emissions: Impacts to plants, animals and the environment.

4.5.2 The Risk Assessment was conducted as follows:

EPA provided the operator with guidance and oversight for the risk assessment process, ensured that the report was sufficiently thorough and extensive, and reviewed the results of the risk assessment. The risk assessment followed the steps below:

1) Measured maximum possible concentrations of emissions from the facility by conducting a trial burn (discussed in greater detail below).
2) Identified exposure routes by which the emissions would reach potential human and ecological receptors.
3) Determined concentrations at which the emissions would reach potential receptors through the identified exposure routes.
4) Calculated potential impacts to human and ecological receptors from exposure to emissions.

4.5.3 Human and ecological receptors considered by the risk assessment:

- Facility workers exposed to emissions on the job.
- The community around the facility, particularly the following sensitive receptors:
  - The elderly, people with health impairments, pregnant women, women of childbearing ages, and children.
  - Individuals engaging in subsistence fishing, hunting and agriculture, and particularly members of the above mentioned higher risk population engaging in subsistence activities.
- Plants and wildlife found around the facility.

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4.5.4 Routes of exposure the Risk Assessment considered:

- Inhalation (breathing in) of impacted air.
- Ingestion (eating) of impacted soil (e.g. incidental ingestion of soil particles or through cultural practices).
- Eating food that absorbs and accumulates chemicals from the impacted air and soil. This food includes locally-raised produce, beef, chicken and eggs.
- Eating fish potentially impacted by wastewater discharge from the facility.

4.5.5 Specific information about the community and the area considered by the risk assessment:

- Information about community activities, such as home gardening, raising of livestock and use of local plants.
- Information about Tribal cultural and spiritual activities that may increase exposure of community members to contaminants.
- Information about local and regional weather patterns.

4.5.6 Human Health impacts from air emissions:

Based on the risk assessment study, the EPA concluded that human health impacts from long-term exposure to stack emissions, fugitive emissions, as well as the combination of the two, were below EPA's acceptable thresholds.

Stack emissions: To measure stack emissions, the operator conducted a trial burn under specific operating conditions (e.g. temperature of the furnace, amount of carbon being processed by facility, contaminants present in the spent carbon). The concentrations of contaminants coming out of the stack were measured during the trial burn. Computers helped model how emitted substances would disperse (spread) throughout the air and soil in a 154 square mile area surrounding the facility.

Fugitive emissions: Fugitive emissions are generated during unloading of the spent carbon that comes into the facility (see Figure 2). The risk assessment estimated levels of fugitive air emissions from information on amounts of spent carbon that are handled at the facility, as well as the concentrations of contaminants in that spent carbon.

What are the impacts to water and fish?

The facility sends its wastewater (mostly from air pollution control devices) through a pipeline to the Colorado River Sewage System Joint Venture, a treatment plant. The treatment plant processes wastewater from the facility along with wastewater from the surrounding community. It then releases the treated water to the Main Drain – a channel that flows to the Colorado River.

Currently, CRIT does not have EPA-approved surface water quality standards. As any discharge from the treatment plant may eventually flow into the Colorado River, the discharge must meet EPA-approved downstream standards established by the State of Arizona Water Quality

Standards. The risk analysis found that wastewater from the facility does not cause the discharge from the treatment plant to exceed the State's most stringent water quality standards. It also found that the discharge from the Joint Venture is not toxic to aquatic organisms.

The uptake of chemicals from the Main Drain into fish and the potential human health impacts from fish ingestion were also addressed as requested by EPA. The fish ingestion pathway was evaluated at a downstream location on the Main Drain where fishing may occur and where water flow rate measurements are routinely collected by USGS. Based on this analytical framework, it can be concluded that the incremental contribution of the facility effluent on the Joint Venture Out fall and Main Drain does not pose unacceptable risks to neither aquatic life nor human health.

4.5.7 Ecological Impacts:

The ecological risk assessment concluded that the stack emissions from the facility do not pose an unacceptable risk to wildlife that was considered to be the most sensitive in the area.

4.5.8 Level of risk from the Facility:

EPA applies an acceptable carcinogenic risk range when evaluating the likelihood of adverse health impacts from combustion facilities. The acceptable range spans from a 1 in 1 million excess cancer risk level to a 10 in 1 million excess cancer risk level. This range indicates that for every 1 million individuals or community members exposed to facility releases, at most 10 additional cases of cancer may develop over the course of a 70 year lifetime. This additional case of cancer would be in addition to cancers in the community caused by factors unrelated to the facility, such as smoking, diet, pesticide use, or naturally occurring radon.

When we apply the "one in 10 million" threshold to a community with fewer than one hundred thousand residents (such as Parker with about 3,000 residents), we would expect less than one additional case of cancer to develop in that community due to emissions from the facility.

5.0 ENVIRONMENTAL SETTING

The information summarized in the following subsections was cited from the *Final Environmental Assessment* performed in February 1991 for construction of the facility on Colorado River Indian Tribal Lands, as referenced at the end of this RFA report.

5.1 Climate

The climate in Parker, Arizona, where the facility is located, is typical of the Sonora and Mojave Desert Regions and the Gila Desert. Winters are mild with minimum temperatures above freezing. The summers are long, hot, and dry with temperatures commonly exceeding 100° F. Average total precipitation is approximately 3.82 inches per year. Precipitation is sporadic, occurring mainly in the time intervals of July through September, and December through February. The 24-hour, 25-year storm water event has been reported to be equal to the average precipitation. The evaporation rate in this area is 86 inches per year.

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5.2 Geology

The Parker, Arizona area is characterized by roughly parallel mountain ranges separated by alluvial basins. The elevation of the basins varies between sea level and 1,000 feet. The mountains are rugged and rise abruptly from the Colorado River or from alluvial slopes. The highest mountain summits in the region reach an average elevation of around 3,300 feet. Between the flood plain and the mountains are piedmont slopes, which are dissected by washes from the mountains and, in a few exceptions, into adjacent and topographically distinct basins. The facility is located on relatively flat terrain, with slopes of zero to three percent.

The geologic units considered important to water resource development at the location of the facility are the Miocene Fanglomerate, the Bouse Formation, and the alluvium of the Colorado River and its tributaries. The rocks of the mountains are relatively impermeable, and form the boundaries of the groundwater reservoirs. Interbasin water movement is limited by the impermeable bedrock and limited to groundwater movement in surface sediments, where intermittent surface drainage exits from a basin.

The bedrock includes all rocks older than the Miocene Fanglomerate, and contains sedimentary, metamorphic, and igneous rocks. These Miocene beds are gravel deposits that have eroded from the mountains and filled the basins. The thickness of these beds varies widely across the basins. The Fanglomerate is a potentially important aquifer near Parker, where wells with a yield of 15 gallons per minute per foot of drawdown, have been developed.

Samples taken at the site prior to construction of the facility indicated that only the eolian (windblown) sand and silt are present. The eolian sand is tan to light tan and fine to medium grained, occurring as a deposit on the surface throughout the area. The Evoqua site soil is classified as Superstition series, which is a gravelly loamy fine sand that develops on zero to three percent slopes.

5.3 Hydrology

5.3.1 Surface Water

The facility is located approximately 2.8 miles southeast of the Colorado River. Hence, the distance from the facility to the nearest surface water body is greater than two miles.

The flood plain of the river is less than one mile wide near Parker, and increases to nine miles in the Parker Valley. The flood plain is that part of the Colorado River Valley that has been covered by floods of the Colorado River, prior to construction of Hoover Dam. The elevation of the flood plain near Parker is approximately 360 feet above sea level.

The town of Parker is no longer taking water directly from the Colorado River. However, a portion of the CRIT reservation (30 miles in length) is served by water drawn from the Colorado River.

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5.3.2 Groundwater

Groundwater in the Parker area occurs in both confined and unconfined aquifers. Most of the wells are completed in the Colorado River gravels (alluvium), where unconfined or water table conditions prevail. The Miocene Fanglomerate (gravel deposits at the base of mountains) and the lower part of the Bouse Formation contain confined aquifers (artesian). The geological age is not certain. The city wells in Parker obtain most of their water from the Miocene Fanglomerate. Sources of recharge to the groundwater supply of the area are the Colorado River, precipitation, and underflow from areas bordering Parker Valley.

A large amount of the groundwater is lost through evapotranspiration in the Parker area. Direct recharge from precipitation is limited. Loss of water from the Colorado River provides almost 50 percent of the recharge to the groundwater near Parker.

The groundwater elevation near Parker is approximately 350 feet above sea level. The depth to the groundwater in the areas bordering the flood plain ranges from 70 to 300 feet below the land surface. The depth to groundwater at the facility is 80 to 100 feet, and groundwater flow direction is to the southwest.

Chemical quality of the groundwater in the Parker area is generally related to the source and movement of the water. The chemical quality of the groundwater is influenced by evaporation, transpiration by native vegetation, former flooding of the river, irrigation developments, and to a marked degree by the local geology. The groundwater beneath the floodplain is relatively poor in quality, except where irrigation water has entered the aquifer. The shallow groundwater in the non-irrigated part of the valley has twice the mineral content as the Colorado River water.

The drinking water from four wells within four miles of the facility, which are on CRIT property, meets all primary water quality standards in the CWA.

The Town of Parker's water source is groundwater. There are three active wells located within Parker (Well No. 6, Well No. 7, and Well No. 8) that the ADEQ considers to be groundwater for regulatory purposes. These wells serve approximately 3,140 people. The town water system is routinely monitored for constituents in drinking water according to Federal and State laws. The depth to the surface of the groundwater is approximately 75 feet near the center of town (90 feet at the well in the northeast corner of town, which is on higher ground) and flows from the northeast to the southwest.

In addition, there are six wells in the area on the CRIT reservation; these wells are located outside the Parker city limits and serve approximately 1,850 connections. Four of these wells are located northeast of Parker along the Colorado River, and two are located on the west side of the city limits.

5.4 Air/Wind

The closest sources of surface meteorological data for use in the air dispersion model for the facility's human health risk assessment were Needles, CA, approximately 60 miles north of the

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facility, and Blythe, CA, approximately 60 miles south of the facility. Both Needles and Blythe are located along the Colorado River, with terrain features similar to those found in Parker. Analysis of wind distribution by the U.S. National Climatic Data Center shows strong north-south components at both sites that reflect the influences of the surrounding terrain. A Wind Rose that provides the direction of prevailing winds at Needles is presented in Appendix F, which is – From Appendix II of Application Reference 5. A similar north-south predominance of wind direction at the facility would be expected due to its surrounding terrain, which is generally similar to that present near the Blythe and Needles monitoring stations.

5.5 Land Use

About 45 percent of the CRIT Reservation is used for irrigated farming. Most of the remainder of the Reservation is rangeland used for seasonal livestock grazing. The CRIT Industrial Park comprises approximately 1,140 acres set aside for commercial and light industrial use. The operator acquired a Land Use Permit from the CRIT to operate the carbon reactivation facility (Permit Number B1122-CR 30.7).

5.6 Biological Environment

The facility is located on CRIT land that is a transition zone between the Sonora and Mojave Deserts.

Desert Flora

Terrestrial vegetation at the facility site is associated with the desert scrub community of the Gila Desert. Creosote bush and burro bush are the predominant plant communities. Other native plants living in the area include desert trumpet, snakeweed, scorpion weed, lupine and brittlebush. Vegetation is sparse in most areas.

Desert Fauna

Songbirds, small mammals, amphibians and reptiles are common in the Gila Desert Cactus Plain in Parker.

Unique Ecosystems

The cactus plains dune ecosystem is located approximately one-half mile east of the facility. The dunes provide a natural habitat to the Mojave fringe-toed lizard (*Uma scoparia*), which is a candidate species on the Arizona Threatened Native Wildlife list. This species is threatened due to general loss of dune habitat. The facility is located in the flat cactus plain area outside the dune area.

Endangered or Threatened Species and Protected Birds

After a site survey in March 1990, it was determined that no listed endangered plants or animals were found at the site proposed for building the carbon reactivation plant. However, there may be several Federally-listed, endangered or threatened species and birds protected under the

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Migratory Bird Treaty Act within the Parker area on CRIT property. To make the RCRA permit decision, EPA has requested that a species survey be conducted as part of the Ecological Risk Assessment that determined the potential for the presence of the following species and identified potential ecological receptors: the razorback sucker (*Xyrauchen texanus*)(endangered), also known as the humpback sucker in older literature; the desert tortoise (*Gopherus agassizii*)(threatened), critical habitat has been designated across the state line in California; the bony tail chub (*Gila elegans*)(endangered); the peregrine falcon (*Falco perigrinus*)(Migratory Bird Treaty Act); the southwestern willow flycatcher (*Empidonax traillii extimus*)(endangered); brown pelican (*Pelicanus occidentalis*)(endangered); Yuma clapper rail (*Rallus longirostris yumanensis*)(endangered); and the burrowing owl (*Athene cunicularia*)(Migratory Bird Treaty Act, also fully protected across the state line in California). Please see Appendix XI of Part B Permit Application Reference 5 for more details.

On February 25, 2009, a review of the Risk Assessment performed as part of the permit application process was evaluated in a memorandum from an EPA Environmental Scientist (John Beach) to the Project Officer for the RCRA project at the time. In the memorandum, Mr. Beach concludes that the Risk Assessment submitted with the Part B Permit Application demonstrated that the possible issuance of a RCRA permit for the Facility was not expected to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Mr. Beach also concluded that the Risk Assessment demonstrated that the possible issuance of a RCRA permit for the Facility was not expected to result in the taking or endangerment of any species protected by the Migratory Bird Treaty Act of 1918, as amended and was not expected to have any measurable negative effect on migratory bird populations. The determination reflected in Mr. Beach's memorandum was confirmed using an updated species list on July 30, 2015, March 20, 2016, and August 4, 2016, since determinations must be made with species lists that are not more than 180 days old. The most recent U.S. Fish and Wildlife IPaC species list for the project site, along with each of the referenced memoranda, are in Appendix D to the Statement of Basis.

6.0 HAZARDOUS WASTE MANAGEMENT UNITS (HWMUs), SOLID WASTE MANAGEMENT UNITS (SWMUs), and AREAS OF CONCERN (AOCs)

RCRA regulated waste is currently managed in a variety of units at the facility. The regulatory status of these units is specified in Tables 1, 2, and 3. RCRA waste is received and stored in the spent carbon storage warehouse, and the spent carbon slurry storage tanks, and ultimately processed in the reactivation furnace RF-2. The reactivation furnace RF-1 previously managed hazardous waste and is now inactive.

The SWMUs operated at the facility have been identified and visually inspected, where possible during the September 2003 VSI by Booz Allen Hamilton. A map of the location of SWMUs is attached as Appendix D2. Photographic documentation of the 2003 VSI tour of the facility is provided as Appendix B (Photographs F-1 through F-37). A detailed description of each SWMU is provided below based on the site characterization information and data which was cited in correspondence between EPA, the operator, and CRIT representatives; in the Part B permit application; and/or obtained during the 2003 VSI interview with the operator's representatives. The relevant cited references are provided in the Reference Section at the end of this RFA report.

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The Draft RFA that was prepared by Booz Allen Hamilton in September 2003 was not finalized. The RFA was more recently updated by the EPA Project Manager using the information that was provided by Evoqua in the more recent Part B Applications References 1 through 5 listed on page vi of the Table of Contents.

When Evoqua responded to EPA's request for information dated September 2011, Evoqua re-categorized the SWMU and AOC list as the HWMU, SWMU, and AOC categories shown in Tables 1, 2 and 3. The three tables give details of how the units were re-designated. Table 4 coordinates the previously designated names of the units as listed in Appendix B with the new names as listed in Tables 1, 2, and 3 and Appendix A.

A follow-up VSI was conducted by the EPA Project Manager in March 2014 (Appendix A). During the 2014 VSI, EPA Project Manager inspected the facility and documented the conditions of the SWMUs, HWMUs, and AOCs. The Project Manager reviewed the last three (3) years of the facility's operating records, inspection records, and calibration records. The new VSI photographic documentation can be found in Appendix A. A map depicting the HWMU, SWMU, and AOC units locations that were verified during the VSI, is provided as Appendix D1. These are the new unit names. These figures are from the Permit Application Reference 5, Figures J-1 to J-7 of Permit Application Section J.

6.1 HAZARDOUS WASTE MANAGEMENT UNITS

Hazardous Waste Management Unit (HWMU): A contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed. [40 C.F.R. § 260.10.]

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TABLE 1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
1	Spent carbon reactivation furnace - RF-1 and Associated Equipment (Dewater screw)	South of RF-2	Furnace shell – carbon steel; internal firebrick lining and block insulation; hearths and furnace roof constructed with firebrick; furnace roof is comprised of firebrick backed with block insulation and castable insulation; bottom hearth is insulated with block insulation and castable insulation	August 1992; Shut down in 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
2	Spent carbon reactivation furnace RF-2 and Associated Equipment (Dewater Screw, Weigh Belt)	East of warehouse	Furnace shell – carbon steel; internally lined with firebrick and block insulation; hearths and furnace roof constructed with firebrick; furnace roof is comprised of firebrick backed with block insulation and castable insulation; bottom hearth is insulated with block insulation and castable insulation; Continuously seal welded internally to assure an air-tight assembly. Dewatering screw length 17 ft; diameter 8 in.	July 1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
3	RF–1 Air pollution control equipment					

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TABLE 1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
	Afterburner	RF-1 structure	Refractory lined steel	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
	Venturi scrubber	RF-1 structure	Hastelloy C	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
	Packed bed scrubber	RF-1 structure	Fiberglass	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
	Emissions stack	RF-1 structure	Mild steel	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
4	RF–2 Air pollution control equipment					
	Afterburner	RF-2 structure	Refractory lined steel cylinder chamber	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure

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TABLE 1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
	Venturi scrubber	RF-2 structure	Hastelloy C	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
	Packed bed scrubber	RF-2 structure	Fiberglass	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
	Wet electrostatic precipitator	RF-2 structure	Fiberglass/AL6XN	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
	Induced draft fan	RF-2 structure	300-series SS	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
	Emissions stack	RF-2 structure	Fiberglass surrounded by a mild steel shell	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
5	Spent carbon unloading hopper H-1	North end of facility on containment	5000 lb capacity; mild steel	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure

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TABLE 1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
6	Spent carbon unloading hopper H-2	Inside warehouse facing east wall	500 lb capacity; mild steel	August 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
7	Hopper air pollution control equipment piping and baghouse	North end of facility on containment	Ducting, baghouse and fan are mild steel	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
8	Spent carbon slurry and recycle water transfer system	Inside warehouse on containment	4" pipes hopper to tank; 3" pipes T-tank to furnace feed tank; 300-series SS	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
9	Spent carbon storage warehouse	Inside warehouse	80 ft by 80 ft concrete/ metal	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
10	Spent carbon slurry storage tank, T–1	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
11	Spent carbon slurry storage tank, T–2	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure

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TABLE 1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
12	Spent carbon slurry storage tank, T–5	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
13	Spent carbon slurry storage tank, T–6	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
14	Furnace Feed System Tank T-8 and Ancillary Equipment	RF–1 Structure	905 gal 300 series SS	August 1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
15	T-18 and Ancillary Equipment	RF-2 structure	6500 gal 300-series SS	July 1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
16	Wastewater conveyance piping to wastewater treatment tank	East of RF-2 structure	3” PVC piping	August 1992	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
17	Spent carbon storage warehouse barrel washer	Next to H-2 in warehouse	2 ft by 3 ft 300 series stainless steel	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure

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TABLE 1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
18	Carbon adsorber - PV1000	North of Containment Pad for Storage Tanks	1000 lb carbon capacity; mild steel.	August 1992	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
19	Carbon adsorber WS-1	Beside spent carbon storage tank	2 x 2000 lb carbon capacity. Mild steel	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
20	Carbon adsorber WS-2	Beside H-1	5000 lb carbon capacity Fiberglass	1992 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
21	Carbon adsorber WS-3	Beside RF–2	1000 lb carbon capacity Mild steel	1996 to present	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
22	Slurry transfer inclined plate settler tank	Adjacent to the venturi scrubber	Mild steel	1992 to 1994	Spent activated carbon. See Part B Application for list of applicable waste codes	See Section J.2 of the Part B Application
23	Scrubber recycle tank T-17	Beside RF-1	Mild steel	1992 to 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure

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TABLE 1 - HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION, NEW UNIT NAME

No.	**HWMU Type/Designation**	**Location**	**Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
24	Filter press	Next to scrubber system for RF-1	Mild steel with polypropylene plates	1992 to 1994	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure
25	New Facility Discharge Piping System	New piping bypasses Lift Station to POTW	6” PVC	February 1996	Spent activated carbon. See Part B Application for list of applicable waste codes	None. Will be further investigated at the time of closure

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6.1.1 HWMU 1 (Previously designated as SWMU 1): Spent Carbon Reactivation Furnace RF-1

Unit Description:

RF-1 was a multiple hearth furnace consisting of four hearths (Hearths 1 through 4) used for spent carbon reactivation. RF-1, operated from 1992 until 1996, is located in the southeast portion of the facility, south of RF-2. RF-1 was replaced with RF-2 and has not been in operation since 1996, and has been replaced with the RF-2 unit.

During operation of this unit, organic compounds were desorbed from the carbon in the high-temperature environment of the reactivation furnace. RF-1 had a production capacity of 600 lbs/hr. The reactivation process in RF-1 involved drying, pyrolysis (i.e., chemical decomposition of the organics by heat), and chemical reaction.

The top hearth (Hearth 1) was an unfired hearth where heat generated in the bottom three hearths (Hearths 2, 3, and 4) was used to complete the dewatering of the spent carbon. The bottom three hearths were fired hearths, where the pyrolysis and reaction steps of the reactivation process occurred. Each of the bottom three hearths was fired with one natural gas burner. These burners were provided to ensure adequate heat input to the reactivation furnace for all the spent carbon reactivated at the facility.

When RF-1 was operating, spent carbon was introduced into the top hearth and flowed downward through the remaining three hearths. Rabble arms with teeth, each connected to a rotating center shaft, were located above each hearth. The rabble teeth plowed the carbon material across the hearth surface and towards drop holes. The carbon fell through the drop holes to the next lower hearth and eventually to the outlet of the reactivation furnace. Reactivated carbon exited the bottom through a cooling screw prior to packaging and shipping of the reactivated product. RF-1 was equipped with a primary combustion air fan and two-center shaft cooling fans.

RF-1 was equipped with air pollution control equipment (APCE) designed to reduce contaminants in the gases prior to discharge to the atmosphere through the stack. The equipment included an afterburner fired by two natural gas burners and designed for combustion of organic material in the off-gas from the furnace. From the afterburner, the gases moved to a venturi scrubber designed to remove particulate matter. The gases then traveled to a packed-bed scrubber designed to remove acid gases. An induced draft fan was used to exhaust combustion gases from the RF-1 furnace, afterburner, and air pollution control system. The gas stream was exhausted to the atmosphere via a 115-foot high stack with an inside diameter of one foot. The stack, constructed of carbon steel, was removed when the unit was shut down in 1996. The air pollution control equipment is described in more detail later in this document.

RF-1 was designed to remove organic compounds from the spent carbon and to remove benzene to a level that met the minimum requirements of NESHAP Subpart FF of the CAA.

The material of construction of RF-1 are presented in Table 1.

Status and Wastes Managed

The start-up date for RF-1 was in 1992; it was taken off-line in June 1996 and remains shut down. This unit was operated under RCRA interim status and is subject to RCRA interim status closure requirements, but it has not yet undergone closure. RF-1 has been disabled by locking out the starters of the motors for the unit's drive, cooling air fan, combustion air blowers, and induced draft fan. The electrical control panels have been removed so that there is no possibility that RF-1 could be operated in its current condition.

Hazardous and non-hazardous spent carbon was thermally treated in this furnace. The list of hazardous constituents that may have been adsorbed onto the spent carbon treated in RF-1 is very extensive and may have included, but may not be limited to, VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The afterburner and air pollution control equipment, described in more detail in Section 6.1.3, provided controls for releases to the air from RF-1.

To ensure good combustion in the furnace and afterburner, carbon monoxide (CO) and oxygen (O_2) concentrations in the exhaust gases were monitored using a CEMS. The CEMS on the RF-1 emissions stack was installed in 1993. The CEMS data was used to determine whether the furnace and afterburner were functioning properly and to alert operators to potential upset conditions. In the CEMS on the RF-1 stack, the stack gases passed through the analyzer without interruption. When RF-1 was disabled, the CEMS for RF-1 was relocated and installed on the RF-2 unit.

Prior to shutting down RF-1, a control valve located at the exit of the reactivation feed tank (Tank T-8) was used to control feed to the reactivation furnace. Feed to RF-1 could be interrupted in an emergency using the dewatering screw emergency stop button. All equipment associated with RF-1 has been disabled.

RF-1 is located over a concrete pad. The area is paved and slopes to grated trenches that lead to a sump. The area was (and still is) washed down daily. Liquids collected in the grated trenches and sumps were (and still are) recycled on-site. The concrete area is surrounded by a six-inch berm.

Release History

During a 1993 EPA inspection, the stack emission was described as clear, and the stack plume was observed to dissipate rapidly. There was a wisp of smoke from the upper end of the dewatering screw-conveyor directly above the discharge chute to the furnace. The operator explained that this was due to insufficient draft at the furnace top hearth and also due to the fact that the screw-conveyor covers were not tightly closed.

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The March 1994 Compliance Evaluation Inspection (CEI) report for EPA's October 1993 inspection states that facility personnel failed to visually observe the stack plume at least hourly for normal appearance (color and opacity).

In November 1995, the facility operator submitted to EPA a summary of emissions data from tests conducted by the operator for RF-1 in 1993 and 1994. The stack emissions testing was performed to compare the facility's emissions with existing RCRA emissions standards. The facility reported RF-1 contaminant emissions to be below EPA's 1994 emissions standards. (Note that the standard for particulate emissions at that time was 0.08 grains per dry standard cubic foot (gr/dscf) with EPA guidance proposing a standard of 0.015 gr/dscf.)

Remedial Actions

In 1993, the operator believed that the afterburner system was limiting the furnace to about 80 percent of its capacity. To correct this problem, the facility operator installed a bigger fan with a control damper and a fan to blow air into the afterburner. The operator also upgraded the CO and oxygen CEMS to modulate air blown into the afterburner to maintain a set CO level in the stack.

Migration Pathways

The RF-1 carbon regeneration furnace is no longer in operation as of June 1996, so the potential for releases from the operation of RF-1 to all media has been eliminated.

(1) Soil to Groundwater Release Potential

During operation of RF-1, the potential release directly to soil and groundwater was low. The likelihood of release was reduced by the concrete pad beneath the unit. Air pollution control equipment reduced contaminant emissions from RF-1. Hence, atmospheric deposition of contaminants to the soil was ongoing during operation of the unit, but likely occurred in small amounts.

(2) Surface Water Release Potential RF-1

The potential for contamination from RF-1 to release directly to surface water was low when it was operational. The likelihood of release was reduced by the concrete pad beneath the unit. Containment was provided for the unit, and the distance to the nearest surface water body is greater than two miles. Air pollution control equipment reduced contaminant emissions from RF-1. Hence, atmospheric deposition of contaminants from stack emissions to surface water was ongoing during operation of the unit, but likely occurred in small amounts.

(3) Air Release Potential RF-1

According to testing conducted by the facility operator, there were ongoing releases of small amounts of contaminants to the air when RF-1 was operational. RF-1 was equipped with air pollution control equipment, which reduced emissions of contaminants to the air, and a CEMS

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for CO and O_2 that evaluated proper functioning of the furnace and alerted operators to potential upset conditions.

6.1.2 HWMU 2 (Previously designated as SWMU 2): Spent Carbon Reactivation Furnace RF-2

Unit Description

RF-2 is a multiple hearth furnace consisting of five hearths (Hearths 1 through 5). RF-2, which operated since 1996, is located in the process area of the facility, east of the spent carbon storage warehouse. Organic compounds are desorbed from the carbon in the high temperature environment of the furnace. RF-2 has a production capacity of 1,200 lbs/hr. The reactivation process in RF-2 involves drying, pyrolysis (the chemical decomposition of the organics by heat), and chemical reaction.

The top two hearths (Hearths 1 and 2) are unfired hearths in which heat generated in the bottom three hearths (Hearths 3, 4, and 5) is used to complete the dewatering of the spent carbon. The bottom three hearths are fired hearths, where the pyrolosis and reaction steps of the reactivation process occur. There are two natural gas burners per hearth on the bottom three hearths. These burners are provided to ensure adequate heat input to the reactivation unit for all spent carbon reactivated at the facility. The approximate operating temperatures in the RF-2 hearths are as follows: 600-800° F for Hearth 1; 900-1,200° F for Hearth 2; 1,300-1,400° F for Hearth 3; 1,350-1,450° F for Hearth 4; and 1,400-1,500° F for Hearth 5.

Spent carbon is introduced into the top hearth and flows downward through the remaining four hearths. Rabble arms with teeth, each connected to a rotating center shaft, are located above each hearth. The rabble teeth plow the carbon material across the hearth surface and towards drop holes. The carbon falls through the drop holes to the next lower hearth, and eventually to the outlet of the reactivation furnace. Reactivated carbon exits the bottom hearth through a cooling screw prior to packaging and shipping the reactivated product. RF-2 is equipped with a primary combustion air fan and two-center shaft cooling fans.

RF-2 is equipped with APCE designed to remove contaminants in the gases prior to discharge to the atmosphere through the stack. The equipment includes an afterburner fired by two natural gas burners and designed for combustion of organic material in the off-gas from the furnace. From the afterburner the gases move to a venturi scrubber designed to remove particulate matter. The venturi scrubber also serves as a rapid quench system, which greatly reduces the formation of dioxins. The gases then travel to a packed-bed scrubber designed to remove acid gases, and lastly are routed to a wet electrostatic precipitator (WESP) designed to remove extremely fine particulates and metals before the stack gas stream is discharged to the atmosphere through the stack. A variable speed induced draft fan is provided to exhaust off-gases from the furnace and afterburner and through the APCE. The gas stream is then routed to the atmosphere through the 110-foot high, fiberglass emissions stack with an inside diameter of one foot. The air pollution control equipment is described in more detail later in this document.

The RF-2 furnace is designed to remove organic compounds from the spent carbon and to remove benzene to a level that meets the minimum requirements of NESHAP 40 CFR 61, Subpart FF of the CAA. According to air emissions tests conducted in March 2006 by Evoqua

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and overseen by the EPA, the system achieves destruction and removal efficiency for organic compounds of greater than 99.99% (See Appendix V of the Part B Permit Application Reference 5).

The material of construction of RF-2 are presented in Table 1.

Status and Wastes Managed

The start-up date for RF-2 was July 11, 1996. The RF-2 unit is active and is the only reactivation process (treatment system) currently used at the facility. The unit is operated under RCRA interim status and is subject to the RCRA permit decision.

Hazardous and nonhazardous spent carbon is thermally treated in this furnace. The list of hazardous constituents that may be adsorbed onto the spent carbon treated in RF-2 is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The afterburner and air pollution control equipment provide controls for releases to the air from RF-2.

To ensure good combustion in the furnace and afterburner, CO and oxygen (O_2) concentrations in the exhaust gases are monitored using a CEMS. The CEMS on the RF-2 emission stack was moved from RF-1 in 1996 with shutdown of RF-1 and startup of RF-2. The CEMS data are used to determine whether the furnace and afterburner are functioning properly and to alert operators to potential upset conditions. In the CEMS on the RF-2 stack, the stack gases pass through the analyzer without interruption. The CEMS evaluates the gases at least once every 15 seconds and computes and records the results at least every 60 seconds. In addition to the CEMS, the RF-2 unit has a feed rate-monitoring device for continuous monitoring of CO and O_2.

A computerized system continuously monitors 739 points in RF-2 and associated equipment for parameters such as temperature, pressure, and flow rate every five seconds, of every hour, of every day. Readings from this system are fed into automatic alarm systems, such as high-level, low-flow, and low-pressure alarms. These automatic alarm systems help prevent malfunctioning of and releases from the furnace and related equipment. For example, a high-level alarm is attached to the dewatering screw on RF-2 where water carbon slurry is dewatered prior to introduction into the reactivation furnace. The unit is automatically shut down if this alarm is triggered. This ensures that the dewatering screw that feeds RF-2 does not overflow. There are low-temperature alarms for the furnace and afterburner. If the temperature in the afterburner falls below the level necessary to destroy incoming contaminants, the furnace feed system is automatically shut off within one to two seconds, preventing carbon from entering the furnace. This immediate feed system shut-off is designed to prevent the release of VOCs.

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Other alarms include low-flow and low-pressure alarms for the combustion air supply and the shaft cooling air supply to RF-2. A failure alarm is attached to the RF-2 burners, a high-pressure alarm is provided for the RF-2 furnace draft, and a low-speed alarm is installed to detect problems with the RF-2 center shaft rotation. In addition, high-weight and low-weight alarms are functional on RF-2; these alarms alert the plant operations personnel if carbon levels on the weigh belts are outside the limits of predetermined specifications. If there is an explosion in the furnace or the afterburner, all equipment surrounding the furnace will be shut down automatically. This includes all burners, fans, and the dewatering screw. Natural gas will be shut off manually.

Daily inspections of the CEMS and the RF-2 furnace system are conducted. The RF-2 APCE and ancillary equipment (pumps, valves, and pipes) are visually inspected daily by the facility to ensure the absence of leaks, spills, fugitive emissions, and signs of unauthorized tampering. The calibration data from the CEMS is checked daily to ensure the CEMS is operating within proper parameters. For more information about the inspection and the calibration schedules please see the latest revision of the Permit Application Reference 5, Sections D, F, and Appendix XII.

A concrete pad surrounded by a berm is present under RF-2. The area is paved and slopes to grated trenches that lead to a sump. The area is washed down daily. Liquids collected in the grated trenches and sumps are recycled on-site.

Release History

During a review of the facility's inspection logs during both VSIs, no evidence of unsatisfactory operating conditions was discovered.

The emissions test data submitted by the operator in the permit application suggest that the plant operates below MACT emission standards from the stack during normal operations. (See the latest revisions of Appendix V and Appendix XI in the Permit Application Reference 5).

There is no known record or report of other past releases that have occurred at this unit. Other than the stack off-gas, no releases were observed at this unit during either VSIs.

Remedial Actions

One description of remedial action was found in the facility file material reviewed during the 2003 VSI. In April 2001, the CEMS operation was unsatisfactory for the oxygen analyzer. Corrective action involved ordering a new oxygen analyzer for the CEMS.

According to the facility's quarterly inspection reports reviewed during the 2003 VSI, a fan was purchased in 1999 to ventilate potential emissions from the dewatering screw to the afterburner.

No other remedial actions were noted in the 2014 VSI.

Migration Pathways

(1) Soil to Groundwater Release Potential

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There is low release potential directly to the soil and groundwater. The likelihood of release is reduced by the bermed concrete pad beneath the unit. APCE reduces the contaminant emissions from RF-2. For more details about the release potential and the risk from that please see Appendix XI in the Permit Application Reference 5.

(2) Surface Water Release Potential

The potential for contamination to release directly to surface water from RF-2 is low. The likelihood of release is reduced by the bermed concrete pad beneath the unit. APCE reduces the contaminant emissions from RF-2, and the distance to the nearest surface water body is greater than two miles. For more details about the release potential and the risk from that please see Appendix XI in the Permit Application Reference 5.

(3) Air Release Potential

According to testing conducted by the operator, there are ongoing releases of small amounts of contaminants to the air from RF-2. RF-2 is equipped with air pollution control equipment, which reduce emissions of contaminants to the air, and a CEMS for CO and O_2 that evaluates proper functioning of the furnace and alerts the operator to potential upset conditions. For more details about the release potential and the risk from that, see Appendix XI in the Permit Application Reference 5.

6.1.3 HWMU 3 (Previously designated as SWMU 3): Air Pollution Control Equipment for RF-1

Unit Description

APCE was present on RF-1 from startup in 1992 until it was shut down in 1996. The RF-1 equipment included an afterburner designed for combustion of organic material in the off-gas from the furnace. From the afterburner the gases moved to a venturi scrubber designed to remove particulate matter from the air stream. The gases then traveled to a packed-bed scrubber designed to remove acid gases. An induced draft fan was used to exhaust combustion gases from the RF-1 furnace, afterburner, and air pollution control system. The gas stream was exhausted to the atmosphere via a 115-foot high stack with an inside diameter of one foot. The stack, constructed of carbon steel, was removed when the unit was shut down in 1996.

The materials of construction of the APCE for RF-1 is presented in Table 1 listing the units above.

Status and Wastes Managed

APCE on RF-1 was operated from 1992 until 1996 when RF-1 was shut down. It has not been operated since 1996.

Gases that come off the carbon regeneration furnace were managed in the APCE. Although the combustion process was expected to destroy much of the organic contaminants originally on the spent carbon, the list of hazardous constituents that may have been in these gases included, but is

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not limited to, VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes that were acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5. This is the same list that the facility continues to receive and treat in the newer furnace that is currently operating.

Release Controls

An induced draft fan was provided to exhaust combustion gases from the furnace and afterburner and through the air pollution control system. A high-level alarm system, a high temperature alarm, and a low flow alarm for the scrubber water supply were installed on the packed bed scrubber.

Devices in the venturi, packed bed, and WESP scrubber systems continuously monitored pressure drop of the gases exhausted from the furnace. If these monitors detect readings outside prescribed levels, the carbon feed system was automatically shut off. The pressure monitors were designed to protect against the release of acid gases or particulate emissions above concentration limits specified in the MACT standards.

The system also contained a CEMS, which monitored CO and O_2. The CEMS helped determine whether complete combustion occurred in the furnace and afterburner.

A bermed concrete pad was and continues to be present under the APCE. The area is paved and slopes to grated trenches that leads to a sump. The area was washed down daily. Liquids collected in the grated trenches and sumps were recycled on-site.

Release History

During a review of the facility's inspection logs during the 2003 VSI, no evidence of unsatisfactory operating conditions was discovered.

For more details about the release potential and the risk from that see Appendix XI in the Permit Application Reference 5.

No additional release history for this unit was identified in the file material during the 2003 VSI.

Remedial Actions

No documented remedial actions have been performed at this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

There was at RF-1 low release potential directly to the soil and groundwater during its operation. The likelihood of release was reduced by the presence of a bermed concrete pad surrounding RF-1. The APCE reduced the contaminant emissions from the furnaces. Hence, although atmospheric deposition of contaminants to the soil was ongoing, it occurred in small amounts.

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For more details about the release potential and the risk from that see Appendix XI in the Permit Application Reference 5.

(2) Surface Water Release Potential

The potential to release directly to surface water (which is 2 miles away) from the APCE was low. The likelihood of release was reduced by the bermed concrete pad beneath these units. The APCE reduced the contaminant emissions from the furnaces, and the distance to the nearest surface water body was greater than two miles. Hence, atmospheric deposition of contaminants from stack emissions to surface water was ongoing, but it occurred in small amounts due to the APCE. For more details about the release potential and the risk from that see Appendix XI in the Permit Application Reference 5.

3) Air Release Potential

According to testing conducted by the facility, RF-1 released small amounts of contaminants to the air through the APCE. For more details about the release potential and the risk from that see Appendix XI in the Permit Application Reference 5. The air pollution control equipment reduced emissions of contaminants to the air, and a CEMS for CO and O_2 that evaluated proper functioning of the furnace and alerted operators to potential upset conditions.

6.1.4 HWMU 4 (Previously designated as HWMU 4): Air Pollution Control Equipment for RF-2

Unit Description

New APCE was purchased for RF-2 when the unit was brought into operation in 1996. APCE on RF-2 is designed to remove hazardous constituents from the gases coming from RF-2. RF-2 and ancillary APCE are contained in a central tower structure. The APCE for RF-2 is comprised of an afterburner, a venturi scrubber, a packed bed scrubber, and a wet electrostatic precipitator.

The afterburner for RF-2 is a self-supporting vertical cylindrical chamber. It includes a baffle wall to route the off-gas from the furnace through the afterburner. The afterburner is designed to thermally oxidize greater than 99.99 percent of the organic material that enters the afterburner.

The venturi scrubber for RF-2 is of the adjustable throat vertical down flow type. A pneumatic cylinder actuator and electro pneumatic positioner adjust the throat area. The throat can be adjusted to maintain a constant pressure differential. The elbow incorporates a water-filled gas impact section directly beneath the throat to prevent erosion of the shell. The water supply for venturi irrigation is recirculated scrubber water. The venturi scrubber is located directly below a quench section and is connected by a flooded elbow to the packed bed scrubber. The venturi scrubber is designed to achieve an outlet particulate matter grain loading of less than 0.03 gr/dscf adjusted to 7 percent oxygen. The venturi scrubber differential pressure is used to determine proper operation of the venturi scrubber.

The packed bed scrubber for RF-2 consists of a vertical up flow and cylindrical disengaging section followed by a packed bed section and a mist eliminator. The bottom portion of the

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scrubber is used to de-entrain water droplets from the gas prior to entering the packed section of the scrubber. The packed bed scrubber is designed to remove a minimum of 99 percent of the incoming hydrogen chloride.

Scrubber water is supplied between the venturi scrubber and the packed bed scrubber via scrubber water supply lines and return lines.

The wet electrostatic precipitator for RF-2 is of a vertical tubular down-flow design with self-irrigating tubes. The wet electrostatic precipitator consists of inlet gas distribution and straightening devices, which are provided to distribute process gas flow entering the electrostatic precipitator, inlet and outlet plenums, a collecting electrode tube bundle, an intermittent flushing system, and a continuous drainage system. The electrostatic precipitator is also equipped with outboard high voltage insulator compartments. The wet electrostatic precipitator, in conjunction with the venturi scrubber, is designed to achieve a maximum outlet particulate matter grain loading of 0.015 gr/dscf adjusted to 7 percent oxygen.

The material of construction of the APCE for RF-2 is presented in Table 1 listing the units above.

Status and Wastes Managed

New APCE was purchased for RF-2. The start-up date for the APCE on RF-2 was July 1996, and it is currently active. As a component of the carbon regeneration system, the APCE on RF-2 is operating under RCRA interim status, and is subject to the RCRA permit decision.

Gases coming off the carbon regeneration furnace are managed in the APCE. Although the combustion process is expected to destroy much of the organic contaminants originally on the spent carbon, the list of hazardous constituents that may be in these gases includes, but is not limited to, VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

An induced draft fan is provided to exhaust combustion gases from the furnace and afterburner and through the air pollution control system. A high-level alarm system, a high temperature alarm, and a low flow alarm for the scrubber water supply are installed on the packed bed scrubber.

Devices in the venturi, packed bed, and WESP scrubber systems continuously monitor pressure drop of the gases exhausted from the furnace. If these monitors detect readings outside prescribed levels, the carbon feed system is automatically shut off. The pressure monitors are designed to protect against the release of acid gases or particulate emissions beyond concentration limits specified in the MACT standards.

The system also contains a CEMS, which monitors CO and O_2. The CEMS helps determine whether complete combustion occurs in the furnace and afterburner.

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A bermed concrete pad is present under the APCE. The area is paved and slopes to grated trenches that lead to a sump. The water collected in the sump is routed to recirculation tank, T-9.

Release History

During a review of the facility's inspection logs during both VSIs, no evidence of unsatisfactory operating conditions were discovered. For more details about the release potential and the risk from this unit see Appendix XI in the Permit Application Reference 5.

No additional release history for this unit was identified in the file material during either VSIs.

Remedial Actions

No documented remedial actions have been performed at this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

RF-2 has a low potential to release directly to the soil and groundwater. The likelihood of release is reduced by the bermed concrete pad beneath and around the unit. The APCE reduces the contaminant emissions from the furnaces. For more details about the release potential and the risk from this unit see Appendix XI in the Permit Application Reference 5.

(2) Surface Water Release Potential

The potential to release directly to surface water from the APCE is low. The likelihood of release is reduced by the bermed concrete pad beneath the unit. The APCE reduces the contaminant emissions from the furnaces, and the distance to the nearest surface water body is greater than two miles. For more details about the release potential and the risk from this unit please see Appendix XI in the Permit Application Reference 5.

3) Air Release Potential

The air pollution control equipment reduces the potential of emissions of contaminants to the air, and a CEMS for CO and O_2 that evaluates proper functioning of the furnace alerts operators to potential upset conditions. For more details about the release potential and the risk from this unit see Appendix XI in the Permit Application Reference 5.

6.1.5 HWMU 5 (Previously designated as SWMU 4): Spent Carbon Unloading Hopper H-1

Unit Description

Unloading hopper H-1 is located below-grade and is located at the north end of the facility adjacent to the spent carbon storage warehouse. The material of construction for H-1 is presented in Table 1 listing the units above.

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Spent carbon is unloaded directly from trucks and large containers into H-1. Trucks are connected to a pipe that is adjacent to and outside of the roofed structure over the hopper. Spent carbon received in large containers such as roll-offs is typically transferred to the hopper by tipping the containers into feed hopper H-1.

The spent carbon flows by gravity through a grate into H-1. Water from Tank T-9 is added as the carbon passes through the hopper to facilitate the transfer of the spent carbon from the hopper via an eductor. The spent carbon slurry is then piped from H-1 to one of four slurry storage tanks (T-1, T-2, T-5, or T-6).

Eighty percent of the incoming spent carbon is handled at hopper H-1. The capacity of hopper H-1 is 5,000 pounds of spent carbon per unloading event.

Status and Wastes Managed

The start-up date for this unit was July 1996, and it is currently active. As a component of the spent carbon handling system, this unit is operating under RCRA interim status, and is subject to the RCRA permit decision.

Hazardous and nonhazardous spent carbon is managed in this unit. The list of hazardous constituents that may be adsorbed onto the spent carbon is very extensive and may include, but is not limited to, VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

H-1 is located below-grade and is equipped with a roofed and three-sided metal structure. The fourth side of the structure is a roof-to-ground sheet of rubber strips approximately five inches wide through which bulk shipments of spent carbon are unloaded. The rubber strips are pushed aside during the unloading of roll-off containers. H-1 is located within a bermed concrete pad with grated trenches and sumps that recycle any water back to tank T-9.

The system is designed to control emissions of VOCs and particulates during the unloading process. A fan pulls air along with organic vapors and particulates from the space formed by the roofed metal structure and the rubber strips. The air is routed via stainless steel piping through a baghouse for particulate removal and then through a large carbon adsorption canister (WS-2) for removal of organic vapors before being vented to the atmosphere.

The carbon in the WS-2 canister is replaced before breakthrough. It was determined through engineering calculations that the carbon in WS-2 needs to be replaced every 100 days at a maximum. The facility operator visually inspects WS-2 for leaks and proper operation on a daily basis. The facility operator also visually inspects the bags in the baghouse on a weekly basis to ensure the bags are in good condition and are operating properly and that the pressure drop across the system is acceptable. The bags are replaced as necessary.

Release History

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EPA's *Compliance Evaluation Inspection Report* for February 1994 presented one concern regarding the potential for release of hazardous carbon particulates during unloading of drums and bulk loads to the hoppers, H-1 and H-2. During the inspection, there appeared to be a potential for release of fugitive particulates due to the design of the hood/vacuum that pulls air from the receiving and unloading areas to one of the baghouses, which is located at ground level between the two hoppers. In response to the 1994 inspection, the facility representatives stated that the practice of watering down the spent carbon as it is unloaded effectively controls fugitive particulates.

The facility's quarterly visual inspection form for February 24, 1996, reviewed during the VSI, indicated that on February 1, 1996 "water accumulation" that had come in contact with benzene-contaminated spent carbon had occurred outside of unloading hopper H-1. On February 1, 1996, the water was collected and routed to the recycle water tank T-9. This water accumulation occurred within the bermed concrete pad.

The facility's daily inspection records reviewed during the VSI revealed that on three occasions the carbon adsorption canister was not hooked to the hoppers (on September 21, 2000; on December 18, 2000; and on March 9, 2001). The facility records did not indicate how long the hoppers were unhooked during these incidents or whether unloading occurred during this time. However, according to facility personnel, the hoppers were likely unhooked for 24 hours or less at each of these incidents, since daily inspections are conducted and work orders are written upon discovery of a problem.
Review of the more recent records didn't show that these issues have occurred in the more recent years.

During both VSIs, the concrete pad appeared to be in good condition, and no releases were observed at this unit. For more details about the release potential and the risk from this unit see Appendix XI in the Permit Application Reference 5.

Remedial Actions

There are no documented remedial actions at this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

There is low release potential directly to soil and groundwater from this unit. The likelihood of release is reduced by the bermed concrete pad beneath this unit. For more details about the release potential and the risk from this unit please see Appendix XI in the Permit Application Reference 5.

(2) Surface Water Release Potential

There is low release potential directly to the surface water from this unit. The likelihood of release is reduced by the bermed concrete pad beneath this unit. Although there was a release of

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contaminated water from H-1, it was contained by the bermed concrete pad. The distance to the nearest surface water is greater than two miles. For more details about the release potential and the risk from this unit see Appendix XI in the Permit Application Reference 5.

(3) Air Release Potential

There is release potential to air from hopper H-1. Air releases are minimized by the roofed, three-sided structure with rubber strips on the fourth side that surrounds the unloading hopper. However, there is a potential for release of contaminants through the rubber strips while unloading occurs. Air releases are also minimized by the water spray system, the baghouse, and the carbon adsorption canister (WS-2). However, the facility's files indicate that the carbon adsorption canister was unhooked on three occasions. Releases of organic vapors may have occurred to the air if carbon was unloaded to the hopper during these occasions. Review of the more recent records showed that these issues have not occurred in more recent years.

During both VSIs, the bermed concrete pad appeared to be in good condition, and no releases were observed at this unit. For more details about the release potential and the risk from this unit see Appendix XI in the Permit Application Reference 5.

6.1.6 HWMU 6 (Previously designated as SWMU 5): Spent Carbon Unloading Hopper H-2

Unit Description

Unloading hopper H-2 is located inside the spent carbon warehouse at the east wall. Twenty percent of all incoming spent carbon managed at the facility is handled at H-2. The capacity of H-2 is 500 lbs. per unloading event. The material of construction of this unit is presented in Table 1 listing the units above.

Various sized containers and drums containing spent carbon are removed from incoming trucks and stored in a bermed containment area within the spent carbon warehouse. The containers and drums are unloaded into H-2 by tipping the contents into the hopper. H-2 is equipped with a water spray system to wash out containers immediately following unloading. There is a lid on this hopper, which is kept closed except when spent carbon is being emptied into the hopper.

The spent carbon flows by gravity through a grate into the hopper. Water from Tank T-9 is added as the carbon passes through the hopper to facilitate the transfer of spent carbon from the hopper via an eductor. The spent carbon slurry is then piped from H-2 to one of four carbon slurry storage tanks (T-1, T-2, T-5, or T-6).

Status and Wastes Managed

The start-up date for this unit is 1992, and it is currently active. As a component of the spent carbon handling system, this unit is operating under RCRA interim status, and is subject to the RCRA permit decision.

Hazardous and nonhazardous spent carbon is managed in this unit. The list of hazardous constituents that may be adsorbed onto the spent carbon is very extensive and may include, but is

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not limited to, VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

A collector system was installed at start-up in 1992 to control particulate and VOC emissions during the container unloading operation. VOCs and particulates, which are released during the unloading process at H-2, are drawn through a stainless steel pipe at the back of the hopper and routed to a baghouse designed to remove particulates and a carbon adsorption canister, WS-2, designed to remove VOCs.

This unit is located inside a warehouse. The floor of the warehouse is concrete with grated trenches that lead to a sump. Any liquids captured inside the warehouse are recycled to Tank T-9.

Release History

EPA's *Compliance Evaluation Inspection Report* for February 1994 presents one concern regarding the potential for release of hazardous carbon particulates during unloading of drums and bulk loads to the hoppers, H-1 and H-2. During the inspection, there appeared to be a potential for release of fugitive particulates due to the design of the hood/vacuum that pulls air from the receiving and unloading areas to one of the baghouses, which is located at ground level between the two hoppers. In response to the inspection, the facility representatives stated that the practice of watering down the waste carbon as it is unloaded effectively controls fugitive particulates.

The facility's daily inspection records reviewed during the VSI revealed that on three occasions the carbon adsorption canister was not hooked to the hoppers (on September 21, 2000; on December 18, 2000; and on March 9, 2001). The facility records did not indicate how long the hoppers were unhooked during these incidents or whether unloading occurred during this time. However, according to facility personnel, the hoppers were likely unhooked for 24 hours or less at each of these incidents, since daily inspections are conducted and work orders are written upon discovery of a problem.
Review of the more recent records didn't show that these issues have occurred in the more recent years.

There is low potential for a release from H-2 since a stainless steel pipe attached to H-2 draws vapors and particulates from the spent carbon as it is unloaded and routes them to a baghouse and carbon adsorption canister WS-2.

The carbon in the WS-2 canister is replaced before breakthrough. It was determined through engineering calculations that the carbon in WS-2 needs to be replaced every 100 days at a maximum. The facility operator visually inspects WS-2 for leaks and proper operation on a daily basis. The facility operator also visually inspects the bags in the baghouse on a weekly basis to ensure the bags are in good condition and are operating properly and that the pressure drop across the system is acceptable. The bags are replaced as necessary.

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No releases were observed at this unit during both VSIs. During both VSIs, the bermed concrete pad appeared to be in good condition, and no releases were observed at this unit. For more details about the release potential and the risk from this unit see Appendix XI in the Permit Application Reference 5.

Remedial Actions

No documented remedial actions have been performed at this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

There is low potential of a release from this unit directly to the soil or groundwater since the unit is located inside the spent carbon warehouse and the floor of the warehouse appears to be in good condition. There is low release potential to soils though deposition from air releases (see item 3 below).

(2) Surface Water Release Potential

There is low potential for release directly to the surface water since the unit is located inside the spent carbon warehouse and the floor of the warehouse appears to be in good condition as stated above. In addition, any spilled liquids are piped to on-site recycle water tank T-9 via a sump located near trenches in the floor. The distance to the nearest surface water is greater than two miles. There is low release potential to surface water through deposition from air releases (see item 3 below).

(3) Air Release Potential

There is low potential for a release to air since a stainless steel pipe attached to H-2 draws vapors and particulates from the spent carbon as it is unloaded and routes them to a baghouse and carbon adsorption canister WS-2.

The carbon in the WS-2 canister is replaced before breakthrough. It was determined through engineering calculations that the carbon in WS-2 needs to be replaced every 100 days at a maximum. The facility operator visually inspects WS-2 for leaks and proper operation on a daily basis. The facility operator also visually inspects the bags in the baghouse on a weekly basis to ensure the bags are in good condition and are operating properly and that the pressure drop across the system is acceptable. The bags are replaced as necessary.

The facility files indicate that the carbon adsorption canister was unhooked on three occasions. Releases of VOCs may have occurred to the air if spent carbon was unloaded to the hopper during these occasions. Review of the more recent records showed that these issues have not occurred in the more recent years. No releases were observed at this unit during both VSIs.

6.1.7 HWMU 7 (Previously designated as SWMU 6): Hopper Air Pollution Control

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Equipment (Piping and Baghouse)

Unit Description

HWMU 7 is a particulate and organic vapor collection system made of steel piping. The system has been installed to collect the particulates and organic vapors from hoppers H-1 and H-2. Particulates and organic vapors, which are released during the unloading process at H-1 and H-2, are drawn through stainless steel pipes at the back of the hoppers and routed first to a baghouse designed to remove particulates and then to a carbon adsorption canister (WS-2) designed to remove VOCs. Treated air is exhausted to the atmosphere. The material of construction of this unit is presented in Table 1 listing the units.

Status and Waste Managed

The start-up date for this unit was 1992, and it is currently active. It is operated to meet the fugitive emission (benzene) NESHAPs standards under the CAA. As a component of the spent carbon handling system, this unit is operating under RCRA interim status, and is subject to the RCRA permit decision.

Air containing particulates and organic vapors is managed in this unit. The list of hazardous constituents that may be present in the air is very extensive and may include, but is not limited to, VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The system is inspected weekly to ensure the particulate collection bags in the baghouse are in good condition and the pressure drop across the system is adequate. A bermed concrete pad is present under the piping that runs outdoors.

Release History

EPA's *Compliance Evaluation Inspection Report* for February 1994 presents one concern regarding the potential for release of hazardous carbon particulates during unloading of drums and bulk loads to the hoppers, H-1 and H-2. During the inspection, there appeared to be a potential for release of fugitive particulates due to the design of the hood/vacuum that pulls air from the receiving and unloading areas to one of the baghouses located on top of the carbon regeneration unit. In response to the results of the inspection, the facility representatives stated that the practice of watering down the waste carbon as it is unloaded effectively controls fugitive particulates.

No release was observed at this unit during both VSIs.

Remedial Actions

There were no documented remedial actions performed at this unit.

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Migration Pathways

(1) Soil to Groundwater Release Potential

There is low release potential directly to soil and groundwater from this unit. The likelihood of release is reduced by the bermed concrete pad beneath this unit. For more details about the release potential and the risk from this unit see Appendix XI in the Permit Application Reference 5. In addition, there is low release potential to soils through deposition from air releases (see item 3 below).

(2) Surface Water Release Potential

The potential to release from this unit directly to surface water is low because the unit is located over concrete pads and the distance to surface water is greater than two miles. In addition, there is low release potential to surface water through deposition from air releases (see item 3 below).

(3) Air Release Potential

The potential to release contaminants from this unit to air is low due to routine inspections of the air pollution control system including prompt replacement of any parts, particulate collection bags, and carbon in the carbon adsorber units as needed. The facility operator also visually inspects the bags in the baghouse on a weekly basis to ensure the bags are in good condition and are operating properly and that the pressure drop across the system is acceptable. The bags are replaced as necessary.

No releases were observed at this unit during either VSIs. During both VSIs, the bermed concrete pad appeared to be in good condition, and no releases were observed at this unit. For more details about the release potential and the risk from this unit see Appendix XI in the Permit Application Reference 5.

6.1.8 HWMU 8 (Previously designated as SWMU 7): Spent Carbon Slurry and Recycle Water Transfer System

Unit Description

This unit is used for transporting spent carbon slurry from unloading hoppers H-1 and H-2 to spent carbon slurry storage tanks T-1, T-2, T-5, and T-6, to reactivation feed tank T-18, and finally to reactivation furnace RF-2. The transfer equipment is located east of the spent carbon warehouse and includes eductor pumps, valves, steel piping, and flexible piping used to transfer the spent carbon slurry from unloading hoppers H-1 and H-2 to the spent carbon slurry storage tanks, from the spent carbon slurry storage tanks to reactivation furnace feed tank T-18, and from the reactivation furnace feed tank to reactivation furnace RF-2 (Appendix E).

The materials of construction for this system are presented in Table 1 listing the units above. The material for all valves is stainless steel. Spent carbon pipelines (inlets, outlets, and overflows) are also constructed of stainless steel. There is one flexible piping that is constructed of steel-reinforced rubber hose. The pipelines are not internally lined because they are compatible with the waste being handled at the facility.

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During periodic inspections the pipelines were noted to be free from outside corrosion. All pipelines are supported throughout by hanger supports and steel bridge supports, and "U" bolts guide them.

Status and Wastes Managed

This transfer system was used for the RF-1 feed system from 1992 to 1996, and it has been used for RF-2 since 1996. The system is currently active. As a component of the spent carbon handling system, this unit is operating under RCRA interim status and is subject to the RCRA permit decision.

Hazardous waste in the form of spent carbon slurry, along with recycle water that has been in contact with the spent carbon, is managed in this unit. The list of hazardous constituents that may be present in slurry and recycle water is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

In the treatment and storage areas, the permanent piping used to transfer spent carbon is rated for at least 125 percent of the nominal operating pressure. All piping and pumps are compatible with the waste that they come in contact with. Pumps are located within a concrete pad to control releases in the event of a leak. The pump motors are Teflon® to minimize chances of electrical shorting if liquids contact the motors. All rotating parts of the pumps are fitted with guards.

The facility operator inspects all transfer equipment weekly for signs of corrosion and leaks and for proper operation. If a problem is found, it is taken care of upon discovery or as soon as possible.

Release History

Based on a review of inspection logs and file material during both VSIs, there are no known records or reports of past releases from this unit. No releases were observed at this SWMU during both VSIs.

Remedial Actions

There are no documented remedial actions performed at this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

There is low potential of a release from this unit to the soil and groundwater since routine

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inspections of the system are performed, and the unit is located within bermed concrete pads.

(2) Surface Water Release Potential

The distance to the nearest surface water is greater than two miles. There is low potential of release to the surface water from this unit since routine inspections of the system are performed, and the unit is located within bermed concrete pads.

(3) Air Release Potential

The air release potential is low because the unit is a closed-loop system that is inspected routinely for integrity to ensure that there are no leaks.

6.1.9 HWMU 9 (Previously designated as SWMU 8): Spent Carbon Storage Warehouse (Container Storage Area)

Unit Description

This warehouse is located in the northern portion of the facility. The hazardous waste storage portion of the warehouse has the capacity to store 100,000 gallons of containerized waste and 35,000 gallons of bulk hazardous waste. Currently, only containerized wastes (drums and filter canisters) are stored in the warehouse; the containers are stored on pallets. Samples collected from incoming spent carbon are also stored in the hazardous waste portion of the warehouse. The samples are stored in glass jars on metal shelves until the batch of spent carbon from which the samples were collected is reactivated. The samples are then poured into the hopper for processing, and the jars are triple-rinsed and reused.

The container storage area is designed to hold up to 100,000 gallons of RCRA spent carbon. The containment system is designed to hold a minimum of 10,000 gallons. The containment volume calculations are shown in Appendix VII of Permit Application Reference 5. The calculated containment volume is 19,418 gallons, which is larger than the minimum required 10,000 gallons. Because the container storage area is inside, run-on is not a consideration. If a container leaks, any liquids leaking from the container will drain into the sump via the trench system, where it will be transferred to recycle water tank T-9. Details of the container storage area floor, slope, sump, etc. can be found on the drawings contained in Appendix VII of the Permit Application Reference 5.

Facility history indicates that more than half of the containers received do not contain free liquids. All containers however are managed in the same manner, consistent with practices for containers with free liquids.

The warehouse slab-on-grade is designed for containment (prevention of release of any spills of hazardous waste to the environment). The slab is constructed of five-inch thick reinforced concrete (3,000 psi) on two-inch sand on a six-millimeter visqueen vapor barrier on a four-inch compacted gravel base. All construction and control joints in the slab are coated with a sealant. The slab is designed for warehouse storage use and light forklift traffic. The slab is sloped one-eighth of an inch per foot to trench drains, which flow into a concrete sump. The slab slope is from the perimeter to the interior trench drains (1 foot by 1 foot minimum). The trench drains

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slope to a sump (3 feet by 3 feet by 3 feet), where any liquids that enter may be stored for subsequent removal.

Any spills within the containment area of the warehouse will drain to the sump. The sump is equipped with a pump that removes any accumulation in the sump to the recycled water storage tank T-9. In addition, a continuous six-inch high concrete curb is provided around the entire building.

All drums and containers stored in this warehouse are managed as "Subpart FF-affected wastes" (meaning the containers are subject to the requirements of the Clean Air Act ("CAA") air emission control provisions at 40 CFR Part 61, subpart FF) and meet DOT container requirements. The materials of construction of the spent carbon storage warehouse are presented in Tables 1 listing the units above.

Status and Wastes Managed

Use of the warehouse for container storage of hazardous waste began in 1992, and it remains active. The hazardous waste portion of the warehouse is operated under RCRA interim status and is subject to the RCRA permit decision.

Both hazardous and nonhazardous spent carbon is managed in this unit. The list of hazardous constituents that may be present on the spent carbon stored in the warehouse is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

Facility personnel inspect the hazardous waste container storage area on a daily basis. The containment system is inspected for cracks, surface erosion, and the integrity of the surface coating. Cracks in the concrete floor of the spent carbon storage warehouse have been sealed with a polyresin, Sikadur-35® or equivalent. On the hazardous waste storage side, the floor is divided by a sump system that collects any spills or wash waters. Liquids collected in the sump system are pumped into the recycle water system. The Container Storage Area is inspected daily. The storage pad is checked for cracks and gaps that would prevent a spill from being contained. Trenches and the sump are checked for standing liquids. Aisles are inspected to make sure they are not blocked and that they allow inspection.

Drums and containers used to store spent carbon that are stored in this facility are visually inspected daily by facility personnel to ensure the absence of corrosion and leaks. To ensure that they are closed during storage, and that they are not leaking and have the required labels.

Release History

Hazardous spent carbon was observed within the containment area on the warehouse floor during EPA's October 1993 inspection, although the floor had been recently washed down. The spill

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was inside the containment area, and may have been indicative of sloppy unloading of spent carbon into hopper H-2.

A review of the facility's quarterly visual inspection logs during the 2003 VSI revealed that in February 1996, a vent scrub tank in the hazardous waste storage area of the warehouse did not have a bottom plug. (A vent scrub tank is a vessel filled with carbon that a generator uses on their site to filter air. When the carbon is ready to be changed out, the entire vessel containing the spent carbon is shipped to the facility for regeneration of the spent carbon.) The problem was resolved upon discovery. No release of any liquid or spent carbon was reported.

During an EPA inspection conducted in June 2001, an open barrel of sample jars, some closed and others without lids, was observed in the hazardous waste storage area within the warehouse. It appeared that the samples may have been dumped into a barrel for storage until disposal or processing for reuse. The facility operator has corrected the problem.

Records reviewed during the 2003 VSI indicate that only one leaking drum has ever been discovered in the warehouse (September 8, 2000); the drum was pulled from the pallet and the contents dumped into hopper H-2. No release was observed at this unit during the 2014 VSI.

Remedial Actions

A plug was installed at the vent scrub tank on February 1, 1996. Also, the barrel of sample jars was removed, and facility personnel now empty the sample jars into the hopper H-2 rather than storing them in a drum.

Migration Pathways

(1) Soil to Groundwater Release Potential

The potential for release from this unit to the soil and groundwater is low because the unit includes secondary containment and is routinely inspected.

(2) Surface Water Release Potential

The distance to the nearest surface water is greater than two miles. There is low release potential to surface water because the unit includes secondary containment and is routinely inspected.

(3) Air Release Potential

The potential for release is low from this unit to air. The containers of spent carbon are kept tightly closed except to unload into hopper H-2. There is low potential for a release to air since a stainless steel pipe attached to H-2 draws vapors and particulates from the spent carbon as it is unloaded and routes them to a baghouse and carbon adsorption canister WS-2. The carbon in the WS-2 canister is replaced before breakthrough. It was determined through engineering calculations that the carbon in WS-2 needs to be replaced every 100 days at a maximum. The facility operator visually inspects WS-2 for leaks and proper operation on a daily basis. The facility operator also visually inspects the bags in the baghouse on a weekly basis to ensure the

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bags are in good condition and are operating properly and that the pressure drop across the system is acceptable. The bags are replaced as necessary.

6.1.10 HWMU 10-13 (Previously designated as SWMUs 10-13): Spent Carbon Slurry Tank System

Units Descriptions

The spent carbon slurry storage tanks are located outside and east of the spent carbon storage warehouse. These tanks are used to store carbon slurry from unloading hoppers H-1 and H-2. From the spent carbon storage tanks the carbon slurry is pumped to reactivation furnace feed tank T-18. The material of construction for all four tanks is stainless steel, specific grade 300 series, and each tank has a design capacity of 8,319 gallons. All four tanks are staged on skirt supports on a steel platform structure. Information on the tanks is presented in Table 1 listing the units above.

The tanks were assessed by a professional engineer in April 2012. For more details about the conditions of the tank, please see the Appendix IX dated April 2012 in the Permit Application Reference 3. In addition the facility does daily inspections of the tanks as described in Appendix XII of Permit Application Reference 4. Each tank is inspected for signs of corrosion, leaks, proper operation, etc. The secondary containment underneath the tanks is inspected for gaps, cracks, standing water, etc. The containment sump is also checked for cracks and standing water. If water is found it is pumped to recycle water tank T-9.

Status and Wastes Managed

The tanks were purchased as used tanks that were new in 1956. The start-up date for the tanks was in 1992, and they are currently active. The tanks are managed and operated under RCRA interim status and are subject to the RCRA permit decision.

Hazardous spent carbon slurry is managed in these units. The list of hazardous constituents that may be adsorbed to the spent carbon slurry is very extensive and may include, but is not limited to: VOCs, PAHs, phthaates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The tanks are located on a secondary containment pad that has U-drains routed to recycle tank T-9. Piping systems and pumps for the four tanks are also located within the secondary containment area.

The tanks are directly attached to a carbon adsorber (for venting). Carbon adsorber WS-1 controls VOC emissions including potential benzene emissions from the tanks. WS-1 is designed to achieve control of benzene emissions by at least 98 percent, and the carbon is replaced before breakthrough on a calculated set schedule as described in the Subpart FF Compliance Plan, Appendix XXIII of the Permit Application Reference 5.

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Typically, proper tank pressure will be maintained via tank "venting" through the carbon adsorber. However, should unacceptably high pressure build up in the tanks, it would be released through the three-inch diameter pressure relief valves with vacuum breaker installed on each tank. All the valves are set at eight ounces for pressure relief and at six ounces to break the vacuum. The pressure relief valves are not connected to a carbon adsorber and release directly to the air.

An overflow nozzle is installed on each tank, and the overflow lines are routed back to the recycle tank, T-9. High-level alarms for carbon levels are present on each of the tanks. The high-level alarm is used to alert operators to cease flow of spent carbon slurry to the tank.

The slurry storage tank system, including any valves and piping associated with these tank systems, are visually inspected daily by facility personnel for leaks, cracks, and external corrosion. The overfill protection systems, valve positions, and level monitoring systems are also visually inspected daily for proper operation. The facility operator also checks the tanks for markings indicating weathering, proper identification of tank contents, and signs of corrosion and pitting on external tank walls.

Release History

No evidence of a release from the tank system was observed during both VSIs, and the tanks were in good condition. Based on a review of inspection logs and file material during both VSIs, there is no known record or report of past release from the tank system. However, a review of the facility's carbon replacement logs revealed several instances historically, in which the carbon in WS-1 was not replaced within specified time periods [see WS-1 for details].

Remedial Actions

Documentation was found in the facility records that, subsequent to the February 1994 tank assessment, the facility operator has addressed the recommendation to install eight one-inch diameter bolts on the skirt supports of the tanks. Inspection of these tanks during both VSIs confirmed that the bolts were in place.

Migration Pathways

(1) Soil to Groundwater Release Potential

The potential for release from these units to the soil or groundwater is low due to the good condition of the tanks, daily inspection of the tanks, and the bermed secondary containment provided underneath the tanks.

(2) Surface Water Release Potential

The nearest surface water is greater than two miles away. The potential for release from these units to the surface water is low due to the good condition of the tanks, daily inspections of the tank systems, and the bermed secondary containment provided around the tanks.

(3) Air Release Potential

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The potential for release from these units to the air is low due to the good condition of the tanks and daily inspection of the tanks. In addition, the tanks vent to carbon adsorber WS-1 to control emissions from the tank. The carbon in the WS-1 canister is replaced before breakthrough. It was determined through engineering calculations that the carbon in WS-1 needs to be replaced every 7.88 days at a maximum as described in the Subpart FF Compliance Plan, Appendix XXIII of Permit Application Reference 5. The facility operator visually inspects WS-1 for leaks and proper operation on a daily basis.

6.1.11 HWMU 14 (Previously designated as SWMU 14) RF-1 Furnace Feed System

HWMU 14 - RF-1 Furnace Feed System (RF-1 Feed Tank T-8, Dewatering Screw, and Weigh Belt Conveyor)

Unit Description

The furnace feed system is located in the RF-1 structures in the central process area of the facility. The RF-1 furnace feed system consists of the feed tank T-8 (capacity of 905 gallons), a dewatering screw, and a weigh belt conveyor. The furnace feed system for RF-1 was cleaned and has not been operated since RF-1 was shut down in 1996.

The materials of construction of this unit are presented in Table 1 listing the units above.

Status and Waste Managed

The feed tank to the reactivation furnace RF-1 (T-8) was new when it was installed. T-8 was operated from 1992 until 1996, when RF-1 was shut down.

Hazardous and spent carbon was managed in this unit. The list of hazardous constituents that may adsorbed to the spent carbon is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

Tank T-8 was located within a bermed concrete pad, which was visually inspected daily for cracks, surface erosion, and signs of leakage to determine whether any liquids had accumulated.

According to facility personnel, the integrity of Tank T-8 was tested upon installation. The pipe from T-8 was vertical and contained a full-open/full-closed valve, which controlled the flow of carbon slurry to the dewatering screw. Waste feed cut-off systems were used to stop the feed of spent carbon into the reactivation furnace; these systems were visually inspected daily.

Tank T-8 was also attached to a carbon adsorber for emissions control when RF-1 was operating, but it was removed when RF-1 was shut down in 1996. The carbon adsorber was designed to

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achieve control of benzene emissions by at least 98 percent, and the carbon was replaced before breakthrough.

Release History

In October 1993, during an EPA inspection, RF-1 was observed to fail to operate in a way that minimizes the possibility of a release of hazardous constituents/pollutants as evidenced by fugitive emissions observed coming from the top of the dewatering screw. The facility's inspection logs also indicated vapor emissions from above the dewatering screw on August 3, 1993. It is not known what, if any, corrective action occurred for the fugitive emissions for the dewatering screw for RF-1.

No evidence of a release from this SWMU was observed during 2003 VSI or during the 2014 VSI. None was expected since this unit has not been used since 1996.

Remedial Actions

It is not known what, if any, corrective action occurred for the fugitive emissions for the dewatering screw for RF-1 in October 1993. A fan was installed to the RF-2 dewatering screw in 1996 to add additional protection against potential releases of organic vapors. The fan routes gases and vapors into the afterburner rather than to the atmosphere. This helped prevent any future incidents similar to the RF-1 incident that happened in October 1993.

Migration Pathways

(1) Soil to Groundwater Release Potential

The potential is low for a release to the soil or groundwater from this unit due to the bermed concrete pad surrounding the unit.

(2) Surface Water Release Potential

The release potential from this unit to surface water was low due to the bermed concrete pad provided underneath the unit and the distance to the nearest surface water, which is greater than two miles.

(3) Air Release Potential

There is no current release potential to air from this unit since it has not been operated since 1996 and since it was cleaned. Past releases to the air from this unit occurred when fugitive emissions were released from the dewatering screw. The past release potential from Tank T-8 was low due to the controls that were in place to minimize fugitive emissions except for the incident that occurred in 1993 as was described above.

6.1.12 HWMU 15 (Previously designated as SWMU 15) RF-2 Furnace Feed System

HWMU 15 - RF-2 Furnace Feed System (RF-2 Feed Tank T-18, Dewatering Screw, and Weigh Belt Conveyor)

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Unit Descriptions

The furnace feed system is located in the RF-2 structure in the central process area of the facility. The RF-2 furnace feed system consists of the feed tank T-18 (capacity of 5,000 gallons), a dewatering screw, and a weigh belt conveyor, and it is currently active. The RF-2 furnace feed system feeds the carbon slurry to the RF-2 reactivation furnace. Details on the operation of this unit are given below.

Prior to introduction into the reactivation furnace, the water-carbon slurry is fed from the feed tank, T-18, via a pipe system to a dewatering screw at the top of RF-2 where the carbon is dewatered. The water from the dewatering screw is routed to the recycle water tank T-9, where it is then recycled through the spent carbon slurry and recycled water transport system. The dewatered spent carbon is then fed into the top hearth of the reactivation furnace by a weigh belt conveyor.

The materials of construction of this unit is presented in Table 1 listing the units above.

Status and Waste Managed

The feed tank, T-18, was new when it was installed. The furnace feed system to RF-2 has been in operation since July 1996 and is still active. As a component of the spent carbon handling system, the furnace feed system operate under RCRA interim status and are subject to the RCRA permit decision.

Hazardous spent carbon is managed in this unit. The list of hazardous constituents that may adsorb to the spent carbon is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

Tank T-18 is located within a bermed concrete pad, which is visually inspected daily for cracks, surface erosion, and signs of leakage to determine whether any liquids have accumulated.

According to facility personnel, the integrity of this tank was tested upon installation.
Tank T-18 was replaced with a double walled tank in 2006 as a result of the Consent Agreement and Final Order dated June 30, 2006. The pipe from T-18 is vertical and contains a full-open/full-closed valve, which controls the flow of carbon slurry to the dewatering screw. Waste feed cut-off systems are used to stop the feed of spent carbon into the reactivation furnace; these systems are visually inspected daily.

Carbon adsorber WS-3 is attached to Tank T-18 to control volatile emissions. Air displaced from Tank T-18 passes through WS-3 prior to being vented to the atmosphere. WS-3 is designed to achieve control of benzene emissions by at least 98 percent, and the carbon is replaced on a

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pre-calculated interval (38 days maximum) before breakthrough. Please see Permit Application Reference 5 and Appendix XXIII, for more details.

A fan was installed to the dewatering screw in March 1999 to add additional protection against potential releases of organic vapors. The fan routes gases and vapors into the afterburner rather than to the atmosphere. This helped prevent any future incidents similar to the RF-1 incident that happened in October 1993.

Release History

During an EPA inspection in December 1998, a shallow pan containing residual drip material was observed on one level of the reactivation furnace structure. The facility representative stated the residue was from a valve and had accumulated over a period of weeks. The pan was used to prevent the material from dripping on workers below, as the material is possibly caustic. The inspector informed the facility representative that if this was hazardous waste, it could be considered satellite accumulation. No pan was present during both VSIs.

No evidence of a release from this unit was observed during both VSIs.

Remedial Actions

In March of 1999, equipment was ordered to vent potential emissions from the dewatering screw to the afterburner to prevent further fugitive emissions from the dewatering screw for RF-2. A review of the facility records during the 2003 VSI verified that a new fan had been ordered, received, and installed to vent emissions to the afterburner.

Migration Pathways

(1) Soil to Groundwater Release Potential

The potential is low for a release to the soil or groundwater from this unit due to the unit being a double walled tank.

(2) Surface Water Release Potential

The release potential from this unit to surface water is low due to the unit being double walled and the distance to the nearest surface water is greater than two miles.

(3) Air Release Potential

The release potential for this unit is low because controls are in place to minimize fugitive emissions. The fugitive emissions from the dewatering screw are now routed to the afterburner. Also Tank T-18 vents to carbon adsorber WS-3 before it vents to the atmosphere.

6.1.13 HWMU 16 (Previously designated as SWMU 27): Wastewater Conveyance Piping to Wastewater Treatment Tank

Unit Description

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The conveyance piping system is located east of the RF-2 structure. The conveyance piping is made of polyvinyl chloride (PVC). Contaminated process water (slurry water/motive water), and other wastewaters are piped to the wastewater treatment tank, Tank T-11. The pipes are above ground. The materials of construction of the piping are presented above in Tables 1 listing the units above.

Status and Waste Managed

The conveyance piping system is located east of the RF-2 structure. The conveyance piping is made of polyvinyl chloride (PVC). Contaminated process water (slurry water/motive water), and other wastewaters are piped to the wastewater treatment tank, Tank T-11. The pipes are above ground. The list of hazardous constituents that may be adsorbed to the spent carbon, and thus may be in the wastewaters managed in this unit, is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

This unit is located on a bermed concrete pad. The facility routinely inspects the piping system for any corrosion, leakage, cracking, or metal fatigue. Any leaks from the piping system would be captured within the bermed concrete pad area and flow to grated trenches and sumps where water or spills are pumped to the recycle water tank, T-9.

Release History

A review of the facility records during both VSIs revealed no records of any releases from this conveyance piping system. No release from the conveyance piping system to the wastewater treatment tank was observed during both VSIs.

Remedial Actions

There is no record of remedial action on the conveyance piping system.

Migration Pathways

(1) Soil to Groundwater Release Potential

There is low potential of a release from this unit to the soil and groundwater since routine inspections of the system are performed, and the unit is located within a bermed concrete pad.

(2) Surface Water Release Potential

The distance to the nearest surface water is greater than two miles. There is low potential of release to the surface water from this unit since routine inspections of the system are performed, and the unit is located within bermed concrete pads.

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(3) Air Release Potential

The air release potential is low because the unit is a closed-loop system that is inspected routinely for integrity to ensure that there are no leaks.

6.1.14 HWMU 17 (Previously designated as SWMU 22): Spent Carbon Storage Warehouse Barrel Washer

Unit Description

The barrel washer is located in the Spent Carbon Storage Warehouse next to hopper H-2. The barrel washer is a rack used to support an empty container such as a drum or barrel, the contents of which has already been unloaded into hopper H-2. Clean water is used to rinse residual spent carbon or contamination from the container. The rinse water is flushed with clean wash-down water and drains to a nearby grated trench, which flows to the sump system. The rinse water is then pumped from the sump to the recycle water Tank, T-9. The materials of construction of this unit are presented in Table 1 listing the units above.

Status and Waste Managed

The use of this unit began in 1998, and it is currently active. As a component of the spent carbon handling system, this unit is operating under RCRA interim status, and is subject to RCRA permitting.

Any of the hazardous constituents found in the spent carbon may be present in the rinse water after cleaning out the empty containers at the barrel washer. These may include, but are not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5 (see Appendix N).

Release Controls

The barrel washer is located within the Spent Carbon Storage Warehouse containment (the concrete floor), which is surrounded by a berm and drains to the grated trenches and sump.

Release History

There is no record of a release to the environment from the barrel washer area within the Spent Carbon Storage Warehouse. Residual rinse water was observed during the 2003 VSI around the barrel washer from a recent washout of barrels. This residual rinse water was within the containment area for the Spent Carbon Storage Warehouse. There was no residual rinse water observed during the 2014 VSI.

Remedial Actions

There is no record of remedial actions performed at this unit.

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Migration Pathways

(1) Soil to Groundwater Release Potential

There is low release potential from this unit to the soil and groundwater. The barrel washer is located indoors, and containment, trenches, and a sump are present to capture rinse water from the barrel washer.

(2) Surface Water Release Potential

There is low release potential from this unit to the surface water since containment, trenches, and a sump present to capture rinse water from the barrel washer. The distance to the nearest surface water is greater than two miles.

(3) Air Release Potential

There is low release potential from this unit to the air. Low concentrations of hazardous constituents may be present in the empty drums that are rinsed out at the barrel washer. However, most of the VOCs and particulates from the drums are released during unloading of the containers at Hopper H-2 and are controlled with the H-2 hopper air pollution control equipment.

6.1.15 HWMU 18 (Previously designated as SWMU 32): Carbon Adsorber PV-50 or PV-1000. This unit doesn't exist anymore.

Unit Description

The carbon adsorber PV50 was part of the process wastewater treatment system with piping to Tank T-11. The canister was located adjacent to Tank T-12, the old motive water and rainwater collection tank which is no longer in use. The unit was used periodically to filter recycle/motive water from tank T-12 before discharging to Tank T-11 to the POTW. This unit doesn't exist anymore.

According to facility representatives, the installation of this unit was not a regulatory requirement for compliance with the CAA or RCRA. It was installed as an additional measure of treatment for recycle water. The designed control of contaminants (% removal of incoming contaminants) was not available from facility reports. The material of construction of this unit is presented in Table 1 listing the units above.

Status and Waste Managed

The list of hazardous constituents that were filtered through the carbon adsorber was very extensive and may have included, but was not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

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Release Controls

According to the facility, the carbon in the carbon adsorber canister was changed out or sometimes a new carbon adsorber canister was taken out of inventory for replacement to prevent breakthrough. Replacement logs were kept to verify replacement. PV50 was located on a concrete pad surrounded by a berm, and grated trenches and sumps provide for capture of any spills. The unit was sealed and kept closed except during change-out of carbon.

Release History

A review of the carbon replacement logs revealed no documentation of a breach in the container, visible leakage, or corrosion of any carbon canister.

There are ongoing low emissions of benzene from this unit of an estimated two percent of the benzene entering the filter, this is based on the 98% efficiency concept. There was no other record of any release from this unit. Staining on the exterior of the canister was observed during the 2003 VSI; further visual inspection indicated that leaking from the top of the canister was apparent.

Remedial Actions

A review of the records revealed no remedial actions at the carbon adsorber PV50.

Migration Pathways

(1) Soil to Groundwater Release Potential

There was low release potential from this unit to the soil or groundwater. The unit was located on a concrete pad surrounded by a berm. Any releases that might have occurred when this unit was in operation, such as the leak observed from the canister during the 2003 VSI, would have been contained in the bermed concrete pad. In addition, the unit was sealed, closed, and only opened for change-out prior to breakthrough.

(2) Surface Water Release Potential

There was low release potential to the surface water from this unit, since the closest surface water was greater than two miles away. Additionally, the carbon adsorber canister was located within the bermed area and was sealed closed except for change-out of carbon before breakthrough.

(3) Air Release Potential

There could have been ongoing low levels of benzene (and possibly other organic constituents) released from this unit to the air. If carbon change-outs were performed on

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schedule, there could have been low release potential to air from this unit. This could have been higher if the change-outs were not done on schedule.

6.1.16 HWMU 19 (Previously designated as SWMU 29): Carbon Adsorber WS-1

Unit Description

Carbon adsorber canister WS-1 is located beside the spent carbon storage tanks, east of the warehouse. The spent carbon storage tanks (T-1, T-2, T-5, and T-6) and the recycle water tank (T-9) vent to the WS-1 adsorber. Air vents through the carbon adsorber, is filtered and then released to the outside air.

WS-1 contains approximately 4,000 lbs. of activated carbon and is designed to achieve control of benzene emissions by at least 98 percent. Emissions calculations supporting the design of WS-1 are contained in the facility's Benzene NESHAPs Subpart FF Compliance Plan (See Appendix XXIII of Part B Application Reference 5). The capacity and material of construction of this unit are presented in Table 1 listing the units above.

Status and Waste Managed

WS-1 has been in operation since 1992, and it is currently active. The carbon canister subject to both RCRA and CAA. The list of hazardous constituents that may be filtered through the carbon adsorber is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

This adsorber is changed out approximately every 7.88 days that the unit is in use at a maximum or more frequently (as described in the Table in Section 4.5 of Appendix XXIII of Permit Application Reference 5) to assure breakthrough does not occur. The spent carbon from WS-1 is unloaded into hopper H-1 for treatment in the reactivation furnace. Replacement logs are kept to verify replacement of spent carbon. WS-1 is located on a concrete pad surrounded by a berm, and grated trenches and sumps provide for capture of any spills. The unit is sealed and kept closed except for change-out of carbon.

Release History

During the 2003 VSI, a review was conducted of the carbon canister replacement log. This log is kept by the facility to ensure carbon replacement within specified time periods and to document any breach in the container, visible leakage, or corrosion. The review of the carbon replacement log revealed that the carbon unit (WS-1) was changed out on March 15, 2000, two days after the required date of March 13, 2000. Also, from July 9, 1996 to August 22, 1996, WS-1 was operated 13 days beyond the change-out period. No documentation of a breach in a canister, or visible leakage, or corrosion was observed in the logs from 1995 through 2000. In the 2014 VSI file review of the past 2 years of records, this was not repeated.

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The facility did periodic monitoring of the WS-1 adsorber vent from June 2011 till August 2013 prior to the carbon change-outs. The logs are attached in Appendix P. The results show that the levels were below the 500 ppm above background with the highest level recorded at 223 ppm. As per the logs, change-outs take place every 2-3 days which is more frequently than the 7.88 days required by the engineering calculations.

A review of quarterly visual inspection records for the period of 1995 to 2001 during the VSI, revealed that in 1996, a cracked hose was identified at the top of the WS-1 carbon canister. Records indicate that the hose was replaced on February 1, 1996. The delays in carbon change-out and the cracked hose may have resulted in releases of unfiltered air from the tanks and carbon filter.

There are ongoing low emissions of benzene (and possibly other organic constituents) from this unit of an estimated two percent of the benzene entering the filter. There is no other record of any release from this unit. No evidence of release was observed during either VSIs at this unit.

Remedial Actions

The only documented remedial actions for WS-1 were that the spent carbon in the canister was changed out on the day of discovery of being past due for change-out, and the cracked hose was replaced.

Migration Pathways

(1) Soil to Groundwater Release Potential

There is low release potential from this unit to the soil or groundwater. The unit is located on a containment pad surrounded by a berm. In addition, the unit is sealed, closed, and only opened for change-out prior to breakthrough.

(2) Surface Water Release Potential

There is low release potential to surface water since the nearest surface water is greater than two miles away. Additionally, the carbon adsorber canister is located within secondary containment and is sealed closed except for change-out of carbon before breakthrough.

(3) Air Release Potential

Since the canister performs at a 98% efficiency, there could potentially have been ongoing low levels of benzene (and possibly other organic constituents) released from this unit to the air. If carbon change-outs are performed on schedule (before 7.88 days have passed), there would be low release potential to air from this unit. This could be higher if the carbon from the unit is not changed-out on schedule.

The 2003 VSI file review showed that, in at least two incidents, change-out did not occur on schedule. In the 2014 VSI file review of the past 2 years of records, this was not repeated.

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The facility did periodic monitoring of the WS-1 adsorber vent from June 2011 till August 2013 prior to the carbon change-outs. The logs are attached in Appendix P. The results show that the levels were below the 500 ppm above background with the highest level recorded at 223 ppm. Most other results were much lower. The logs showed that change-outs normally take place every 2-3 days which is more frequently than the 7.88 days required by the engineering calculations.

6.1.17 HWMU 20 (Previously designated as SWMU 30): Carbon Adsorber WS-2

Unit Description

The WS-2 carbon adsorber canister is located east of the warehouse and on the process area bermed concrete pad. WS-2 controls VOC emissions from unloading hoppers H-1 and H-2. Until 1996, it also controlled VOC emissions from Tank T-8, the former feed tank to RF-1. The canister filters air collected from above the hoppers. This air flows through the carbon adsorber, is filtered, and then is released to the outside air.

WS-2 contains approximately 5,000 lbs. of activated carbon and is designed to achieve control of benzene emissions by at least 98 percent. The inlet concentration is 80 ppmv with a maximum flow rate of 2500 cfm. The engineering calculations are included in the facility's Benzene NESHAPs Subpart FF Compliance Plan (See Appendix XXIII of Part B Application Reference 5). The carbon adsorber is designed to achieve benzene control efficiency of at least 98 percent. The capacity and material of construction of this unit are presented in Table 1 listing the units above.

Status and Waste Managed

WS-2 began operating in 1992, and it is currently active. From 1992 until present, the unit has been used to control VOC emissions from the spent carbon unloaded into hoppers H-1 and H-2. From 1992 until 1996, it also controlled VOC emissions from Tank T-8. The carbon canister is subject to both RCRA and CAA.

The list of hazardous constituents that may be filtered through the carbon adsorber is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The carbon in the carbon adsorption canister is scheduled to be replaced before breakthrough as part of the facility's operation and maintenance procedures. The maximum number of days (100) before the carbon is replaced in the canister was determined by engineering calculations. The spent carbon from WS-2 is unloaded into hopper H-1 for treatment in the reactivation furnace. Replacement logs are kept to verify replacement of spent carbon. WS-2 is located on a containment pad surrounded by a berm, and grated trenches and sumps provide for capture of any spills. The unit is sealed and kept closed except for change-out of carbon.

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Since the canister performs at a 98% efficiency, potentially, there could be ongoing low levels of benzene (and possibly other organic constituents) released from this unit to the air. If carbon change-outs are performed on schedule (before 100 days have passed), there would be low release potential to air from this unit.

The 2003 VSI file review showed that, in at least two incidents, change-out was not done on schedule. In the 2014 VSI file review of the past 2 years of records, this was not repeated. In addition, the facility did periodic monitoring of the WS-2 adsorber vent from July 2011 to June 2013 prior to the carbon change-outs. The logs are attached in Appendix P. The results show that the levels were below the 500 ppm background threshold with the highest level recorded at less than 2 ppm. The logs showed that change-outs normally take place before 90 days which is more frequent than the 100 days required by the engineering calculations.

Release History

Daily inspection records reviewed during the VSI revealed that on three occasions carbon adsorption canister WS-2 was not hooked to the hoppers (on September 21, 2000; on December 18, 2000; and on March 9, 2001). The facility records did not indicate how long the hoppers were unhooked during these incidents or whether unloading occurred during this time. However, according to facility personnel, the hoppers were likely unhooked for 24 hours or less at each of these incidents, since daily inspections are conducted and work orders are written upon discovery of a problem.

The facility did periodic monitoring of the WS-2 adsorber vent from July 2011 till June 2013 prior to the carbon change-outs. The logs are attached in Appendix P. The results show that the levels were below the 500 ppm above background with the highest level recorded at less than 2 ppm. As per the logs, change-outs take place every 91 days at the most which is more frequent than the 100 days required by the engineering calculations.

Since the canister performs at a 98% efficiency, potentially, there could have been ongoing low levels of benzene (and possibly other organic constituents) released from this unit to the air. If carbon change-outs are performed on schedule (before 100 days have passed), there would be low release potential to air from this unit. This could be higher if the change-outs are not done on schedule.

Remedial Actions

A review of the records revealed no remedial actions at WS-2. The facility logs do not indicate whether the canister was promptly re-hooked up to the hoppers on the dates noted above. The facility did periodic monitoring of the WS-2 adsorber vent from July 2011 to June 2013 prior to the carbon change-outs. The logs are attached in Appendix P. The results show that the levels were below the 500 ppm background threshold with the highest level recorded at less than 2 ppm. As per the logs, change-outs take place every 91 days at the most which is more frequent than the 100 days required by the engineering calculations.

Migration Pathways

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(1) Soil to Groundwater Release Potential

There is low release potential from this unit to the soil or groundwater. The unit is located on a concrete pad surrounded by a berm. In addition, the unit is sealed, closed, and only opened for change-out prior to breakthrough.

(2) Surface Water Release Potential

There is low release potential to surface water since the closest surface water body is greater than two miles away. Additionally, the carbon adsorber canister is located within a concrete pad surrounded by a berm and is sealed closed except for change-out of carbon before breakthrough.

(3) Air Release Potential

Since the canister performs at a 98% efficiency, potentially, there could have been ongoing low levels of benzene (and possibly other organic constituents) released from this unit to the air. If carbon change-outs are performed on schedule (before 100 days have passed), there would be low release potential to air from this unit. This could be higher if the change-outs are not done on schedule.

The 2003 VSI file review showed that, in at least two incidents, change-out was not done on schedule. In the 2014 VSI file review of the past 2 years of records, this was not repeated. In addition, the facility did periodic monitoring of the WS-2 adsorber vent from June 2011 to August 2013 prior to the carbon change-outs. The logs are attached in Appendix P. The results show that the levels were below the 500 ppm background threshold with the highest level recorded at less than 2 ppm. Most other results were much lower. The logs showed that change-outs normally take place every 91 days which is more frequent than the 100 days required by the engineering calculations.

There could have been ongoing low levels of benzene (and possibly other organic constituents) released from this unit to the air, since the canister performs at a 98% efficiency. If carbon change-outs are performed on schedule, there would be low release potential to air from this unit. This could be higher if the change-outs are not done on schedule.
There are ongoing low levels of benzene (and possibly other organic constituents) released from this unit to the air. If carbon change-outs are performed on schedule (every 100 days at maximum), there is low release potential to air from this unit. If change-out is not done on schedule, there would be a higher potential for release to air. The 2003 VSI file review shows that WS-2 was not hooked up to the hoppers in several incidents. Releases of VOCs may have occurred to the air if carbon was unloaded to the hopper during these occasions. In the 2014 VSI file review of the past 2 years of records, this was not repeated.

6.1.18 HWMU 21 (Previously designated as SWMU 31): Carbon Adsorber WS-3

Unit Description

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Carbon adsorber unit WS-3 is located on a bermed concrete pad beside the RF-2 structure. WS-3 is used to control VOC emissions from Tank T-18, the feed tank for carbon slurry to RF-2. The tank is vented to the adsorber. The air flows through the carbon adsorber, is filtered, and then released to the outside air.

The WS-3 unit contains approximately 1,000 lbs. of activated carbon and is designed to achieve control of benzene emissions at least 98 percent. Under worst-case conditions, it is expected that the maximum daily inlet flow rate to adsorber WS-3 is approximately 5.9 cubic feet per minute with a maximum benzene concentration of 4,589 ppmv. See the Subpart FF Compliance Plan that can be found in Appendix XXIII of Part B Application Reference 5. The material of construction of this unit is presented in Table 1 listing the units above.

Status and Waste Managed

WS-3 began operating in 1996, and it is currently active. The carbon canister is not RCRA-regulated, but it is subject to the applicable Benzene NESHAP Subpart FF requirement.

The list of hazardous constituents that may be filtered through the carbon adsorber is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

This adsorber is changed out approximately every 38 days to assure breakthrough has not occurred. Replacement logs are kept to verify replacement of spent carbon. WS-3 is located on a concrete pad surrounded by a berm, and grated trenches and sumps provide for capture of any spills. The unit is sealed and kept closed except for change-out of carbon.

Release History

A review of the Carbon Canister Replacement Logs during the VSI revealed that WS-3 was changed out on December 3, 1997, which was on the 40th day instead of the 38th day as required by the facility's Subpart FF plan (Appendix XXIII of Permit Application Reference 5.) Records indicate that the plant was down for maintenance for 10 days during this period. Therefore, although the change-out period was exceeded, this calculation is based on full production, and minimal emissions would have occurred due to the shutdown. Further, records reviewed during the 2003 VSI revealed that WS-3 was changed out on January 12, 1998, which was the 40th day instead of the 38th day as required by the facility's Subpart FF plan (Appendix XXIII of Permit Application Reference 5.) The plant was running at less than 95 percent of capacity at that time, so the calculations on which the change-out time is based would have allowed for the extension in time with no emissions. In the 2014 VSI file review of the previous 2 years of records, the change-out period for the carbon canisters was within the allotted temporal range.

Since the canister performs at a 98% efficiency, potentially, there could be ongoing low levels of benzene (and possibly other organic constituents) released from this unit to the air. If carbon

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change-outs are performed on schedule (before 38 days have passed), there would be low release potential to air from this unit.

Remedial Actions

The spent carbon was changed out on the day of discovery of being past due or on the day it was due because of plant shutdown.

Migration Pathways

(1) Soil to Groundwater Release Potential

The potential to release from this unit to the soil or groundwater is low. The unit is located on a bermed concrete pad. In addition, the unit is sealed, closed, and only opened for change-out prior to breakthrough.

(2) Surface Water Release Potential

The potential to release to the surface water is low since the surface water is greater than two miles away. Additionally, the carbon adsorber canister is located within bermed concrete pad and is sealed closed except for change-out of carbon before breakthrough.

(3) Air Release Potential

There are ongoing low levels of benzene (and possibly other organic constituents) released from this unit to the air. If carbon change-outs are performed on schedule (every 38 days), the potential to release to air from this unit is low. If change-out is not done on schedule, there would be a higher potential for release to air.

6.1.19 HWMU 22 (Previously designated as SWMU 33): Slurry Transfer Inclined Plate Settler Tank. This unit was removed and doesn't exist anymore.

Unit Description

This tank was used to remove suspended solids from the scrubber water. It was located in the process area near the venturi scrubber and Tank T-11. The slurry transfer inclined plate settler tank was purchased new and installed in 1992. It was cleaned and removed two to three years later (around 1994 or 1995) because it never worked as advertised, according to facility representatives. The unit was a part of a wastewater treatment system and therefore was exempt from RCRA permitting requirements, with the exception of the fugitive emission requirements in Subpart CC of RCRA. The material of construction of the slurry transfer inclined plate settler tank is presented in Table 1 listing the units above.

Status and Waste Managed

The slurry transfer inclined plate settler tank was purchased new and installed in 1992. It was cleaned and removed two to three years later (around 1994 or 1995) because it never worked as

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advertised, according to facility representatives. The unit was a part of a wastewater treatment system and therefore was exempt from RCRA permitting requirements, with the exception of the fugitive emission requirements in Subpart CC of RCRA.

Any contaminants present in the combustion gases in the APCE may also be transferred to the scrubber water blowdown managed in this unit. Although the combustion process is expected to destroy much of the organic contaminants originally on the spent carbon, the list of hazardous constituents adsorbed to the spent carbon and transferred to wastewater managed in this unit may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5. Products of incomplete combustion could also be in the gases coming into contact with the scrubber water.

Release Controls

This tank was purchased new, and the equipment was monitored daily. It was located on a bermed concrete pad, and grated trenches and sumps were provided for capture of spills or leaks.

Release History

There is no record of any release from this unit.

Remedial Actions

There is no record of any remedial action at this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

There was low release potential to the soil and groundwater. The unit was located on a bermed concrete pad, and grated trenches and sumps provided for capture of any spills or leaks.

(2) Surface Water Release Potential

There was low release potential to the surface water. The unit was a closed system located on a bermed concrete pad, and surface water is greater than two miles away.

(3) Air Release Potential

There was low release potential to air since the unit was a closed system.

6.1.20 HWMU 23 (Previously designated as SWMU 34): Scrubber Recycle Settler Tank T-17. This unit has been removed and doesn't exist anymore.

Unit Description

This tank was the scrubber recirculation tank used on RF-1 as part of the wastewater treatment

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system. The scrubber recycle settler tank was installed new in 1992. It was cleaned and removed four years later in 1996 when RF-1 was shutdown. This unit was part of a wastewater treatment unit. According to facility representatives, this unit never worked as advertised. The material of construction of the scrubber recycle settler tank is presented in Table 1 listing the units above.

Status and Waste Managed

The scrubber recycle settler tank was installed new in 1992. It was cleaned and removed four years later in 1996 when RF-1 was shutdown. This unit was part of a wastewater treatment unit and therefore was exempt from RCRA regulation, with the exception of the fugitive emission requirements in the RCRA air emission control provisions at 40 CFR Part 264, Subpart CC.

Any contaminants present in the combustion gases in the APCE may also be transferred to the scrubber water blowdown that was managed in this tank. Although the combustion process is expected to destroy much of the organic contaminants originally on the spent carbon, the list of hazardous constituents adsorbed to the spent carbon and transferred to wastewater managed in this tank may have included, but was not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5. Products of incomplete combustion could also be in the gases coming into contact with the scrubber water.

Release Controls

This tank was purchased new, and the equipment was monitored daily. It was located on a bermed concrete pad, and grated trenches and sumps provide for capture of spills or leaks.

Release History
A review of the records revealed no releases from this unit.

Remedial Actions
A review of the records revealed no remedial actions for the scrubber recycle settler tank.

Migration Pathways

(1) Soil to Groundwater Release Potential

There was low release potential to the soil and groundwater. The unit was located on a bermed concrete pad, and grated trenches and sumps provide for capture of any spills or leaks.

(2) Surface Water Release Potential

There was low release potential to the surface water. The unit was located on a bermed concrete pad, and the distance to surface water is greater than two miles.

(3) Air Release Potential

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There was low release potential to the air since the unit was a closed system.

6.1.21 HWMU 24 (Previously designated as SWMU 35): Filter Press. This unit has been removed and doesn't exist anymore.

Unit Description

The filter press, formerly located near RF-1 in the Process Area, was used to remove suspended solids from liquids in the scrubber system for RF-1. The filter press was installed new in 1992. It was cleaned and removed two years later in 1994 since it never worked as advertised, according to facility representatives. This unit was part of a wastewater treatment unit. The material of construction of this unit is presented in Table 1 listing the units above.

Status and Waste Managed

The filter press was installed new in 1992. It was cleaned and removed two years later in 1994 since it never worked as advertised, according to facility representatives. This unit was part of a wastewater treatment unit and therefore was exempt from RCRA regulation, with the exception of the fugitive emission requirements in the RCRA air emission control provisions at 40 CFR Part 264, Subpart CC.

The filter cakes made by the filter press may have contained hazardous constituents from the spent carbon. Although the combustion process is expected to destroy much of the organic contaminants originally on the spent carbon, the list of hazardous constituents adsorbed to the spent carbon and transferred to wastewater managed in this unit may have included, but was not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5. Products of incomplete combustion could also be in the gases coming into contact with the scrubber water.

Release Controls

The filter press was new when installed. The equipment was monitored and inspected daily. It was located on a bermed concrete pad, and grated trenches and sumps provided for capture of spills or leaks.

Release History

There is no record of any releases from this unit.

Remedial Actions

There is no record of any remedial action for this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

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There was low release potential to the soil and groundwater. The unit was located on a bermed concrete pad, and grated trenches and sumps provided for capture of any spills or leaks.

(2) Surface Water Release Potential

There was low release potential to the surface water. The surface water is greater than two miles away, and the unit was located on a bermed concrete pad.

(3) Air Release Potential

There was low release potential to the air. The filter press was a closed system.

6.1.22 HWMU 25: New Facility Discharge Piping System

Unit Description

This lift station was operated from 1992 until early 1996. The new piping was installed in 1996 to bypass the old lift station. The lift station and the old and new piping systems are part of the wastewater treatment system that discharges to the POTW and are exempt from RCRA regulation.

This new conveyance piping system bypasses the lift station to the Public Owned Treatment Works (POTW) which is the joint venture owned by CRIT and the city of Parker. The conveyance piping is made of polyvinyl chloride (PVC). The materials of construction of the piping are presented above in Table 1 listing the units above.

Status and Waste Managed

The piping system is part of the wastewater treatment system that bypasses the lift station and discharges to the POTW and is exempt from RCRA regulation. Changeover occurred in 1996 from the old piping system and the lift station to a new piping system, a gravity flow system, which did not require pumps.

The list of hazardous constituents that may be adsorbed to the spent carbon, and thus may be in the wastewaters managed in this unit, is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

Scrubber blowdown from RF-2 air pollution control equipment is treated in the wastewater treatment unit, prior to discharge to the POTW. The discharge to the POTW is continuously monitored for pH, total dissolved solids, flow, and temperature to ensure compliance with the discharge limitations found in the facility's current industrial wastewater discharge permit. Because the new piping is located underground, it has not been physically inspected. No

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evidence of release, such as stained soil, was observed during the VSI. A review of file material during the VSI uncovered no indication of leaks from the new underground piping system.

Release History

On February 15, 1996, the facility experienced a spill from its new piping system and discharge line to the POTW. A contractor relocating the natural gas line to the facility inadvertently punctured the newly installed piping system to the POTW. Facility personnel immediately responded to the accident by shutting off all flow to the line and performing repairs and remediation.

A review of file materials during the VSI revealed that no release is known to have occurred from the new piping system, except when it was punctured in 1996, as described above. The volume of water discharged from the facility and the volume received by the POTW are monitored continuously. No discrepancies are known to have occurred that would indicate leaking pipes somewhere along the piping system to the POTW.

Remedial Actions

On February 15, 1996, the facility experienced a spill from its new piping system and discharge line to the POTW. A contractor relocating the natural gas line to the facility inadvertently punctured the newly installed piping system to the POTW. Facility personnel immediately responded to the accident by shutting off all flow to the line and performing repairs and remediation.

Following the incident, on February 15, 1996, the operator removed all wetted soil from the punctured new piping system and placed it in drums, and the punctured section of the piping system was replaced. A total of six drums of soil (3,681 lbs) that contacted discharged water were stored on site pending analytical results. The soil was sent for incineration at Aptus in Utah. The operator collected samples of residual soil at the spill sites. Based on analytical results of soil samples, the operator determined that there was no residual contamination of concern at the site.

Migration Pathways

(1) Soil to Groundwater Release Potential

There is low potential of a release from this unit to the soil and groundwater since the amount of flow discharged to the POTW is continuously monitored at both ends and any discrepancies are investigated. This unit will be further investigated at the time of closure and any contamination found will be remediated.

(2) Surface Water Release Potential

There is low release potential from the new underground piping system directly to the surface water since the distance to the nearest surface water is greater than two miles.

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(3) Air Release Potential

There is low release potential from the new piping system since it is also underground and is not in contact with the atmosphere.

6.2 SOLID WASTE MANAGEMENT UNITS (SWMUs)

A SWMU is defined as any discernable unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released. A discernible unit in this context includes the types of units typically identified with the RCRA regulatory program, including landfills, surface impoundments, land treatment units, waste piles, tanks, container storage areas, incinerators, injection wells, wastewater treatment units, waste recycling units, and other physical, chemical or biological treatment units. [61 Fed. Reg. 19,432, 19,442-19,443 (May 1, 1996).]

In addition, EPA has interpreted the SWMU term to apply to areas contaminated by "routine, systematic, and deliberate discharges" of hazardous waste or hazardous constituents from process areas (a product may become a waste if it is discarded or abandoned). Routine and systematic releases constitute, in effect, management of wastes; the area at which this activity has taken place can thus reasonably be considered a SWMU. In addition to identifying releases from SWMUs, the RFA also investigates evidence of spills and/or other releases to any area resulting from waste management activities, which may not fit the definition of a SWMU release. The term “deliberate” is included in the SWMU definition to exclude from consideration under corrective action one-time accidental spills that cannot be linked to a discernible SWMU. An example of this type of release would be an accidental spill from a truck at a RCRA facility.

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TABLE 2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
1	Bermed containment area	East of Warehouse	Approx. 180' x 55'; concrete	August 1992	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
2	Sump by H-1	South of H-1	3'-4" square; concrete	July 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
3	Sump by storage tank, T–9	East of warehouse in between T-9 and RF-2	3'-4" square sump; U-drain 30' long x 16"wide; concrete	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
4	Recycled motive water storage tank, T–9	East of warehouse on containment	10,500 gal 316 series stainless steel	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
5	Rainwater and motive water storage tank, T–12	East of warehouse on containment	25,080 gal Mild steel	1992. Removed from service in 2002.	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure

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TABLE 2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
6	Wastewater storage tank, T–11 System	East of the warehouse and south of RF -2	10’ Dia x 20’ H; Approx 12,000 gal fiberglass	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
7	Sump by cooling screw under Venturi scrubber tank	East of warehouse beside RF-2	3’-4” square; concrete	July 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
8	RF–2 scrubber water equalization tank, T-19	Under RF-2 Structure	Approx. 1000 gal Fiberglass	July 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
9	Hazardous waste debris bin	North of warehouse on asphalt pavement	20 - 40 cubic yards Mild steel	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
10	Spent carbon storage warehouse grated trenches and sump	Warehouse in containment area	Trench 3 ft, 4 in square sump U-drain 50 ft long, 16 in wide; cross drain sections 40 ft long 16 in wide Concrete	1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
11	Hopper concrete pad	Outside H-1 structure	Approx 60’ x 44’; concrete	July 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure

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TABLE 2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
12	WWTP	Inside warehouse	Fiberglass, mild steel modular water treatment system. Separate containment.	October 2003 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
13	Wastewater lift station and piping system (old)	At the end of access road to plant. Old piping from Tank T-11 to the Lift Station	Approx. height 15 ft; outside diameter 5 ft Lift Station: mild steel/concrete/fiberglass Old piping system PVC.	1992 to 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
14	Spent carbon unloading and transfer area asphalt pad	North area of facility	Approx. 44 ft by 80 ft	August 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None. Will be further investigated at the time of closure
15	Satellite Accumulation Area	North side of warehouse	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None. Will be further investigated at the time of closure
16	Satellite Accumulation Area	South side of drum containment	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None. Will be further investigated at the time of closure
17	Satellite Accumulation Area	East of Control Room	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None. Will be further investigated at the time of closure

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TABLE 2 - SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	**SWMU Type/Designation**	**Location**	**General Description**	**Date Unit was First Operated**	**Identification of Wastes Managed in Unit**	**Releases from Unit**
18	Satellite Accumulation Area	Laboratory in Admin Building	≤ 55 gallons (metal or plastic)	August 1996 to present	Laboratory Debris and laboratory Testing	None. Will be further investigated at the time of closure
19	Satellite Accumulation Area	Underneath Spent Carbon Baghouse	≤ 55 gallons (metal or plastic)	August 1992 to present	Spent Carbon Dust from Baghouse	None. Will be further investigated at the time of closure

6.2.1 SWMU 1 (Previously designated as SWMU 23): Bermed Concrete in Process Area (This includes the Secondary Containment Under the Spent Carbon Slurry Storage Tanks)

Unit Description

This bermed concrete pad in the process area is located east of the spent carbon storage warehouse and underlies the process (spent carbon treatment) area. Within this area is the secondary containment for the spent carbon slurry tanks. This bermed concrete pad is a large concrete pad that provides containment for numerous units that contain, transfer and regenerate hazardous and non-hazardous waste carbon.

The materials of construction of this unit are presented in Table 2 listing the units above.

Status and Waste Managed

Use of this unit began in 1992, and it is currently active. The unit is operating under RCRA interim status and is subject to the RCRA permit decision.

Hazardous spent carbon slurry and wastewaters are managed in the units within this bermed concrete area. The hazardous constituents in the slurry and the wastewaters may include, but are not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

This unit is constructed of concrete and surrounded by a berm. Within this area is the secondary containment for the spent carbon slurry tanks. Inspections by EPA of the secondary containment found numerous cracks in the pad. Visual inspection during the VSI and a review of file material reveal that cracks have been repaired and sealed by filling them in with a polyresin, Sikadur 35® or equivalent material. The facility routinely inspects and repairs the area, if necessary, upon discovery of a problem. On June 19-20, 2001, January 24, 2002, August 29, 2002, March 6-7, 2003, and February 12, 2004, EPA inspectors, accompanied by personnel from the Colorado River Indian Tribe Environmental Health Office, conducted RCRA compliance evaluation inspections at the Facility. Based upon the findings made during the inspections, and additional information obtained subsequent to the inspections the EPA entered with the facility in a Consent Agreement and Final Order (CAFO) in June 2006 to expand the size of the secondary containment to contain 100 percent of the capacity of the largest tank within its boundary and designed to have sufficient excess capacity to contain run-on or infiltration. The facility affirmed EPA that they continue to ensure that the secondary containment is free of cracks or gaps. So the facility periodically repairs cracks in the concrete of the bermed containment area with Sikadur 35® or equivalent material.

Release History

There is no record of a release from this concrete area. No evidence of a release was observed

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during both VSIs at this unit other than the cracks in the concrete which will be further investigated at the time of closure. Please see right column for AOC Table in Section 6.3 below which describes the sampling to be done at the time of closure. Please also see Appendices XV, XVI, & XVII in Permit Application Reference 5.

Remedial Actions

On June 19-20, 2001, January 24, 2002, August 29, 2002, March 6-7, 2003, and February 12, 2004, EPA inspectors, accompanied by personnel from the Colorado River Indian Tribe Environmental Health Office, conducted RCRA compliance evaluation inspections at the Facility. Based upon the findings made during the inspections, and additional information obtained subsequent to the inspections the EPA entered with the facility in a Consent Agreement and Final Order (CAFO) in June 2006 to expand the size of the secondary containment to contain 100 percent of the capacity of the largest tank within its boundary and designed to have sufficient excess capacity to contain run-on or infiltration. The facility must ensure that the secondary containment is free of cracks or gaps. So the facility periodically repairs cracks in the concrete of the bermed containment area with Sikadur 35® or equivalent material. The cracks in the concrete will be further investigated at the time of closure. Please see right column for AOC Table in Section 6.3 below which describes the sampling to be done at the time of closure. Please also see Appendices XV, XVI, & XVII in Permit Application Reference 5

Migration Pathways

(1) Soil and Groundwater Release Potential

There are grated trenches and sumps in the bermed concrete area to capture any spills and rainwater. This unit will be further investigated at the time of closure. Please see right column for AOC Table in Section 6.3 below which describes the sampling to be done at the time of closure. Please also see Appendices XV, XVI, & XVII in Permit Application Reference 5

(2) Surface Water Release Potential

The nearest surface water body is greater than two miles away. There is low release potential to surface water due to the design and construction of the pad and the routine inspections and repairs.

(3) Air Release Potential

The potential for release to the air is low because spills to the pad are immediately washed down upon discovery and water is pumped to the recycle tank T-9.

6.2.2 SWMU 2 (Previously designated as SWMU 24): Sump by Unloading Hopper H-1

Unit Description

The sump is located adjacent to the unloading hopper H-1. The sump collects water from activities such as washing trucks used to transport spent carbon slurry, and from the surrounding containment area. Metal-grated concrete trenches in the containment area collect the wash-down

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water and rainwater that then drains into the in-ground, square concrete sump. A pump in the sump directs the water through piping to Tank T-9. The grated trenches and sump also serve to collect any spills in the area. The materials of construction of this unit are presented in Table 2 listing the units above.

Status and Waste Managed

The sump is currently operational. The startup date for the sump adjacent to hopper H-1 was in 1996 when construction of the unloading hopper was completed to serve the new reactivation furnace RF-2. Prior to 1996, the unloading hopper H-2, trenches, and sump inside the spent carbon storage warehouse served the reactivation furnace RF-1 until it was deactivated in 1996. As a component of the spent carbon handling system, this unit is operating under RCRA interim status and is subject to RCRA permitting.

Any of the hazardous constituents found in the spent carbon may be present in the wash-down water or any spill that drains into this sump. These may include, but are not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The sump pump immediately pumps water that enters the sump via piping to the recycle water tank T-9. No cracks in the concrete sump were observed during both VSIs.

The integrity of the sump pump and concrete is ensured by routine inspections. Any cracks discovered in the concrete are promptly sealed with a polyresin, Sikadur-35® or equivalent. If any mechanical problem were to occur with the sump pump, repair would occur promptly upon discovery.

Release History

Review of file material during both VSIs revealed that there is no record of a release or overflow of this sump. No evidence of overflow at the sump was observed during both VSIs.

Remedial Actions

There is no record of remedial action for this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

There is low release potential to soil and groundwater from this unit. The sump is located within concrete pad area, the integrity of the concrete is monitored by routine inspections, and any observed cracks are sealed by the facility. No unsealed cracks were noted during both VSIs.

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(2) Surface Water Release Potential

There is low release potential to surface water from this unit. The sump is located within a concrete pad area, and liquid collected in the sump is immediately directed via a sump pump and piping system to the recycle water tank, T-9. Also, surface water is greater than two miles away.

(3) Air Release Potential

There is low release potential to the air from this unit. Only very low concentrations of VOCs are expected in the liquids collected in this sump.

6.2.3 SWMU 3 (Previously designated as SWMU 25): Sump by Storage Tank T-9

Unit Description

The sump is located east of the spent carbon storage warehouse between Tank T-9 and RF-2. Metal-grated concrete trenches in the bermed concrete pad collect any spilled process water and rainwater that then drains into this in-ground, square concrete sump. A pump in the sump directs the water through piping to Tank T-9. The materials of construction of this unit are presented in Table 2 listing the units above.

Status and Waste Managed

The sump is currently operational. Use of the sump began in 1992 to serve the reactivation furnace RF-1. After RF-1 was shutdown and RF-2 was put in use the sump continues to be used to support RF-2 operations. As a component of the spent carbon handling system, this unit is operating under RCRA interim status, and is subject to RCRA permitting.

Any of the hazardous constituents described for concrete pad may be present in the liquids collected in this sump. These may include, but are not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals, as well as products of incomplete combustion. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The sump is located within the bermed concrete pad. Any process water or rainwater that flows into the sump is immediately pumped by a sump pump to the recycle water tank T-9. No cracks in the sump were observed during both VSIs.

The integrity of the sump pump and concrete is ensured by routine inspections. Any cracks discovered in the concrete are promptly sealed with a polyresin, Sikadur-35® or equivalent. If any mechanical problem were to occur with the sump pump, repair would occur promptly upon discovery.

Release History

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Review of file material during both VSIs revealed that there is no record of a release or overflow of this sump. No evidence of overflow from this sump was observed during both VSIs. During the 2003 VSI, a small amount of wash-down water was observed adjacent to the trench that leads to the sump. None were observed during the 2014 VSI.

Remedial Actions

There is no record of remedial action at this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

There is low release potential to soil and groundwater from this unit. The sump is located within a bermed concrete pad area, the integrity of the concrete is monitored by routine inspections, and any observed cracks are sealed by the facility. No unsealed cracks were noted during both VSIs.

(2) Surface Water Release Potential

There is low release potential to surface water from this unit. The sump is located within a bermed concrete pad area, and liquid collected in the sump is immediately directed via a sump pump and piping system to the recycle water tank, T-9. Also, surface water is greater than two miles away.

(3) Air Release Potential

There is low release potential to the air from this unit. Only very low concentrations of VOCs are expected in the liquids collected in this sump.

6.2.4 SWMU 4 (Previously designated as SWMU 16): Recycled Motive Water Storage Tank T-9

Unit Description:

Tank T-9 is a water storage tank that stores motive water and water from several other sources. Tank T-9 is located east of the storage warehouse above a bermed concrete pad. The capacity of Tank T-9 is 10,500 gallons. The materials of construction of this unit are presented in Table 2 listing the units above.

Tank T-9 collects water from the following sources. Just prior to introduction into the reactivation process, the dewatering screw dewaters the spent carbon, and the motive water is returned to Tank T-9. Process water overflow from the process storage feed tanks is returned to T-9 via a closed loop piping. Rainwater that falls within the concrete pads, along with spills and wash-down, as noted for the sumps, may be pumped to Tank T-9.

Status and Wastes Managed

The start-up date for this unit was in 1992, and it remains active. The motive regulatory status was initially addressed in a 1993 facility inspection conducted by EPA. Additionally, in several

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revised Part A applications, and in the Part B permit applications submitted to EPA Region 9, the operator stated its position regarding the regulatory status of this tank that it is not a regulated unit under RCRA. EPA agrees with this analysis.

The list of hazardous constituents that may be adsorbed to the spent carbon, and thus may be in the motive water stored in this tank, is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

According to facility personnel, the integrity of Tank T-9 was tested upon installation. The tank is inspected daily by the operator. A bermed concrete pad is present under Tank T-9, and a grated trench and sump are adjacent to Tank T-9. The T-9 tank overflow controls consist of a level sensor monitored by computer. An alarm notifies the operator if the tank level needs attention.

The tank has a pressure relief valve, which is vented to a carbon adsorber. Carbon adsorber WS-1 controls VOC emissions, including potential benzene emissions, from Tank T-9. WS-1 is designed to achieve control of benzene emissions by at least 98 percent. The spent carbon is changed out before breakthrough based on engineering calculations. The facility did periodic monitoring of the WS-1 adsorber vent from June 2011 till August 2013 prior to the carbon change-outs. The logs are attached in Appendix P. The results show that the levels were below the 500 ppm above background with the highest level recorded at 223 ppm. Most other results were much lower. The logs showed that change-outs normally take place every 2-3 days which is more frequent than the 7.88 days required by the engineering calculations.

The excess water from Tank T-9 is treated in a wastewater treatment plant prior to discharge to the POTW. The discharge to the POTW is continuously monitored for pH, total dissolved solids, flow and temperature to ensure compliance with the discharge limitations found in the facility's industrial wastewater discharge permit.

Release History

In February 1994, the recycled water pump located next to Tank T-9 was found to be leaking at the packing, which seals the pump shaft. The leak in the potable water line used for cooling and flushing the seal gland was repaired.

During the VSI, a review of the facility's carbon replacement logs revealed several instances in which the carbon in WS-1 was not replaced within specified time periods.
In the 2014 VSI file review of the past 2 years of records, this was not repeated.

The facility did periodic monitoring of the WS-1 adsorber vent from June 2011 till August 2013 prior to the carbon change-outs. The logs are attached in Appendix P. The results show that the levels were below the 500 ppm above background with the highest level recorded at 223 ppm.

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As per the logs, change-outs take place every 2-3 days which is more frequent than the 7.88 days required by the engineering calculations. See WS-1 for more details.

No evidence of release was observed at this unit during both VSIs.

Remedial Actions

No remedial actions have occurred at this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

The potential for release from this tank to the soil or groundwater is low due to bermed concrete pad, grated trenches, and a sump present at the tank. In addition, routine inspections are performed.

(2) Surface Water Release Potential

The distance to the nearest surface water is greater than two miles. The potential for release from this tank to the surface water is low due to routine inspections for leaks and corrosion, and the bermed concrete pad that is present.

(3) Air Release Potential

There is low release potential to air from this tank due to the good condition of the tank, and to daily inspection of the tank. In addition, APCE is present to control emissions from the tank [carbon adsorption canister WS-1]. However, breakthrough may have occurred in WS-1 in several instances when the carbon was not replaced within specified time periods. Also, it is unknown whether releases have occurred through the pressure relief valves, which would release tank gases directly to the air. Since the canister performs at a 98% efficiency, potentially, there could have been ongoing low levels of benzene (and possibly other organic constituents) released from this unit to the air. If carbon change-outs are performed on schedule (before 7.88 days have passed), there would be low release potential to air from this unit. This could be higher if the change-outs are not done on schedule.
The 2003 VSI file review showed that, in at least two incidents, change-out was not done on schedule. In the 2014 VSI file review of the past 2 years of records, this was not repeated.

6.2.5 SWMU 5 (Previously designated as SWMU 17): Rainwater, Dewatering Screw, and Motive Water Storage Tank T-12. This tank is no longer used.

Unit Description:

Tank T-12 is no longer used.

Status and Wastes Managed

US EPA ARCHIVE DOCUMENT

The start-up date for this unit was in 1992. This unit is no longer in use and was removed in 1996.

The list of hazardous constituents that may be adsorbed to the spent carbon, and thus could have been in the motive water stored in this tank, is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

According to facility personnel, the integrity of tank T-12 was tested upon installation. Facility personnel conducted daily inspections of Tank T-12 while it was in operation and its integrity (no corrosion or leaks) was documented on the inspection log sheets. Tank T-12 was on top of a bermed concrete pad.

Release History

According to facility personnel, no releases have occurred from Tank T-12. No evidence of any spill or release was observed during the 2003 VSI. Tank T-12 is no longer used.

During the 2003 VSI, a review of the facility's carbon replacement logs revealed several instances when the carbon in WS-1 was not replaced within specified time periods. In the 2014 VSI file review of the past 2 years of records, this was not repeated.

The facility did periodic monitoring of the WS-1 adsorber vent from June 2011 till August 2013 prior to the carbon change-outs. The logs are attached in Appendix P. The results show that the levels were below the 500 ppm above background with the highest level recorded at 223 ppm. As per the logs, change-outs take place every 2-3 days which is more frequent than the 7.88 days required by the engineering calculations. See WS-1 for more details.

Remedial Actions

There have been no documented remedial actions performed at this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

The potential for release to the soil or ground water from this unit is low due to the bermed concrete pad provided underneath the unit, and routine inspections are performed.

(2) Surface Water Release Potential

The distance to the nearest surface water is greater than two miles. The potential for release to surface water from this unit is low because it is inspected routinely for leaks and corrosion, and a bermed concrete pad is present.

US EPA ARCHIVE DOCUMENT

(3) Air Release Potential

There is low release potential to air from this tank due to the good condition of the tank, and to daily inspection of the tank. In addition, APCE is present to control emissions from the tank [carbon adsorption canister WS-1]. However, breakthrough may have occurred in WS-1 in several instances when the carbon was not replaced within specified time periods. Also, it is unknown whether releases have occurred through the pressure relief valves, which would release tank gases directly to the air. Since the canister performs at a 98% efficiency, potentially, there could have been ongoing low levels of benzene (and possibly other organic constituents) released from this unit to the air. If carbon change-outs are performed on schedule (before 7.88 days have passed), there would be low release potential to air from this unit. This could be higher if the change-outs are not done on schedule.
The 2003 VSI file review showed that, in at least two incidents, change-out was not done on schedule. In the 2014 VSI file review of the past 2 years of records, this was not repeated.

6.2.6 SWMU 6 (Previously designated as SWMU 18): Wastewater Storage Tank T-11

Unit Description:

Tank T-11 is an industrial wastewater treatment and storage tank located east of the warehouse and south of RF-2. Tank T-11 is used to collect process wastewater prior to discharge to the sewer system under a discharge permit from the local publicly owned treatment works (POTW) operated by the Colorado River Sewage System Joint Venture. The volume discharged from Tank T-11 to the local POTW averages about 140,000 gallons per day (gpd). Tank T-11 has a capacity of approximately 20,000 gallons. The materials of construction of this unit are presented in Table 2 listing the units above.

Process wastewaters collected in Tank T-11 are scrubber water blow down from Tank T-19, cooling water blow down, and boiler water blow down. Tank T-11 also occasionally collects wastewaters from Tank T-9.

Status and Wastes Managed

The start-up date for Tank T-11 was in 1992, and it is currently operational. T-11 and its ancillary equipment is a wastewater treatment unit and therefore is exempt from RCRA regulation., with the exception of the fugitive emission requirements in Subpart CC of RCRA (*i.e.*, the RCRA regulatory requirements contained in 40 CFR Part 264, Subpart CC). It is tested annually for Subpart CC applicability.

The list of hazardous constituents that may be adsorbed to the spent carbon, and thus may be in the wastewaters managed in Tank T-11, is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

US EPA ARCHIVE DOCUMENT

According to facility personnel, the integrity of this tank was tested upon installation. The facility operator inspects Tank T-11 daily. Tank T-11 is located on a bermed concrete pad. The plant computer continuously monitors the water level of T-11. Audible alarms alert the operator of potential problems.

The facility monitors the water discharged from Tank T-11 to the POTW continuously for total dissolved solids (TDS), temperature, flow, and pH. Two times per month the operator takes 24-hour composite samples for total suspended solids (TSS) and chemical oxygen demand (COD). Once per year, the operator analyzes the wastewater for total toxic organics (TTOs). All monitoring and analytical results are submitted on a monthly basis to the local POTW manager to demonstrate compliance with the facility's discharge permit. The facility operator has also conducted additional tests of wastewater it discharges to the POTW and has detected the following priority pollutants: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc, chlorodibromomethane, dichlorobromomethane, 1,2-dichloroethane, 1,1,2-trichloroethane, phthalate (2-ethylhexyl).

Release History

The facility's test data from wastewater entering and exiting Tank T-11, demonstrate VOCs less than 500 ppmw (See Appendix XX of Part B Application Reference 5). The facility has also reported low inorganic concentrations for priority pollutants in their discharge to the POTW (Appendix R). Besides the facility's discharges, the POTW receives other industrial wastewater, as well as domestic sewage from Parker and portions of the Colorado River Indian Reservation. At the POTW, these wastewaters are combined, treated, and then released to a drainage canal, which in turn flows into the Colorado River. During treatment at the POTW, some of the contaminants contributed by Evoqua are likely to be removed from the wastewater (as well as contaminants from other dischargers to the POTW). The resulting concentrations of contaminants in the POTW's discharge to the drainage canal have been within the limits of the POTW's wastewater discharge permit.

During the VSI, condensation water was noted around Tank T-11, which the facility representative identified as a *de minimis* quantity of scrubber water blowdown. The facility representative explained that the scrubber water has tested to be nonhazardous (see most recent results in Appendix J). Since the outside temperature was 106° Fahrenheit during the 2003 VSI, the amount of water present would likely evaporate by the end of the day.

There is no other record of a release at this unit.

Remedial Actions

There is no record of remedial action at this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

US EPA ARCHIVE DOCUMENT

There is low release potential to soil and groundwater from this unit. The tank is inspected daily, and bermed concrete containment underlies the tank.

(2) Surface Water Release Potential

The distance to the nearest surface water is greater than two miles. The tank is inspected daily, and bermed concrete containment underlies the tank. Therefore, the release potential directly to the surface water from this unit is low. However, ongoing releases of small amounts of contaminants likely occur through discharge of water from this tank to the POTW, which then discharges to a drainage canal, which in turn flows to the Colorado River. Please see Appendix XI of Part B Permit Application Reference 5 for more details

(3) Air Release Potential

There is low release potential to the air from Tank T-11. Although Tank T-11 vents directly to the atmosphere, the wastewaters it manages are expected to have very low concentrations of VOCs. The other wastewaters entering Tank T-11 are expected to have low levels of organic compounds. Please see Appendix XI of Part B Permit Application Reference 5 for more details

6.2.7 SWMU 7 (Previously designated as SWMU 26): Sump by Cooling Screw Under Venturi Scrubber Tank

Unit Description:

The sump is located east of the storage warehouse beside the RF-2 structure within the bermed concrete pad area. The concrete sump collects spills from the cooling screw under the venturi scrubber tank and any other spills or rainwater in the process area and directs the liquid via a pump and piping to Tank T-9. The materials of construction of this unit are presented in Table 2 listing the units above.

Status and Waste Managed

Use of the sump began in 1996, and it is currently operational. As a component of the spent carbon handling system, this unit is operating under RCRA interim status and is subject to RCRA permitting.

Any of the hazardous constituents described for bermed concrete area may be present in the liquids collected in this sump. These may include, but are not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals, as well as products of incomplete combustion. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The sump is located within a bermed concrete pad. Any process water or rainwater that flows into the sump is immediately pumped by a sump pump to the recycle water tank, T-9. No cracks in the sump were observed during both VSIs.

US EPA ARCHIVE DOCUMENT

The integrity of the sump pump and concrete is ensured by routine inspections. Any cracks discovered in the concrete are promptly sealed with a polyresin, Sikadur-35® or equivalent. If any mechanical problem were to occur with the sump pump, repair would occur promptly upon discovery.

Release History

Review of file material during both VSIs revealed that there is no record of a release or overflow of this sump. No evidence of overflow from this sump was observed during both VSIs.

Remedial Actions

During both VSIs, no record was found of remedial action for this sump or sump pump.

Migration Pathways

(1) Soil to Groundwater Release Potential

There is low release potential to soil and groundwater from this unit. The sump is located within a bermed concrete area, the integrity of the concrete is monitored by routine inspections, and any observed cracks are sealed by the facility. No unsealed cracks were noted during both VSIs.

(2) Surface Water Release Potential

There is low release potential to surface water from this unit. The sump is located within a bermed concrete pad area, and liquid collected in the sump is immediately directed via a sump pump and piping system to the recycle water tank, T-9. Also, surface water is greater than two miles away.

(3) Air Release Potential

There is low release potential to the air from this unit. Only very low concentrations of VOCs are expected in the liquids collected in this sump.

6.2.8 SWMU 8 (Previously designated as SWMU 19): RF-2 Scrubber Water Equalization Tank T-19

Unit Description:

Tank T-19 is located under the RF-2 structure. Scrubber water is supplied to the APCE from the scrubber water tank, Tank T-19. While moving through the APCE, the scrubber water removes contaminants from the furnace gases. From the air pollution control equipment, the scrubber water is returned to T-19. The pH of the scrubber water is controlled by the introduction of acid or sodium hydroxide via a scrubber-metering pump into the scrubber water line just prior to introduction into the venturi and packed bed scrubbers. The materials of construction of this unit are presented in Table 2 listing the units above.

US EPA ARCHIVE DOCUMENT

Status and Waste Managed

This unit began operation in 1996 and is currently active as part of the wastewater treatment system. The facility operator analyzed the scrubber water from Tank T-19, and reported nondetection of VOCs, SVOCs, organochlorine pesticides, polychlorinated biphenyls, and alcohols. Please see Appendix J for the latest results. The pH of the scrubber water ranges between 2.5 and 12.5.

Any contaminants present in the combustion gases in the APCE may also be transferred to the scrubber water blowdown that is managed in Tank T-19. Although the combustion process is expected to destroy much of the organic contaminants originally on the spent carbon, the list of hazardous constituents adsorbed to the spent carbon and transferred to wastewater managed in Tank T-19 includes, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5. Products of incomplete combustion, are also in the gases coming into contact with the scrubber water. Please see Appendix XI of Part B Permit Application Reference 5 for more details.

Release Controls

According to facility personnel, the integrity of this tank was tested upon installation. A high and low alarm system was installed on the scrubber water equalization tank. The scrubber water blow down is discharged via piping to Tank T-11 and from T-11 it is sent through the Waste Water Treatment Plant before it is discharged to the POTW. The discharge to the POTW is continuously monitored for flow, pH, TDS, and temperature.

Release History

No documentation of releases from this unit was found in the facility records.

Remedial Actions

There is no record of remedial action at this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

There is low release potential to the soil and groundwater. Routine inspections and repairs are performed, and a bermed concrete pad is present underneath the unit.

(2) Surface Water Release Potential

The distance to the nearest surface water is greater than two miles. There is low release potential to the surface water from this unit. Routine inspections and repairs are performed as needed, and bermed concrete pad is present underneath the unit.

US EPA ARCHIVE DOCUMENT

(3) Air Release Potential

There is low release potential to the air. The tank and ancillary equipment are inspected routinely.

6.2.9 SWMU 9 (Previously designated as SWMU 20): Hazardous Waste Debris Bin

Unit Description:

The hazardous waste debris bin is located north of the storage warehouse on the asphalt pavement. The location of this unit on the pavement is changed for convenience. Debris -- such as personal protective equipment, rags, spill cleanup wastes, and contaminated pallets -- is stored for less than 90 days in this hazardous waste debris bin. There are three areas inside the spent carbon storage warehouse where the debris is accumulated. This accumulated debris is then transferred to the debris bin. The debris bin is a roll-off container that is covered at all times except when debris is being added. The materials of construction of this unit are presented in Table 2 listing the units above.

Status and Waste Managed

This unit began operation in 1992 and is currently active. The unit stores hazardous waste for less than 90 days, and so is subject to generator requirements as per 40 CFR 262.

Hazardous waste debris may be contaminated with any of the hazardous constituents adsorbed to the spent carbon. These may include, but are not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The lid on the debris bin is closed at all times except when waste is added. The hazardous waste debris is shipped off-site in less than 90 days from the date of initial accumulation in the bin. The facility operator performs routine inspections at this unit.

Release History

No documented releases from this unit have occurred. No evidence of any spill or release of hazardous constituents was observed during both VSIs.

Remedial Actions

There are no documented remedial actions performed at this unit.

Migration Pathways

(1) Soil and Groundwater Release Potential

US EPA ARCHIVE DOCUMENT

There is low release potential to the soil and groundwater. Routine (daily) inspections are performed, and asphalt is present underneath the unit.

(2) Surface Water Release Potential

The nearest surface water body is greater than two miles away, routine inspections are performed, and asphalt is present underneath the unit. Therefore, there is low release potential to the surface water.

(3) Air Release Potential

The lid is kept closed except to add debris to the container, and the unit is routinely inspected. Therefore, there is low release potential to air from the hazardous waste debris bin.

6.2.10 SWMU 10 (Previously designated as SWMU 21): Spent Carbon Storage Warehouse Metal Grated Trenches and Sump

Unit Description:

The grated trenches and sump are located inside the storage warehouse facing the east wall in the containment area of the spent carbon storage warehouse. Metal grated trenches in the spent carbon storage warehouse collect rinse water that is used to wash out empty drums of spent carbon after unloading into Hopper H-2. The trenches drain into an in-ground square-shaped sump that is equipped with a sump pump to direct water through piping to the recycle water storage tanks, T-9. The grated trenches and concrete sump also serve to collect any spills from leaking drums. The materials of construction of this unit are presented in Table 2 listing the units above.

Status and Waste Managed

This unit was constructed over a four-year time span, from 1992 to 1996, and it is currently active. As a component of the spent carbon handling system, this unit is operating under RCRA interim status and is subject to RCRA permitting.

Any of the hazardous constituents found in the spent carbon may be present in the rinse water or in spills from leaking containers in the spent carbon storage warehouse. These may include, but are not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

No unsealed cracks in the trenches or sump were observed at this unit during both VSIs. Water that enters the sump is pumped via piping to the recycle water tank, T-9.

The integrity of the sump pump, concrete trenches and sump is monitored by routine inspections by facility personnel. Any release draining to the unit would not be expected to exceed the capacity of the trenches and sump.

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Release History

There is no record of overflow occurring from the grated trenches or sump. No history of build-up of liquid in the sump was found in the facility records. No evidence of overflow release was observed during both VSIs at the grated trenches and sump.

Records reviewed during the 2003 VSI indicated that only one leaking drum has ever been discovered in the hazardous waste storage warehouse (September 8, 2000); the drum was pulled from the pallet and the contents dumped into hopper H-2.

Remedial Actions

The hazardous material handlers cleaned up the area in the warehouse where the leak occurred on September 8, 2000, upon discovery; no contact occurred with soil or groundwater.

Migration Pathways

(1) Soil to Groundwater Release Potential

The potential to release to soil and groundwater is low. The integrity of the concrete is monitored by routine inspections. Any cracks in the concrete would be promptly repaired. No unsealed cracks were noted during both VSIs.

(2) Surface Water Release Potential

There is low release potential to surface water. The integrity of the concrete is monitored by routine inspections, and surface water is greater than two miles away.

(3) Air Release Potential

There is low release potential to the air. Only very low concentrations of VOCs are expected in the rinse water in the trenches and sump.

6.2.11 SWMU 11 (This is a New Unit Split from the Old SWMU 23): Hopper Concrete Pad (Outside H-1 Structure)

SWMU 11 Unit Description

The hopper pad area is a bermed concrete pad. There is a continuous six-inch high concrete berm around the pad, and it is equipped with a sump and transfer pump to remove any liquids collected on the pad.

This bermed concrete pad is protection in the event of spills of carbon or liquids during the unloading of waste carbon. The pad slopes to a sump, and liquids collected on the pad drain to

the sump. The sump is pumped to the recycle water tank, T-9. The materials of construction of this unit are presented in Table 2 listing the units above.

Status and Wastes Managed

The start-up date for the unit was in 1992, and the unit is currently active. As a component of the spent carbon handling system, the concrete pad is operated under RCRA interim status, and is subject to the RCRA permit decision.

Both hazardous and nonhazardous spent carbon is managed at the units within this concrete area. The list of hazardous constituents that may be adsorbed to the spent carbon is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

This bermed concrete pad is protection in the event of spills of carbon or liquids during the unloading of waste carbon. The pad slopes to a sump, and liquids collected on the pad drain to the sump. The sump is pumped to the recycle water tank, T-9.

Release History

No evidence of release was observed at this unit during both VSIs. The concrete pad was in good condition. All cracks in the concrete have been sealed with an epoxy, Sikadur-35® or equivalent material.

Remedial Actions

The facility operator has repaired all cracks in the concrete pads and berm with an epoxy, Sikadur-35® or equivalent material and inspects the concrete pad and berm daily.

Migration Pathways

(1) Soil to Groundwater Release Potential

The potential for release is low from this unit to the soil and groundwater due to the design and construction of the pad and the routine (daily) inspections and repairs. At the time of closure this will be investigated further.

(2) Surface Water Release Potential

The nearest surface water body is greater than two miles away. There is low release potential to surface water due to the design and construction of the bermed concrete pad and the routine inspections and repairs.

(3) Air Release Potential

US EPA ARCHIVE DOCUMENT

The potential for release to the air is low because spills to the pad are immediately washed down upon discovery and water is pumped to the recycle tank T-9.

6.2.12 SWMU 12 (New Unit): WWTP (located inside the warehouse)

Unit Description:

The Waste Water Treatment Plant (WWTP) is located inside the warehouse. It is a fiberglass and mild steel modular water treatment system. It has its own separate containment. The WWTP treats the scrubber blowdown from RF-2 air pollution control equipment. The WWTP discharges to the POTW. The discharge to the POTW is continuously monitored for pH, total dissolved solids, flow and temperature to ensure compliance with the discharge limitations found in the facility's industrial wastewater discharge permit. The discharge used to go through a lift station.

The lift station is now bypassed using a new underground PVC piping system with direct discharge to the POTW. Facility personnel use a manhole located behind the administration building at the facility to sample the wastewater prior to discharge under Permit No. 1002-96 to the POTW. The materials of construction of this unit are presented in Table 2 listing the units above.

Status and Waste Managed

The lift station and the old and new piping systems are part of the wastewater treatment system that discharges to the POTW and are exempt from RCRA regulation.
The list of hazardous constituents that may adsorbed to the spent carbon, and thus may be in the wastewaters managed in this unit, is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The WWTP is located inside the warehouse. It has its own separate secondary containment.

Release History

There is no history of release from the WWTP, other than what was described for the old piping with the overflow of the lift station. Please see the SWMU 13 for more details.

Remedial Actions

There were no remedial actions performed on this unit.

Migration Pathways

(1) Soil to Groundwater Release Potential

US EPA ARCHIVE DOCUMENT

The WWTP is located inside the warehouse. It has its own separate secondary containment. The release potential to soil and groundwater is very low.

(2) Surface Water Release Potential

The WWTP is located inside the warehouse. It has its own separate secondary containment. The release potential to surface water from this unit is very low, since the distance to the nearest surface water is greater than two miles.

3) Air Release Potential

The WWTP is located inside the warehouse. The release potential air from this unit is very low.

6.2.13 SWMU 13 (Previously designated as SWMU 28): Wastewater Lift Station and Piping Systems (Old Piping)

Unit Description:

This lift station, located at the end of the access road to the facility off Mutahar Street, was formerly used to lift (pump) wastewater from WWTP via the old piping system to the local POTW collection line at the south edge of Evoqua property. The lift station also pumped domestic wastewater from the facility. The old piping system, which has not been removed, is made of either PVC or ductile iron.

The lift station is now bypassed using a new underground PVC piping system with direct discharge from the WWTP to the POTW. The new piping is discussed in Section 6.1.22 describing HWMU 25. Facility personnel use a manhole located behind the administration building at the facility to sample the wastewater prior to discharge under Permit No. 1002-96 to the POTW. The materials of construction of this unit are presented in Table 2 listing the units above.

Status and Waste Managed

This lift station was operated from 1992 until early 1996. The new piping was installed in 1996 to bypass the old lift station. The lift station and the old and new piping systems are part of the wastewater treatment system that discharges to the POTW and are exempt from RCRA regulation.

The list of hazardous constituents that maybe adsorbed to the spent carbon, and thus may be the wastewaters managed in this unit, is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

US EPA ARCHIVE DOCUMENT

The lift station had two pumps which alternated operating. When operational, one ran until the low level probe switched it off, and as soon as the high level probe was reached the other pump began operating. Changeover occurred in 1996 from the old piping system and the lift station to a new piping system, a gravity flow system, which did not require pumps.

Release History

On November 10, 1994, the facility experienced an overflow episode from the lift station located on-site. The facility lost power during the evening of November 9, 1994. Operations at the facility ceased. When the power was restored, a breaker to one of two lift station pumps was tripped. After operations restarted there was no evidence of problems with the lift station pumps. However, in the morning on November 10, 1994, an electrician at the facility was arriving at the plant and noticed that the lift station was overflowing. He immediately reset the breaker and stopped the overflow. Wastewater that is normally pumped to the POTW spilled from the lift station; this wastewater consisted of domestic waste and scrubber (discharge) blowdown.

A similar incident occurred on April 17, 1995 with a release of domestic sewage and wastewater to the soil. Based on the latest analytical results of the wastewater managed in Tank T-11, the facility determined that neither overflow incident from the lift station constituted a threat to human health or the environment. Since the wastewater may have been in contact with hazardous constituents, the soil was treated as hazardous during the remedial action response.

Because the old piping is located underground, it has not been physically inspected. No evidence of release, such as stained soil, was observed at the lift station during the 2003 VSI.

Remedial Actions

During the overflow incident on November 10, 1994, the facility operator made a soil dike on Mutahar Street to stop flow from running north and to contain the spill. On November 11, 1994, the operator removed the impacted soil around the lift station (approximately six to twelve inches of top soil) and placed it in drums. Approximately 133 drums (55 gallons/each) or 15.4 cubic yards of soil were labeled as hazardous waste and stored within the facility containment pad pending analytical results. Facility personnel collected samples of residual soil at the spill site. Based on analytical results of soil samples, the facility determined that there was no residual contamination of concern at the site. The soil analytical data generated from the cleanup of impacted soil is included as Appendix I.

After the overflow incident on April 17, 1995, the facility operator excavated an estimated 30 cubic yards of soil and placed it in drums labeled as hazardous pending analytical results. The operator collected samples of residual soil at the spill site. Analytical results of soil samples documented no residual contamination of concern. The soil analytical data generated from the cleanup of impacted soil is included as Appendix I.

Migration Pathways

(1) Soil to Groundwater Release Potential

US EPA ARCHIVE DOCUMENT

There is no current release potential to soil and ground water from the lift station and old piping system since they have been taken out of operation. The past releases to the soil that occurred were remediated.

(2) Surface Water Release Potential

There is currently no release potential to the surface water from the lift station and old piping system since they are no longer operational. The past release potential from the lift station and the old piping system directly to surface water was low due to the distance to surface water.

There is low release potential from the new underground piping system directly to the surface water since the distance to the nearest surface water is greater than two miles.

3) Air Release Potential

There is no current release potential to the air from the old piping system and the lift station because they are no longer operational. The old unit had low release potential to air when active because it was not in contact with the atmosphere.

6.2.14 SWMU 14 (Previously designated as SWMU 9): Spent Carbon Unloading and Transfer Area Asphalt Pavement

Unit Description

The transfer area asphalt pavement has a continuous six-inch high berm around the part of the asphalt pavement closest to the building.
This area is part of a larger continuous asphalt pavement area that borders the concrete process area. The materials of construction of this unit are presented in Table 2 listing the units above.

Status and Wastes Managed

The unit is currently active as a component of the spent carbon handling area.

Both hazardous and nonhazardous spent carbon are handled at this unit within this asphalt area. The list of hazardous constituents that may be adsorbed to the spent carbon is very extensive and may include, but is not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

There is a continuous six-inch high concrete berm around unloading and transfer area part of the asphalt pavement. The operators waste carbon management practices and timely responses to spills will be the first line of release control.

Release History

US EPA ARCHIVE DOCUMENT

Two plausible release areas were identified during the Preliminary Report. The first is the land surrounding the spent carbon unloading and transfer area, where carbon dust/particulate deposition may have occurred and continue to occur, and the second is the area where a spill from a tank truck occurred in September 1998.

In August 1996, Evoqua conducted soil testing inside the fenced area of the facility, including areas where carbon dust and particulate deposition may have occurred prior to paving. Analytical results indicated that the soil had not been impacted or contaminated by the operations at the facility. No soil samples exhibited the toxicity characteristic, and no detectable levels of semi volatile, volatile, or organochlorine pesticides and PCBs were found in the soil. However, this whole area will be further investigated at the time of closure.

Regarding the second area, on September 26, 1998 a spill occurred from a truck on site that contained recycle water from the plant that was used to slurry hazardous spent carbon in the treatment process plant. The spill was caused by the driver opening a valve and accidentally discharging the recycle water onto the soil just outside the main gate of the plant. Approximately 100 gallons were released to the soil. The Facility Operator immediately started containment and cleanup procedures. Fifty-six drums of impacted rocks and soil were excavated and managed as hazardous waste and manifested (Manifest Document No. 12239) for shipment off site to be incinerated at APTUS in Aragonite, Utah. The Facility Operator tested the remaining soil for metals, VOCs, and SVOCs. Analytical results revealed no residual contamination above background concentrations at the spill site (Appendix I). A visual inspection of these areas on July 12, 2001, during the VSI, revealed no evidence of stained surface soil, and a review of facility records document cleanup of the past spills.

No evidence of release was observed at this unit during both VSIs.

Remedial Actions

Please see the discussion on the truck spill and cleanup discussed in the section above.

Migration Pathways

(1) Soil to Groundwater Release Potential

The potential for release is low from this unit because the carbon containers are not opened in this area. At the time of closure this unit and the soil underneath it will be investigated further as per the Closure Plan, Appendix XV in Permit Application Reference 5.

(2) Surface Water Release Potential

The nearest surface water body is greater than two miles away. There is low release potential to surface water due to the carbon containers not being opened in this area.

(3) Air Release Potential

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The potential for release to the air is low because the carbon containers are not opened in this area.

6.2.15 SWMU 15 (This is a New Unit): Satellite Accumulation Area (North Side of Warehouse)

Located at the north end of the container storage area and is used to accumulate various debris which may include respirator cartridges, gloves, PPE, trash and floor sweepings. The container is a drum containing less than or equal to 55 gallons.

Status and Waste Managed

The unit stores hazardous waste for less than 90 days, and so is subject to generator requirements as per 40 CFR 262.

Hazardous waste debris may be contaminated with any of the hazardous constituents adsorbed to the spent carbon. These may include, but are not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The lid on the debris container is closed at all times except when waste is added. The hazardous waste debris is emptied periodically into the debris bin and is shipped off-site in less than 90 days from the date of initial accumulation in the bin. The facility operator performs routine inspections at this unit.

Release History

No documented releases from this unit have occurred. No evidence of any spill or release of hazardous constituents was observed during 2014 VSI.

Remedial Actions

There are no documented remedial actions performed at this unit.

Migration Pathways

(1) Soil and Groundwater Release Potential

There is low release potential to the soil and groundwater since this unit is located at the north end of the container storage area. Routine (daily) inspections are performed, and concrete is present underneath the unit.

(2) Surface Water Release Potential

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The nearest surface water body is greater than two miles away, routine inspections are performed, and this unit is located at the north end of the container storage area. Therefore, there is low release potential to the surface water.

(3) Air Release Potential

The lid is kept closed except to add debris to the container, and the unit is routinely inspected. Therefore, there is low release potential to air from this unit.

6.2.16 SWMU 16 (This is a New Unit): Satellite Accumulation Area (South Side of Drum Containment)

Located at the south end of the container storage area and is used to accumulate various debris which may include respirator cartridges, gloves, PPE, trash and floor sweepings. The container is a drum containing less than or equal to 55 gallons.

Status and Waste Managed

The unit stores hazardous waste for less than 90 days, and so is subject to generator requirements as per 40 CFR 262.

Hazardous waste debris may be contaminated with any of the hazardous constituents adsorbed to the spent carbon. These may include, but are not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The lid on the debris container is closed at all times except when waste is added. The hazardous waste debris is emptied periodically into the debris bin and is shipped off-site in less than 90 days from the date of initial accumulation in the bin. The facility operator performs routine inspections at this unit.

Release History

No documented releases from this unit have occurred. No evidence of any spill or release of hazardous constituents was observed during 2014 VSI.

Remedial Actions

There are no documented remedial actions performed at this unit.

Migration Pathways

(1) Soil and Groundwater Release Potential

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There is low release potential to the soil and groundwater since this unit is located at the south end of the container storage area. Routine (daily) inspections are performed, and concrete is present underneath the unit.

(2) Surface Water Release Potential

The nearest surface water body is greater than two miles away, routine inspections are performed, and this unit is located at the south end of the container storage area. Therefore, there is low release potential to the surface water.

(3) Air Release Potential

The lid is kept closed except to add debris to the container, and the unit is routinely inspected. Therefore, there is low release potential to air from this unit.

6.2.17 SWMU 17 (This is a New Unit): Satellite Accumulation Area (East of Control Room)

Located outside the east end of the control room door. This is used to accumulate various debris which may include respirator cartridges, gloves, PPE, trash and floor sweepings. This is a container containing less than or equal to 55 gallons.

Status and Waste Managed

The unit stores hazardous waste for less than 90 days, and so is subject to generator requirements as per 40 CFR 262.

Hazardous waste debris may be contaminated with any of the hazardous constituents adsorbed to the spent carbon. These may include, but are not limited to: VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The lid on the debris container is closed at all times except when waste is added. The hazardous waste debris is emptied periodically into the debris bin and is shipped off-site in less than 90 days from the date of initial accumulation in the bin. The facility operator performs routine inspections at this unit.

Release History

No documented releases from this unit have occurred. No evidence of any spill or release of hazardous constituents was observed during 2014 VSI.

Remedial Actions

There are no documented remedial actions performed at this unit.

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Migration Pathways

(1) Soil and Groundwater Release Potential

There is low release potential to the soil and groundwater since this unit is located outside the east end of the control room door. Routine (daily) inspections are performed, and concrete is present underneath the unit.

(2) Surface Water Release Potential

The nearest surface water body is greater than two miles away, routine inspections are performed, and this unit is located outside the east end of the control room door. Therefore, there is low release potential to the surface water.

(3) Air Release Potential

The lid is kept closed except to add debris to the container, and the unit is routinely inspected. Therefore, there is low release potential to air from this unit.

6.2.15 SWMU 18 (This is a New Unit): Satellite Accumulation Area (Lab in Admin Building)

Located in the testing lab in the administration building. This is used to accumulate debris from laboratory testing of samples and is a 5 gallon container.

Status and Waste Managed

The unit stores hazardous waste for less than 90 days, and so is subject to generator requirements as per 40 CFR 262.

Hazardous waste debris may be contaminated with any of the hazardous constituents adsorbed to the spent carbon. These may include, but are not limited to, VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The lid on the debris container is closed at all times except when waste is added. The hazardous waste debris is emptied periodically into the debris bin and is shipped off-site in less than 90 days from the date of initial accumulation in the bin. The facility operator performs routine inspections at this unit.

Release History

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No documented releases from this unit have occurred. No evidence of any spill or release of hazardous constituents was observed during 2014 VSI.

Remedial Actions

There are no documented remedial actions performed at this unit.

Migration Pathways

(1) Soil and Groundwater Release Potential

There is low release potential to the soil and groundwater since this unit is located in the testing lab in the administration building. Routine (daily) inspections are performed, and concrete is present underneath the unit.

(2) Surface Water Release Potential

The nearest surface water body is greater than two miles away, routine inspections are performed, and this unit is located in the testing lab in the administration building. Therefore, there is low release potential to the surface water.

(3) Air Release Potential

The lid is kept closed except to add debris to the container, and the unit is routinely inspected. Therefore, there is low release potential to air from this unit.

6.2.19 SWMU 19 (This is a New Unit): Satellite Accumulation Area (Underneath Spent Carbon Baghouse)

Located under the baghouse that services H-1 and H-2 hoppers. This is used to accumulate spent carbon dust/fines captured by the baghouse. The container is a drum containing less than or equal to 55 gallons.

Status and Waste Managed

The unit stores hazardous waste for less than 90 days, and so is subject to generator requirements as per 40 CFR 262.

Hazardous waste debris may be contaminated with any of the hazardous constituents adsorbed to the spent carbon. These may include, but are not limited to, VOCs, PAHs, phthalates, amines, pesticides, and metals. The complete list of hazardous wastes and RCRA-regulated waste codes acceptable for reactivation at the facility is provided in Appendix I of Part B Permit Application Reference 5.

Release Controls

The lid on the debris container is closed at all times except when waste is added. The hazardous waste debris is emptied periodically into the debris bin and is shipped off-site in less than 90

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days from the date of initial accumulation in the bin. The facility operator performs routine inspections at this unit.

Release History

No documented releases from this unit have occurred. No evidence of any spill or release of hazardous constituents was observed during 2014 VSI.

Remedial Actions

There are no documented remedial actions performed at this unit.

Migration Pathways

(1) Soil and Groundwater Release Potential

There is low release potential to the soil and groundwater since this unit is located under the baghouse that services H-1 and H-2 hoppers on top of a bermed concrete pad. Routine (daily) inspections are performed, and concrete is present underneath the unit.

(2) Surface Water Release Potential

The nearest surface water body is greater than two miles away, routine inspections are performed, and this unit is located under the baghouse that services H-1 and H-2 hoppers on top of a bermed concrete pad. Therefore, there is low release potential to the surface water.

(3) Air Release Potential

The lid is kept closed except to add debris to the container, and the unit is routinely inspected. Therefore, there is low release potential to air from this unit.

6.3 AOCs

Area of Concern (AOC): Any area of a facility under the control or ownership of an owner or operator where a release to the environment of hazardous wastes or hazardous constituents has occurred, is suspected to have occurred, or may occur, regardless of the frequency or duration. [63 Fed. Reg. 56710, n.1 (Oct.22, 1998).] Areas of concern include areas that have experienced one-time spills of hazardous waste or hazardous constituents that have not been adequately cleaned up. [61 Fed. Reg. 19,432, 19,443 (May 1, 1996).]

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TABLE 3 - AREAS OF CONCERN (AOC) IDENTIFICATION TABLE, NEW UNIT NAME

No.	Description of AOC	Location	Management Requirements at Closure
1	Spent carbon unloading and transfer area.	AOC 1 is entirely contained within SWMU14.	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 5 & 7.
2	Tank area concrete containment pad	AOC 2 is entirely contained within SWMU 1.	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 3.
3	Receiving area/pad	AOC 3 is entirely contained within SWMU14.	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 8.
4	Hopper H-1 loading/unloading area	See HWMU 5 for more detail on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 4 & 5.
5	Hopper H-2 loading/unloading area	See HWMU 6 for more detail on this unit	Sampling. See Closure Plan Container Area Sample Locations 1 & 2.
6	Spent carbon storage warehouse	See HWMU 9 for more detail on this unit	Sampling. See Closure Plan Container Area Sample Locations 1, 2, & 3.
7	Furnace feed systems	See HWMUs 14 and 15 for more details on these units	Sampling. See Closure Plan RF-1 and RF-2 Process Area Sample Locations 1 & 2
8	Recycled motive water tank T-9	See SWMU 4 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 6.
9	Rainwater, Dewatering Screw, and Motive Water Storage Tank T-12	See SWMU 5 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 2.
10	Spent carbon storage warehouse barrel washer	See HWMU 17 for more details on this unit	Sampling. See Closure Plan Container Area Sample Locations 1, 2, & 3.
11	Bermed concrete pad in process area	AOC 2 is entirely contained within SWMU 1. See SWMU 1 for more detail on this unit	Sampling. See Closure Plan RF-1 and RF-2 Process Area Sample Locations 1, 2, & 3.
12	Sump by unloading hopper H-1	See SWMU 2 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 4.
13	Sump by storage tank T-9	See SWMU 3 for more details on this unit	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 6.
14	Spent carbon storage tanks and carbon adsorbers	Please see HWMUs 10, 11, 12, & 13 and HWMUs 19, 20, & 21 for more details on these units	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 1, 2, & 3.

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TABLE 4 – OLD SWMUs UNIT NAMES AND HOW THEY CORRESPOND WITH THE NEW UNIT NAMES FOR SWMUs AND HWMUs

(First column from the left uses the old unit name and the first column from the right corresponds it with the new unit name).

SWMU		New Name for the SWMUs as a result of splitting out HWMUs
1	Spent Carbon Reactivation Furnace RF-1 and Associated Equipment (Dewater screw)	HWMU 1
2	Spent Carbon Reactivation Furnace RF-2 and Associated Equipment (Dewater Screw and Weigh Belt)	HWMU 2
3	Air Pollution Control Equipment for RF-1 (Afterburner, Venturi scrubber, packed bed scrubber, and emissions stack)	HWMU 3
3	Air Pollution Control Equipment for RF-2 (Afterburner, Venturi scrubber, packed bed scrubber, wet electrostatic precipitator, induced draft fan, and emission stack)	HWMU 4
4	Spent Carbon Unloading Hopper H-1	HWMU 5
5	Spent Carbon Unloading Hopper H-2	HWMU 6
6	Hopper Air Pollution Control Equipment piping and baghouse	HWMU 7
7	Spent Carbon Slurry and Recycle Water Transfer System	HWMU 8
8	Spent Carbon Storage Warehouse	HWMU 9
9	Transfer Area Concrete Pad	SWMU 14
10	Spent Carbon Slurry Storage Tank T-1	HWMU 10
11	Spent Carbon Slurry Storage Tank T-2	HWMU 11
12	Spent Carbon Slurry Storage Tank T-5	HWMU 12
13	Spent Carbon Slurry Storage Tank T-6	HWMU 13
14	RF-1 Furnace Feed System (Tank T-8, Dewatering Screw, and Weigh Belt Conveyor)	HWMU 14
15	RF-2 Furnace Feed System (Tank T-18, Dewatering Screw, and Weigh Belt Conveyor)	HWMU 15
16	Recycled Motive Water Storage Tank T-9	SWMU 4
17	Rainwater, Dewatering Screw, and Motive Water Storage Tank T-12	SWMU 5
18	Wastewater Storage Tank T-11	SWMU 6
19	RF-2 Scrubber Water Equalization Tank T-19	SWMU 8
20	Hazardous Waste Debris Bin	SWMU 9
21	Spent Carbon Storage Warehouse Grated Trenches and Sump	SWMU 10
22	Spent Carbon Storage Warehouse Barrel Washer	HWMU 17
23	Bermed Containment Area Under Spent Carbon Slurry Storage Tanks	SWMU 1
24	Sump By Unloading Hopper H-1	SWMU 2
25	Sump By Storage Tank T-9	SWMU 3
26	Sump By Cooling Screw Under Venturi Scrubber Tank	SWMU 7

SWMU		New Name for the SWMUs as a result of splitting out HWMUs
27	Wastewater Conveyance Piping to Wastewater Treatment Tank	HWMU 16
28	Wastewater Lift Station and Piping System (Old and New)	SWMU 13
29	Carbon Adsorber WS-1	HWMU 19
30	Carbon Adsorber WS-2	HWMU 20
31	Carbon Adsorber WS-3	HWMU 21
32	Carbon Adsorber PV-1000	HWMU-18
33	Slurry Transfer Inclined Plate Settler Tank	HWMU 22
34	Scrubber Recycle Tank T-17	HWMU 23
35	Filter Press	HWMU 24
	New Facility Discharge Piping System	HWMU 25
9	Hopper Concrete Pad (Outside H-1 Structure). Used to be part of old SWMU 23	SWMU 11
	WWTP (located inside the warehouse)	SWMU 12

7.0 EXPOSURE PATHWAYS AND HUMAN AND ENVIRONMENTAL RECEPTORS

7.1 Surface Water

The Colorado River is the closest major surface water body to the site and is greater than two miles northwest of the facility. Due to the distance a release would have to travel to reach the Colorado River, and containment structures on site, there is a low potential for surface water impacts directly from the facility.

The facility discharges its wastewaters to the local POTW. At the POTW, the wastewater is treated along with industrial wastewater and domestic sewage from other sources, and is discharged to a nearby canal. The canal flows into the Colorado River.

The facility tests its wastewaters before discharge to the POTW, and submits the data to the POTW. The POTW Discharge Report is provided in Appendix L and demonstrates that POTW permit limits were not exceeded for TDS, temperature, pH, flow, COD, and TSS (Appendix L).

The potential for atmospheric deposition of airborne contaminants from stack emissions to the surface water is ongoing, but low due to the air pollution control equipment. The potential for atmospheric deposition of airborne contaminants from fugitive emissions from all operations to the surface water is also ongoing about low due to the waste management practices at the facility. For more details about the potential for adverse health impacts please see the Human Health and Ecological Risk Assessment Report provided in Permit Application Reference 5 and Appendix XI.

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7.2 Groundwater

The depth to groundwater at the facility is 80 to 100 feet. The drinking water from four wells within four miles of the facility meets all primary water quality standards in the CWA. These four wells are on CRIT property. The Town of Parker's water source is groundwater. The depth to the surface of the groundwater is approximately 75 feet near the center of town (90 feet at the well in the northeast corner of town, which is on higher ground). The 2000 water quality testing yielded only one non-acute violation for distribution system water quality.

Although spills within and outside secondary containment areas have occurred in the past or may occur in the future at the facility, the potential for exposure of human or environmental receptors to hazardous constituents via groundwater is unlikely, due to the depth of groundwater, the high evaporation rate, the promptness in the facility's response and clean up, and the distance to the drinking water wells.

The release potential from the former underground piping system to the lift station is unknown because documentation of the integrity of the piping system was not provided or found in the facility files during the VSI. There is low release potential from the new underground piping due to the age of the piping system.

7.3 On-site Surface Soil

There are no documented releases to the surface soil at the facility with the exception of the three spills in 1994, 1995, and 1996, and the punctured pipe in the piping system to the POTW in 1998. The spills and release from the piping system were documented as cleaned up, and tests on remaining soils showed no contamination (Appendix I).

In August 1996, according to the Sample Plan formulated on August 7, 1996 for sampling soils inside the fence of the facility prior to paving, the facility operator collected samples from 10 separate 10 foot by 10 foot grids chosen at random. Based on the soil analytical results for metals, SVOCs, VOCs, organochlorine pesticides, PCBs, and alcohol, and the comparison of concentration levels to risk-based screening levels, the soil within the fenced area of the facility has not been impacted or contaminated by the operations of the facility (Appendix I). Atmospheric deposition of airborne contaminants to the soil may occur from fugitive emissions of dust/particulates from unloading spent carbon at hopper H-1. However, there is low potential that residual soil contamination could pose an exposure threat to on-site human or environmental receptors. For more details about potential health impacts please see the Human Health and Ecological Risk Assessment Report provided in Permit Application Reference 5 and Appendix XI.

The potential for atmospheric deposition of airborne contaminants from stack emissions to the soil is ongoing, but low due to the air pollution control equipment. The potential for atmospheric deposition of airborne contaminants from fugitive emissions from all operations to the soil is also ongoing about low due to the waste management practices at the facility. For more details about potential health impacts please see the Human Health and Ecological Risk Assessment Report provided in Permit Application Reference 5 and Appendix XI.

7.4 Air

The facility has installed air pollution control equipment on the reactivation furnace. This equipment considerably reduces the level of hazardous pollutants emitted to the air from the reactivation furnace through the stack. However, stack emissions are ongoing during operations at the facility.

Records from the daily inspections performed by the facility operator of the thermal treatment equipment, tanks, sumps, piping, and other equipment indicate mechanical integrity of all equipment has been maintained except on a few occasions where problems with hoses, hook-ups, and insufficient draft have occurred. Carbon adsorption canisters on equipment also minimize the release of volatile organics at the facility. Occasionally, a delay in change-out of carbon in accordance with the schedule to avoid breakthrough has occurred. Low level, intermittent releases to the air from tanks, sumps, hoppers, carbon canisters, and the piping systems are likely to occur. However, there appear to be sufficient controls in place to keep such fugitive emissions from the facility at a minimum. Therefore, there are ongoing fugitive emissions to the air at fairly low levels from operations at the facility. For more details about potential health impacts please see the Human Health and Ecological Risk Assessment Report provided in Permit Application Reference 5 and Appendix XI.

7.5 Facility Emissions

For more details about potential health impacts from the facility emissions please see the Human Health and Ecological Risk Assessment Report provided in Permit Application Reference 5 and Appendix XI.

8.0 VISUAL SITE INSPECTION

8.1 Purpose of the Visual Site Inspections

A Visual Site Inspection (VSI) is conducted after the initial information-gathering step of the RFA process is complete. The purpose of the VSI is to visit the facility to obtain site characterization information that was not completely disclosed in the file review. During the VSI, the focus is to identify SWMUs and AOCs, to collect visual evidence of releases at the facility, and to identify exposure pathways. The site characterization information gathered during the VSI is evaluated along with the information gathered during the Preliminary Review step to determine the probability that a release has occurred or could occur at the facility. A VSI was conducted at the facility in Parker, Arizona on July 12, 2001. Photo documentation of the 2001 VSI can be found in Appendix B.

8.1.1 Visual Site Inspection Participants

The following personnel were present during the VSI:

Andrea L. Austin	Booz Allen Hamilton, Environmental Scientist
Monte McCue	Plant Manager, Evoqua Water Technologies

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Roy Provins	Environmental Health & Safety Manager, Evoqua Water Technologies
Karen Scheuermann	EPA Region 9, USEPA, Environmental Engineer/Project Manager

8.1.2 Summary of the Visual Site Inspection

The RFA VSI included a visual inspection of present and former (where possible) waste streams, identification of SWMUs and AOCs, and collection of information necessary to assess the potential for release of hazardous constituents to the environment. The inspection was conducted on an extremely hot, sunny day. The temperature was approximately 106° Fahrenheit.

The VSI included the following activities:

Development of a detailed site base map which depicts site features and SWMU locations;
A facility visual inspection and photographic documentation of all SWMUs and a search for related releases and identification of exposure pathways;
An interview with facility representatives and a review of specific documents and file records on-site to fill the site characterization gaps identified during the preliminary review.

8.2 Purpose of the Second Visual Site Inspections

A second VSI was conducted by the USEPA Project manager in March 2014 (Appendix A). EPA invited the CRIT Environmental Protection Office (EPO) to participate in the VSI, however the CRIT EPO office declined and requested a debriefing, of the EPA findings, on the last day of the VSI. The debriefing took place at the EPO office on Friday, March 14, 2014.

The purpose of the second VSI was to verify and document the conditions of all the units at this facility (HWMUs, SWMUs, and AOCs) since the last VSI was over twelve years old.

8.2.1 Visual Site Inspection Participants

The following personnel were present during the VSI:

Monte McCue	Plant Manager, Evoqua Water Technologies
Roy Provins	Environmental Health & Safety Manager, Evoqua Water Technologies
"Mike" Mahfouz Zabaneh	EPA Region 9, USEPA, Environmental Engineer/Project Manager

8.2.2 Summary of the Visual Site Inspection

During the second VSI, EPA inspected the facility and documented the conditions of the SWMUs, HWMUs, and AOCs. The Project Manager reviewed the last three (3) years of the facility's operating records, inspection records, and calibration records. The new VSI photographic documentation can be found in Appendix A.

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9.0 SUGGESTIONS FOR FURTHER ACTION

The findings of this RFA show that there is no need for immediate corrective action at this facility. The waste management units and AOCs at this facility will be further investigated and if need be and cleaned up at the time of the facility closure.

10.0 REFERENCES

Inspection Records Reviewed During the VSI

1995 to 2001: Benzene NESHAP Quarterly Visual Inspection Records for Process Equipment Assessment for Potential Emissions (Documentation of Mechanical Integrity and Corrective Actions); the Carbon Adsorbers; Drums, Vessels, or Bags in Storage; Recycle and Spent Carbon Tank; Dewater Screw; Afterburner; and the Slurry Piping

1995 to 2001: Daily Inspection Checklist of Structural Features and Storage Facilities; Operating Equipment Except Thermal Treatment; Thermal Treatment System; and Safety Equipment; Satisfactory and Unsatisfactory Categories; Unsatisfactory Checks Require a Work Order; Work Orders 4/26/01 for Cut-off Valve Above Waste Feed Tank T-5 and Oxygen Analyzer for the CEMS

1995 to 2001: Weekly Inspection Checklist of Structural Features and Storage Facilities; Operating Equipment Except Thermal Treatment; Thermal Treatment System; and Safety Equipment; Work Order 09/08/00, Pallet Containing Leaking Drum was Pulled and Dumped into H-2 to Feed Process

1995 to 2001: Monthly Inspection Checklist for Safety Equipment; Pumps and Valves Plant-Wide; and Dust Collection System; Monthly Inspection 12/10/99 and Work Order 12-16-99 for Berm in Hazardous Waste Storage Area—Repaired

1995 to 2001: Carbon Adsorber Replacement Logs for WS- 1, WS-2, and WS-3

Other File Material and Facility Records Reviewed for the RFA

April 1, 1990: Business Lease, Lease No. B-1122-CR, Colorado Indian Tribes, U.S. Department of Interior, Bureau of Indian Affairs, and Evoqua Water Technologies

February 1991: Final Environmental Assessment (EA), Carbon Reactivation Plant at the Colorado River Indian Tribes Industrial Park, Parker, Arizona.

April 30, 1991: EPA Form 8700-12, First Notification of Regulated Waste Activity

August 12, 1991: EPA Form 8700-23, Hazardous Waste Permit Application

July 1, 1992: Coating Inspection Services Report on Tank T-8

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September 21, 1992: Preliminary Assessment Summary Memorandum submitted to EPA Region 9

February 4, 1993: *RCRA* Closure Plan for RF-1 and RF-2, Evoqua Carbon-Arizona, Inc.

August 18, 1993: Memorandum from Ray Fox to Larry Bowerman

December 8, 1993: Letter from Evoqua to USEPA Region XI Re: EPA Inspection

February 15, 1994: Determination of Violation, Compliance Order and Notice of Right to Request a Hearing ("Complaint")

February 24, 1994: Inspection Report and Certification Signed by a Registered Professional Engineer for the Spent Carbon Storage Tank and the Furnace Feed Tank and their Ancillary Equipment; That These Tank Systems Have Sufficient Structural Integrity and are Capable of Handling Hazardous Waste

March 1994: RCRA Compliance Evaluation Inspection Report, Westates Carbon-Arizona, Inc., for the October 27, 1993 inspection

June 3, 1994: Letter from EPA Region 9 to Westates Carbon-Arizona Inc., Re: Westates Carbon Hazardous Waste Treatment Facility, in Response to Questions Raised at a Meeting Held on January 6, 1994; Attached Application for Approval, Modification of the Westates-Carbon-Arizona, Inc., Parker Facility

June 17, 1994: Screening Human Health Risk Assessment for the Westates Carbon-Arizona, Inc. Carbon Reactivation Facility in Parker, Arizona with Wind Rose

July 13, 1994: Warning Letter, from Greg Czajkowski, Chief, EPA Region IX, to Jeffery Walsh, Westates Carbon-Arizona, Inc., regarding hazardous waste investigation on March 15, 1994

October 21, 1994: Compliance Evaluation Inspection Report (for October 27, 1993 CEI) March 1994 and Cover Letter from SAIC to EPA Region 9

November 22, 1994: Letter from Westates Carbon-Arizona, Inc. to EPA Region IX; Re: Notice of Implementation of Contingency Plan (spill from the lift station (domestic sewage and scrubber water blowdown, November 10, 1994)

March 9, 1995: RCRA Compliance Evaluation Inspection Report

April 27, 1995: Letter from Westates Carbon-Arizona, Inc. to EPA Region IX Re: Notice of Implementation of Contingency Plan (spill from the lift station (domestic sewage and scrubber water blowdown, April 17, 1995)

July 1995: Consent Agreement and Final Order, Westates Carbon-Arizona, Inc., Docket No. RCRA-09-04-0001, July 1995

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May 31, 1995: RCRA Compliance Evaluation Inspection Report

November 1995: RCRA Part B Permit Application, Westates Carbon, Parker, Arizona

September 19, 1995: RCRA Compliance Evaluation Inspection Report

February 20, 1996: Letter from Westates Carbon-Arizona, Inc., to EPA Region IX, Re: Notice of Implementation of Contingency Plan (spill at lift station, ruptured pipe, facility discharge line to the POTW February 15, 1996)

May 8, 1996: Cover letter, Permit and Fact Sheet for the Colorado River Sewage System Joint Venture for the Industrial Wastewater Discharge Permit No.: 1002-96

October 16, 1996: Letter from Westates Carbon-Arizona, Inc. ,to EPA Region 9, Re: Notice of Change of Ownership and Hazardous Waste Permit Application, Part A, Form 8700-23

December 3, 1996: Subpart CC Compliance Plan, Westates Carbon-Arizona, Inc. Facility, Parker, Arizona

December 19, 1996: Letter from Arlene Kabei, Chief Compliance Monitoring and Enforcement Section, EPA Region IX to Monte McCue, Plant Manager, Westates Carbon-Arizona, Inc. with Appendix of RCRA Compliance Evaluation Inspection Report, December 18, 1996

August 7, 1996: Memorandum from Westates Carbon to Soil Testing File Re: Sampling Plan Prior to Paving "Inside the Fence Area" of the Facility; Testing of Soil Samples Will Consist of Metals, Semi-Volatile Organics, Volatile Organics, Organochlorine Pesticides and PCB's, and Alcohol Scan

August 23, 1996: Memorandum from Westates Carbon to Soil Testing File; Summary of Analytical Results

October 5, 1998: Letter from Monte McCue, Plant Manager, to Felicia Marcus, Regional Administrator, EPA Region IX Re: Westates Carbon-Notice of Implementation of Contingency Plan

January 20, 1999: Purchase Requisition for Fan (Cook #12 CVB, ¾ HP, 460/3 Phase TEFC with Weather Cover, Epoxy Coat, and Spring Hangers) for Ventilation to Afterburner

1999: Letter and EPCRA Form R for 1999, from Roy Provins, EH & S Manager to Daniel Eddy, Jr., Colorado River Indian Tribes

January 26, 2000: Letter from Monte McCue, Plant Manager, US Filter/Westates Carbon to USEPA Region IX; Re: 1999 Air Emission Report for Westates Carbon-Arizona, Inc. Under EPA Potential to Emit Transition Policy for Part 71 Implementation in Indian Country; Applicability of 40 CFR Part 63 Subpart EEE for RCRA Permitting Requirements at Westates

January 31, 2000: Letter from Frances Schultz, Chief, RCRA Enforcement Section to Monte

US EPA ARCHIVE DOCUMENT

McCue, Plant Manager, Westates Carbon-Arizona, Inc. and a Copy of the Inspection Report for December 9-10, 1998

June 26, 2000: Letter from Roy Provins to Daniel Eddy, Jr., Chairman, Colorado River Indian Tribes with Attachment of the toxic Release Inventory Report (Form R) for Reporting Year 1999; also furnished to EPCRA Reporting Center

August 22, 2000: Letter from Karen Scheuermann, Permits and Technical Assistance Office, Waste Management Division, EPA Region IX to Bradley Angel, Greenaction; Re: Biennial Reporting System data from 1993, 1995, and 1997 for Westates Carbon

October 19, 2000: Letter from EPA Region IX to Westates Carbon, Re: Applicability of Title V of the Clean Air Act to the Westates Carbon facility

November 8, 2000: DelMar Analytical Laboratory Report for Scrubber Water Blowdown; Documentation for Determining Nonhazardous Waste

November 9, 2000: Open House Questions and Answers about Westates

January 16, 2001, Wastewater Permit Application, Submitted by Westates Carbon to the Colorado River Sewage System Joint Venture, Priority Pollutant Information

January 18, 2001: Letter from Jeff Scott, Acting Director, Waste Management Division, to Monte McCue, Plant Manager, Westates Carbon-Arizona, Inc., and Re: Applicability of 40 CFR Part 63 Subpart EEE for RCRA Permitting Requirements at Westates

February 2001: Enclosure to Letter from Karen Scheuermann, EPA Region IX to Dave Harper, Mojave Elders and Bradley Angel, Greenaction: Westates Carbon Emission Tests, Draft

February 21, 2001: Letter from Monte McCue, Director, Plant Operations, US Filter/Westates Carbon, to Mr. Daniel Eddy, Chairman, Colorado River Indian Tribes, Re: US Filter Westates Carbon RCRA Part B Permit Application

February 22, 2001: Letter from Monte McCue, Director, Plant Operations, US Filter/Westates Carbon, to Karen Scheuermann, USEPA Region IX, Re: Preliminary Internal RF-2 Stack Test Data October 25-26, 2000

February 26, 2001: Letter from US Filter/Westates Carbon, Roy Provins, EH and S Manager to Karen Scheuermann, USEPA Region IX with Appendix of analytical documentation for spills that occurred at Westates Carbon

February 28, 2001: Response Letter with Enclosure from Karen Scheuermann, EPA to Dave Harper, Mojave Elders and Bradley Angel, Director of Greenaction; Summary of Emissions Data From Tests Conducted in 1993/1994 and in 2000

March 13, 2001: Letter from Monte McCue, Director of Plan Operations to Karen Scheuermann, EPA: Clarification of Statements Attached to EPA's Letter dated February 28,

US EPA ARCHIVE DOCUMENT

2001 to David Harper, Mojave Elders and Bradley Angel, Greenaction, Regarding the Summary of 1993/1994 Emissions Tests

Spring 2001, covering Year 2000 Water Quality Testing: Third Annual Drinking Water Quality Report, Town of Parker, Public Water System #15-013

July 20, 2001, Baseline Report required per the Centralized Waste Treatment discharge regulations with Appendices of analytical results (pending) for wastewater

August 21, 2001: Letter with Enclosures from EPA to Westates Carbon-Arizona, Inc. requesting submittal of Westates' Air Emissions Test Plan and Risk Assessment Work Plan

September 7, 2001: Letter with enclosures from EPA to the Director of the Environmental Protection Office of the Colorado River Indian Tribes (Elena Etcitty) regarding Superfund wastes received at Westates

September 17, 2001: Letter from Monte McCue to EPA, response to EPA's August 21, 2001 letter requesting submittal of Westates' Air Emissions Test Plan and Risk Assessment Work plan

September 26, 2001: Letter from EPA to Westates Carbon-Arizona, US Filter, Inc., applicability of the centralized waste treatment rules under the Clean Water Act (CWA) 40 CFR 437.2 (c)

November 15, 2001: Letter from EPA to the Chairman of the Colorado River Indian Tribes (Daniel Eddy, Jr.), invitation to Meeting regarding Westates Carbon, November 19, 2001

December 3, 2001: Andrea Austin, Booz Allen Hamilton, personal communication with Karen Scheuermann, EPA Region 9, Environmental Engineer, regarding emissions tests results in 1993 and 1994, and October 2000 for Westates Carbon

December 17, 2001: Letter from EPA to U.S. Filter Westates Carbon with Inspection Report for June 2001 enclosed

January 16, 2002: Newspaper article, Parker Pioneer, Water Use Down In Parker

February 4, 2002: Letter from the EPA Contractor, Booz Allen Hamilton, to Eric Shepard, Attorney General's Office, Colorado River Indian Tribes and to Elena Etcitty, Director Environmental Protection Office, Colorado River Indian Tribes requesting information and data from the CRIT files relevant to the RFA

February 01, 2002 - February 28, 2002: Westates Carbon-Arizona, Inc. POTW Discharge Report

February 19, 2002: Phone Response from Eric Shepard, Attorney General's Office, Colorado Indian Tribes, to EPA Contractor, Booz Allen Hamilton: No additional information or data relevant to the RFA is in the CRIT files

March 12, 2001: E-mail Response from Monte McCue. Additional information and data relevant to the RFA

US EPA ARCHIVE DOCUMENT

August 9, 2002: E-mail Response from Monte McCue. Additional information relevant to the RFA

September 6, 2002: E-mail Response from Monte McCue. Additional information relevant to the RFA

US EPA ARCHIVE DOCUMENT

Appendix A

2014 VSI Photographic Documentation with New Unit Names

US EPA ARCHIVE DOCUMENT

TABLE - SOLID WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

SWMU No.	SWMU Type/Designation	Picture of Unit
1	Bermed concrete in process area (this includes the secondary containment for slurry storage tanks) – LOCATION: East of Warehouse	
2	Sump by Hopper H-1 LOCATION: South of H-1	

TABLE - SOLID WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

SWMU No.	SWMU Type/Designation	Picture of Unit
3	Sump by storage tank, T–9 LOCATION: East of warehouse in between T-9 and RF-2	
4	Recycled motive water storage tank, T–9 LOCATION: East of warehouse on containment	

TABLE - SOLID WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

SWMU No.	SWMU Type/Designation	Picture of Unit
5	Rainwater and motive water storage tank, T–12 LOCATION: East of warehouse on containment	This Tank was removed from service in 2002
6	Wastewater storage tank, T–11 System LOCATION: East of the warehouse and south of RF -2	

TABLE - SOLID WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

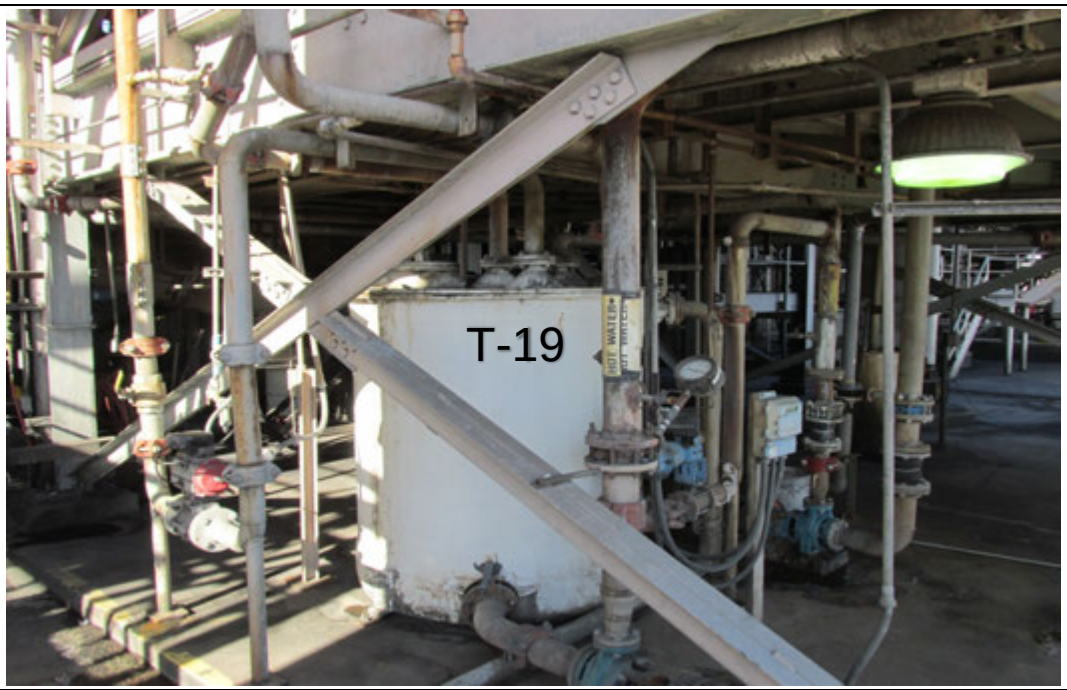
SWMU No.	SWMU Type/Designation	Picture of Unit
7	Sump by cooling screw under Venturi scrubber tank LOCATION: East of warehouse beside RF-2 NOTES: Used for washdown and rainwater drainage	
8	RF–2 scrubber water equalization tank, T-19 LOCATION: Under RF-2 Structure	

TABLE - SOLID WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

SWMU No.	SWMU Type/Designation	Picture of Unit
9	Hazardous waste debris bin LOCATION: North of warehouse on asphalt pavement. Location of this unit on the asphalt changes for convenience	
10	Spent carbon storage warehouse grated trenches and sump LOCATION: Warehouse in containment area	

TABLE - SOLID WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

SWMU No.	SWMU Type/Designation	Picture of Unit
	Picture of the sump inside the spent carbon storage warehouse (This is part of SWMU 10)	
11	Hopper H-1 concrete pad LOCATION: Outside Hopper H-1 structure	

TABLE - SOLID WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

SWMU No.	SWMU Type/Designation	Picture of Unit
12	WWTP LOCATION: Inside warehouse	
13	Wastewater lift station and piping system (old) LOCATION: At the end of access road to plant. Old piping from Tank T-11 to the Lift Station	

TABLE - SOLID WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

SWMU No.	SWMU Type/Designation	Picture of Unit
14	Spent carbon unloading/transfer area asphalt pavement LOCATION: North area of facility	
15	Satellite Accumulation Area LOCATION: North Side of warehouse	

TABLE - SOLID WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

SWMU No.	SWMU Type/Designation	Picture of Unit
16	Satellite Accumulation Area LOCATION: South Side of drum containment	
17	Satellite Accumulation Area LOCATION: East of Control Room	

TABLE - SOLID WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

SWMU No.	SWMU Type/Designation	Picture of Unit
18	Satellite Accumulation Area LOCATION: Laboratory in Admin Building	
19	Satellite Accumulation Area LOCATION: Underneath the Spent Carbon Baghouse	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
1	Spent carbon reactivation furnace - RF-1 and Associated Equipment (Dewater screw) LOCATION: South of RF-2	
	Dewatering Screw for RF-1 (A component of HWMU 1)	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
2	Spent carbon reactivation furnace RF-2 and Associated Equipment (Dewater Screw, Weigh Belt) LOCATION: East of warehouse	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
	Dewatering Screw (A component of HWMU 2)	
	Weigh Belt (A component of HWMU 2)	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
3	3 RF–1 Air pollution control equipment	
	Afterburner (A component of HWMU 3)	
	Venturi scrubber (A component of HWMU 3)	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
	Packed bed scrubber	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
	Emissions stack (was removed. This is a picture of where it was.)	
4	RF–2 Air pollution control equipment	
	Afterburner	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
	Venturi scrubber	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
	Packed bed scrubber and Wet electrostatic precipitator (WESP)	
	Induced draft fan	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
	Emissions stack	
5	Spent carbon unloading hopper H-1 LOCATION: North end of facility on containment	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
6	Spent carbon unloading hopper H-2 LOCATION: Inside warehouse facing east wall	
7	Hopper air pollution control equipment piping and baghouse LOCATION: North end of facility on containment	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
8	Spent carbon slurry and recycle water transfer system LOCATION: Inside warehouse on containment LOCATION: Outside on concrete pad	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
9	Spent carbon storage warehouse LOCATION: Inside warehouse	
10	Spent carbon slurry storage tank, T–1 LOCATION: East of warehouse within secondary containment	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
11	Spent carbon slurry storage tank, T–2 LOCATION: East of warehouse within secondary containment	
12	Spent carbon slurry storage tank, T–5 LOCATION: East of warehouse within secondary containment NOTES:	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
13	Spent carbon slurry storage tank, T–6 LOCATION: East of warehouse within secondary containment NOTES:	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
14	Furnace Feed System Tank T-8 and Ancillary Equipment LOCATION: RF–1 Structure	
15	T-18 and Ancillary Equipment LOCATION: RF-2 structure	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
16	Wastewater conveyance piping to wastewater treatment tank LOCATION: East of RF-2 structure	
17	Spent carbon storage warehouse barrel washer LOCATION: Next to H-2 in warehouse	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
18	Carbon adsorber - PV1000 LOCATION:	Equipment does not exist anymore
19	Carbon adsorber WS-1. These are two adsorbers in series (lead – lag configuration) LOCATION: Beside spent carbon storage tank	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
20	Carbon adsorber WS-2 LOCATION: Beside Hopper H-1	
21	Carbon adsorber WS-3 LOCATION: Beside RF–2	

TABLE - HAZARDOUS WASTE MANAGEMENT UNITS
VISUAL SITE INSPECTION
BY MIKE ZABANEH
MARCH 11, 2014

HWMU No.	HWMU Type/Designation	Pictures
22	Slurry transfer inclined plate settler tank LOCATION: Adjacent to the venturi scrubber	Equipment doesn't exist anymore
23	Scrubber recycle tank T-17 LOCATION: Beside RF-1	Equipment doesn't exist anymore
24	Filter press LOCATION: Next to scrubber system for RF-1	Equipment doesn't exist anymore
25	New Facility Discharge Piping System LOCATION: New piping bypasses Lift Station to POTW	

TABLE - AREA OF CONCERN IDENTIFICATION

No.	AOC Type/Designation/Location	Management Requirements at Closure
1	Spent carbon unloading and transfer area. LOCATION:	
2	Tank area concrete containment pad LOCATION:	

TABLE - AREA OF CONCERN IDENTIFICATION

No.	AOC Type/Designation/Location	Management Requirements at Closure
3	Receiving area/pad LOCATION:	
4	Hopper H-1 loading/unloading area LOCATION:	

TABLE - AREA OF CONCERN IDENTIFICATION

No.	AOC Type/Designation/Location	Management Requirements at Closure
5	Hopper H-2 loading/unloading area LOCATION:	
6	Spent carbon storage warehouse LOCATION:	

TABLE - AREA OF CONCERN IDENTIFICATION

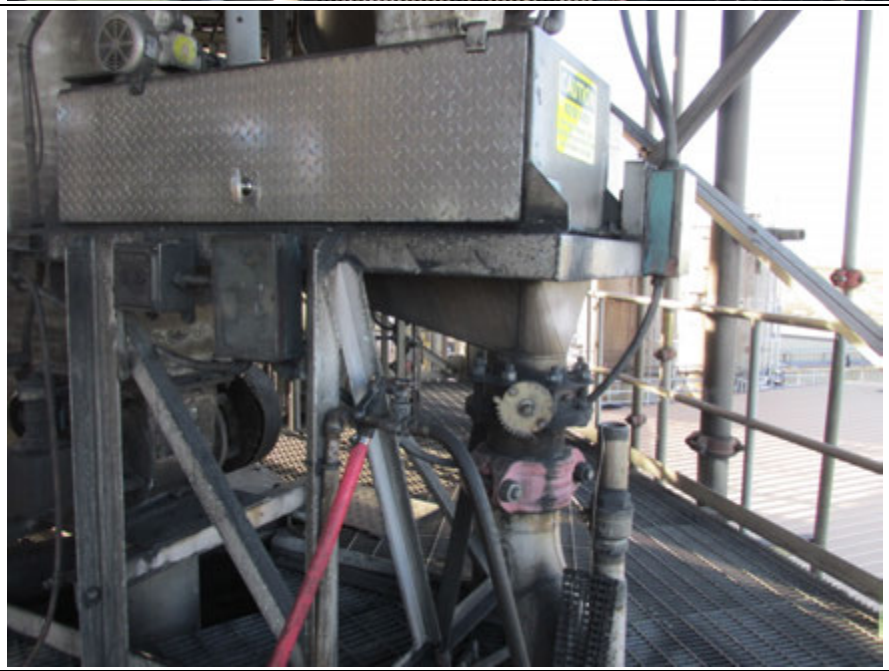
No.	AOC Type/Designation/Location	Management Requirements at Closure
7A	Furnace feed system – Dewatering screw LOCATION:	
7B	Furnace feed system – Weigh Belt LOCATION:	

TABLE - AREA OF CONCERN IDENTIFICATION

No.	AOC Type/Designation/Location	Management Requirements at Closure
8	Recycled motive water tank T-9 LOCATION:	
9	Rainwater, dewatering screw, and motive water tank T-12 LOCATION: Was removed. Doesn't exist anymore	Tank was removed. Doesn't exist anymore.

TABLE - AREA OF CONCERN IDENTIFICATION

No.	AOC Type/Designation/Location	Management Requirements at Closure
10	Spent carbon storage warehouse barrel washer LOCATION:	
11	Bermed containment area in process area LOCATION:	

TABLE - AREA OF CONCERN IDENTIFICATION

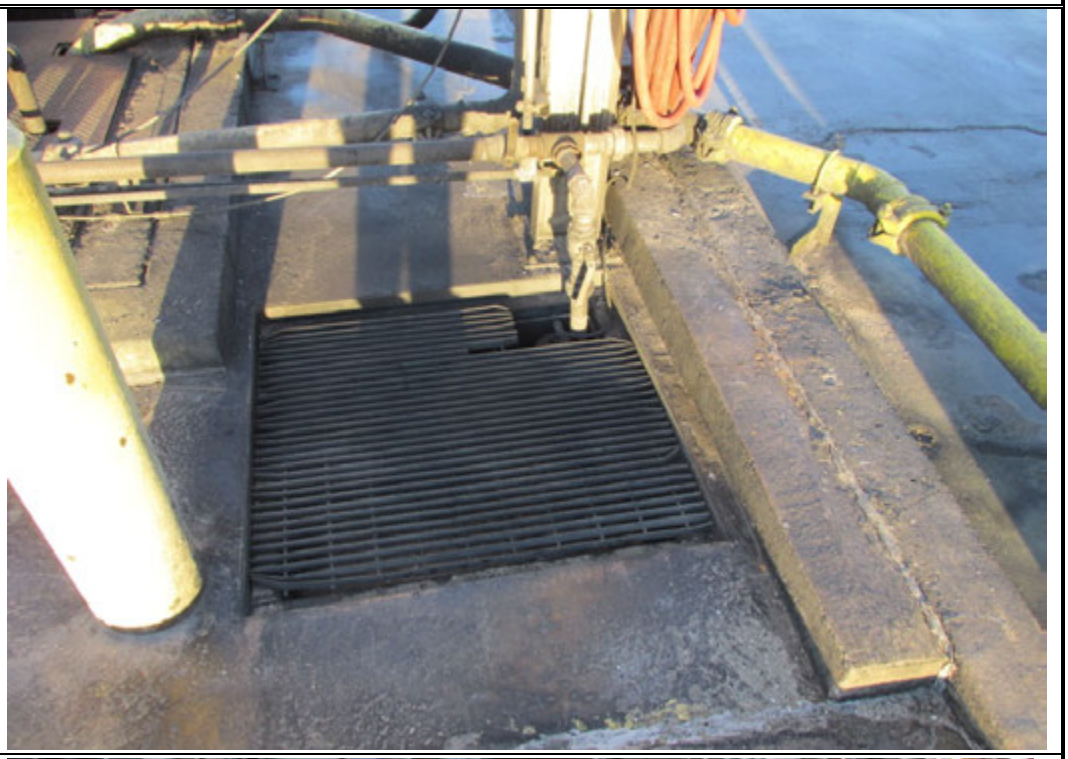
No.	AOC Type/Designation/Location	Management Requirements at Closure
12	Sump by unloading hopper H-1 LOCATION:	
13	Sump by tank T-9 LOCATION:	

TABLE - AREA OF CONCERN IDENTIFICATION

No.	AOC Type/Designation/Location	Management Requirements at Closure
14	Spent carbon storage tanks and carbon adsorbers LOCATION:	

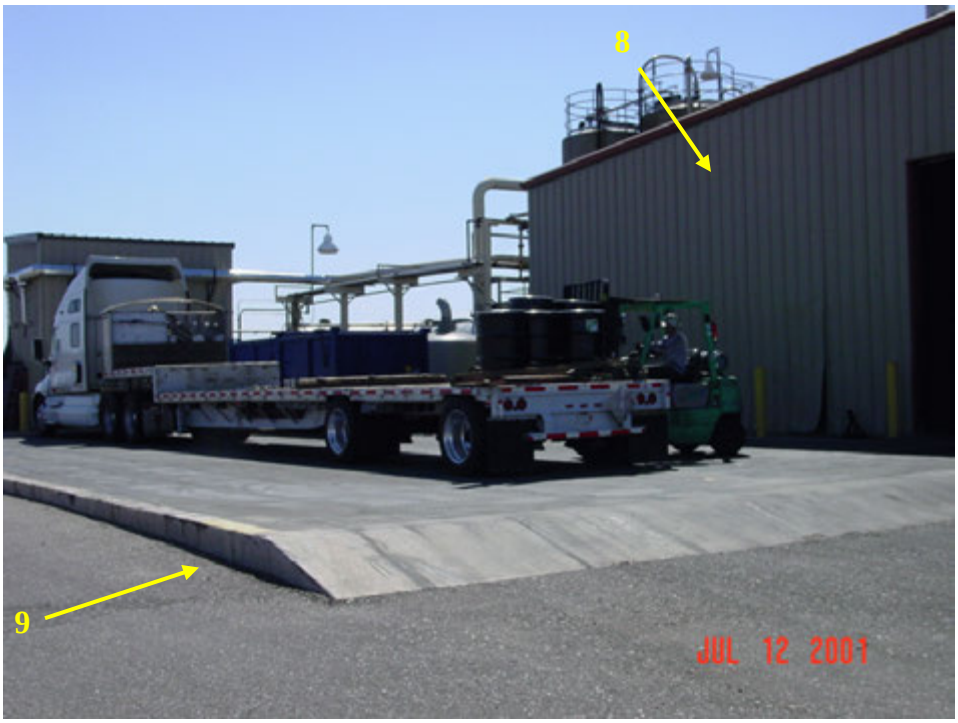
Appendix B

2003 VSI Photographic Documentation with Old Unit Names

US EPA ARCHIVE DOCUMENT

Westates Carbon-Arizona, Inc., RFA
Parker, Arizona

Photograph No.: F-1
Photographer: Andrea Austin
SWMU No.: 9
SWMU Name: Transfer Area Containment Pad
Date: 07/12/2001
SWMU Description: Concrete loading pad with secondary containment berm adjacent to the spent carbon storage warehouse (SWMU8). No evidence of spills.



Photograph No.: F-2
Photographer: Andrea Austin
SWMU No.: 9
SWMU Name: Transfer Area Containment Pad
Date: 07/12/2001
SWMU Description: Concrete loading pad adjacent to the spent carbon storage warehouse (SWMU 8). No evidence of spills.



Westates Carbon-Arizona, Inc., RFA
Parker, Arizona

Photograph No.: F-3
Photographer: Andrea Austin
SWMU No.: 20
SWMU Name: Hazardous Waste Debris Bin
Date: 07/12/2001
SWMU Description: Debris bin at spent carbon transfer area containment (SWMU 9); cracks in concrete filled in with a polyresin, Sikadur 35. Debris such as personal protective equipment is stored for less than 90 days. There are three areas inside the spent carbon storage warehouse where the debris is accumulated before putting into the dumpster. Debris bin is closed at all times except to add debris. No evidence of any spill.



Photograph No.: F-4
Photographer: Andrea Austin
SWMU No.: 8
SWMU Name: Spent Carbon Storage Warehouse
Date: 07/12/2001
SWMU Description: About 10 rows plus 10-20 bag filter canisters. Tightly closed / labeled 55-gallon drums of hazardous and non-hazardous waste. Authorized to store 100,000 gallons (approximately 1,818 drums of hazardous waste). Drums are stacked on and separated by wooden pallets. There are four drums per pallet therefore using a total of twenty-four pallets. Crack in floor repaired with a polyresin, Sikadur 35®. Grated trenches collect any spill.



Photograph No.: F-5
Photographer: Andrea Austin
SWMU No.: 8
SWMU Name: Spent Carbon Storage Warehouse
Date: 07/12/2001
SWMU Description: Storage area for spent carbon. Spills are washed into trenches that drain to a sump and vault (SWMU 21). Water in sump is recycled to T-9 (SWMU 16) and T-12 (SWMU 17), the water recycle storage tank. Water was observed on the floor from recent wash-out of empty drums. White vessels are filter canisters, each containing approximately 1000 (?) lbs of spent carbon.



Photograph No.: F-6
Photographer: Andrea Austin
SWMU No.: 5
SWMU Name: Spent Carbon Unloading Hopper (H-2)
Date: 07/12/2001
SWMU Description: Drums of spent carbon are emptied into this feed hopper. Forty percent of waste is handled at H-2. The capacity of H-2 is 500 lbs. No evidence of spills were observed.



Westates Carbon-Arizona, Inc., RFA
Parker, Arizona

Photograph No.: F-7
Photographer: Andrea Austin
SWMU No.: 7
SWMU Name: Carbon Slurry and Recycle Water Transfer System
Date: 07/12/2001
SWMU Description: Piping conveyance system from unloading hopper (H-2) (SWMU 5) to spent carbon slurry storage tanks (SWMUs 10 through 13).



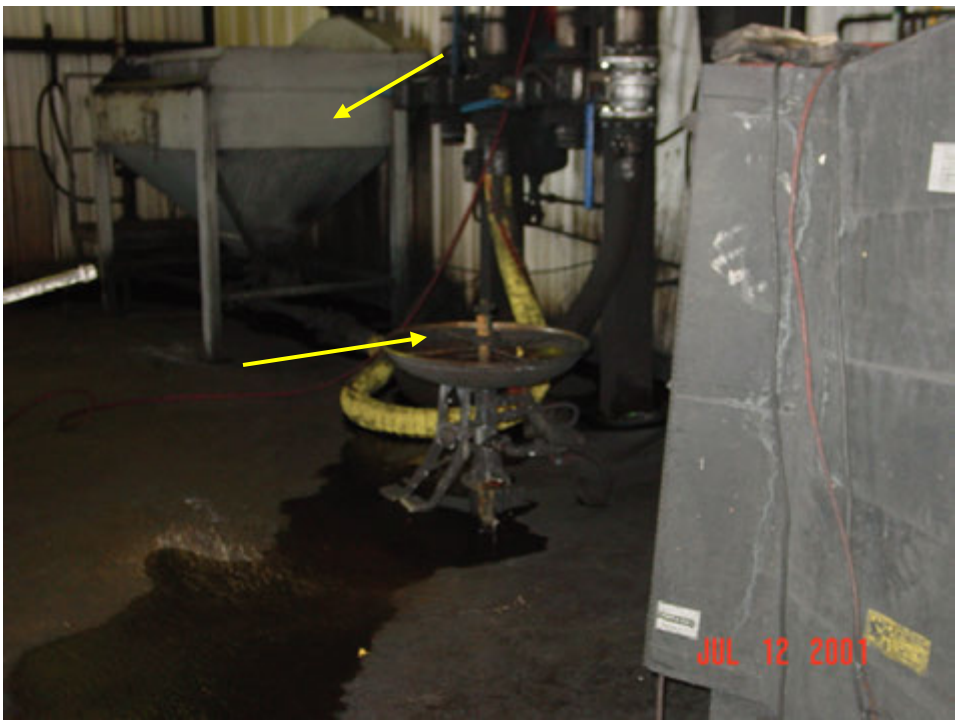


Photograph No.: F-8
Photographer: Andrea Austin
SWMU No.: 5
SWMU Name: Spent Carbon Unloading Hopper (H-2)
Date: 07/12/2001
SWMU Description: Piping behind H-2 that draws organic vapors and particulates from spent carbon. The pipe leads to the baghouse and carbon adsorber WS-2 (SWMU 30).

Photograph No.: F-9
Photographer: Andrea Austin
SWMU No.: 21
SWMU Name: Spent Carbon Storage Warehouse: Metal Grated Trenches, Sump, and Vault.
Date: 07/12/2001
SWMU Description: Grating over trenches for collecting water used to wash out empty drums at the barrel washer (SWMU 22). Also the collection point for washdown of the spent carbon transfer area containment pad (SWMU 9) just outside the warehouse entrance. The liquid is collected in the sump, then pumped to Tank T-9 (SWMU 16) or Tank T-12 (SWMU 17). Crack in concrete has been sealed with a polyresin, Sikadur 35®. No history of build-up of liquid in the sump and vault. No evidence of release around the sump and vault in the warehouse.

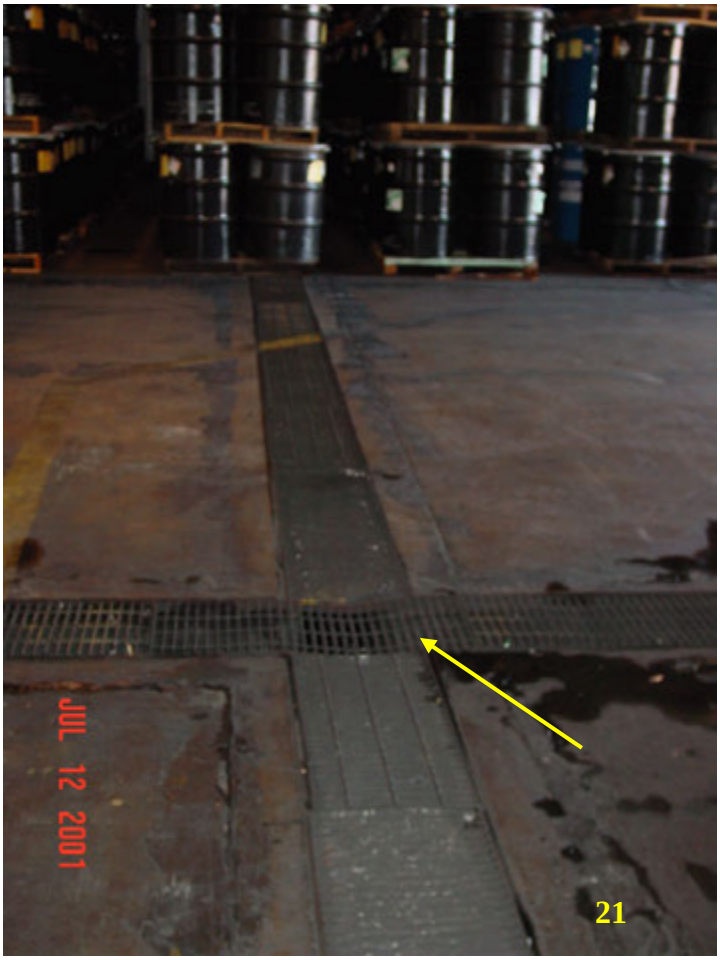


Photograph No.: F-10
Photographer: Andrea Austin
SWMU No.: 22
SWMU Name: Spent Carbon Storage Warehouse Barrel Washer
Date: 07/12/2001
SWMU Description: Barrel washer adjacent to H-2 (SWMU 5). Water used to rinse empty drums drains into trenches and flows to the sump and vault (SWMU 21) (Photograph No. F-9). From there the water is recycled to tank T-9 (SWMU 16) or (SWMU 17) T-12. Water observed on the floor from recent wash-out of empty drums.



Westates Carbon-Arizona, Inc., RFA
Parker, Arizona

Photograph No.: F-11
Photographer: Andrea Austin
SWMU No.: 21
SWMU Name: Spent Carbon Storage Warehouse: Grated Trenches
Date: 07/12/2001
SWMU Description: The grated trenches in the spent carbon storage warehouse are present to capture any spills. The dark wet area on the concrete is water from recently washing out empty drums. The trenches lead to the sump and vault and transport the wastewater via a pipe system to Tank T-9 (SWMU 16) and T-12 (SWMU 17) where water is recycled.

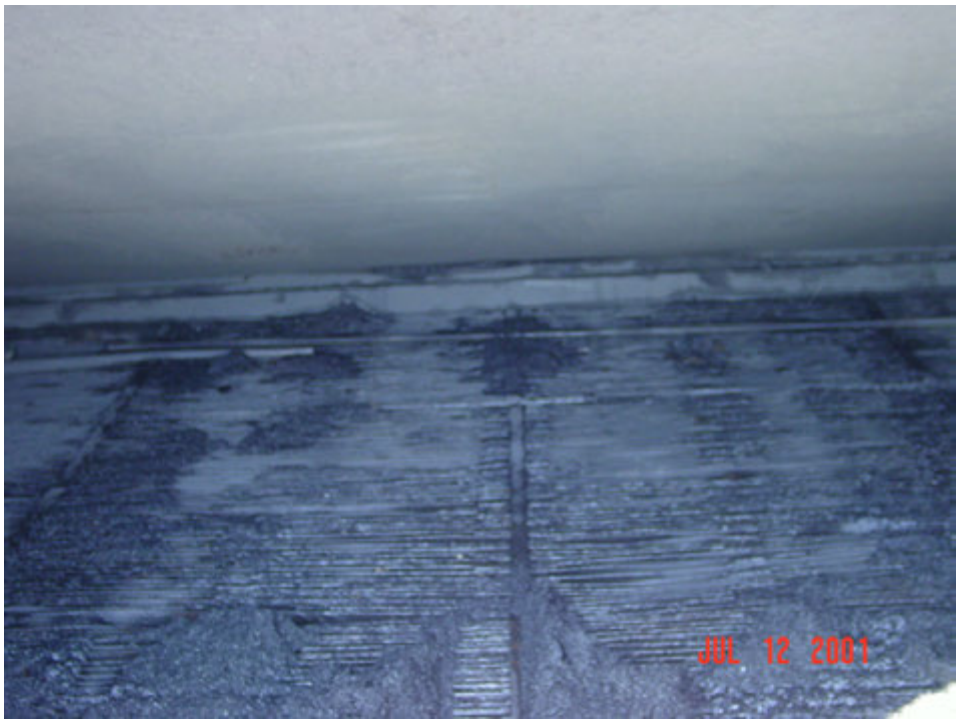


Photograph No.: F-12
Photographer: Andrea Austin
SWMU No.: 8
SWMU Name: Spent Carbon Storage Warehouse
Date: 07/12/2001
SWMU Description: Containment berm separating the container storage area from the maintenance area.



Westates Carbon-Arizona, Inc., RFA
Parker, Arizona

Photograph No.: F-13
Photographer: Andrea Austin
SWMU No.: 4
SWMU Name: Unloading Hopper (H-1)
Date: 07/12/2001
SWMU Description: Inside unloading hopper (H-1); the grate onto which spent carbon is unloaded. Approximately sixty percent of the spent carbon is handled at H-1. The capacity of H-1 is 5,000 lbs. Residual spent carbon was observed on the grate of H-1.



Photograph No.: F-14
Photographer: Andrea Austin
SWMU No.: 4
SWMU Name: Connection Pipe for Slurry Trucks to Unload to
Date: 07/12/2001
SWMU Description: Slurry Trucks unload by connecting to pipe. Spent carbon falls through grate into the hopper; eductor at the bottom moves the carbon into slurry transfer system (SWMU 7).



Westates Carbon-Arizona, Inc., RFA
Parker, Arizona

Photograph No.: F-15
Photographer: Andrea Austin
SWMU No.: 4 and 6
SWMU Name: Hopper Air Pollution Equipment
Date: 07/12/2001
SWMU Description: Outside of unloading hopper (H-1). Heavy rubber strips/curtain minimizes escape of dust/particulates and organic vapors during unloading of spent carbon. Water was observed on the transfer area containment pad (SWMU 9). There is a fan that pulls air off H-1, drawing organic vapors and particulates from spent carbon in the hopper. Air pollution control equipment draws particulates and organic vapors; piping leads to the baghouse and then to a carbon adsorber. Silver pipes draw from H-1; white pipes draw from H-2.



Photograph No.: F-16
Photographer: Andrea Austin
SWMU No.: 4
SWMU Name: Air Pollution Control Equipment and Piping to the Baghouse for H-1 and H-2
Date: 07/12/2001
SWMU Description: Unloading hopper H-1 showing silver piping leading to air pollution control equipment (SWMU 6). Bags of reactivated carbon (nonhazardous) are staged adjacent to H-1; used for on-site carbon adsorber canisters.



Photograph No.: F-17
Photographer: Andrea Austin
Location: Paved Area Outside Process Area. Not a SWMU.
Date: 07/12/2001
Description: Staging area for empty filter canisters to be recycled offsite. No evidence of any spills. This area is not used to store waste, and is not within a containment pad. White filter canisters have 1000 lb. spent carbon capacity; blue filter canisters have 2000 lb. spent carbon capacity.



Photograph No.: F-18
Photographer: Andrea Austin
SWMU No.: 17
SWMU Name: Motive Water and Rainwater Collection Tank (T-12)
Date: 07/12/2001
SWMU Description: Tank T-12 receives excess recycle water, rain water, and washdown water. The water from this tank is recirculated to the slurry piping system. No evidence of release. Tank and pipe system is close-looped. Blue tank is carbon adsorber PV 50. This adsorber filters recycle water that is discharged to the POTW.



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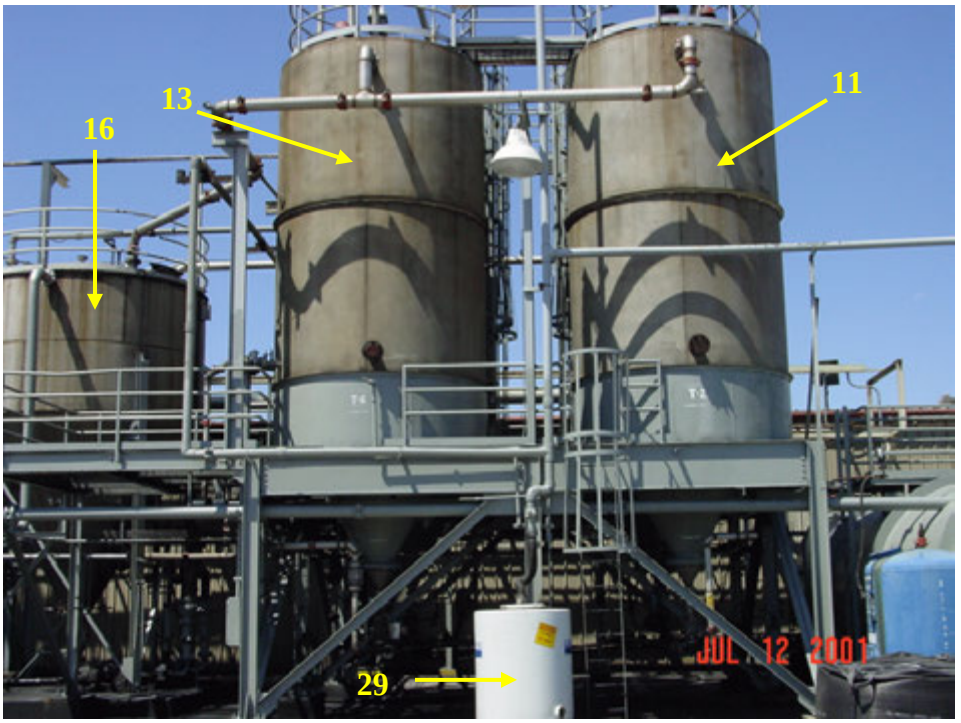
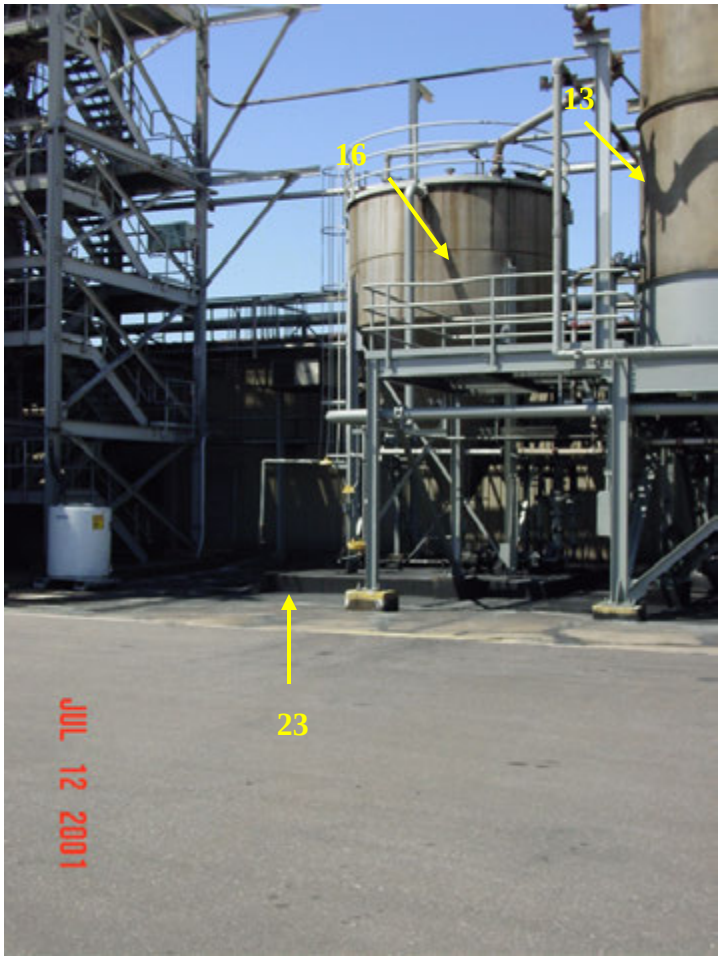
Parker, Arizona

Photograph No.: F-19
Photographer: Andrea Austin
SWMU Nos.: 10, 11, 12, 13, and 29
SWMU Name: Spent Carbon Slurry Storage Tanks: T-1, T-2, T-5, T-6, and Carbon Adsorber WS-1 (SWMU 29).
Date: 07/12/2001
SWMU Description: Four spent storage tanks; Tank T-1 (SWMU 10) is behind Tank T-2 (SWMU 11); Tank T-5 (SWMU 12) is behind Tank T-6 (SWMU 13). Carbon adsorber tank (WS-1) [the white carbon canister], used to control volatile emissions from tanks T-1, T-2, T-5, T-6, T-9 (SWMU 16), and T-12 (SWMU 17). WS-1 is emptied into the spent carbon unloading hopper (H-1) (SWMU 4) when the carbon inside reaches its adsorption capacity. Tank T-9 (SWMU 16) also appears in the photo.



Photograph No.: F-20
Photographer: Andrea Austin
SWMU No.: 16
SWMU Name: Recycled Motive Water Storage Tank (T-9)
Date: 07/12/2001
SWMU Description: Motive water for creating a carbon slurry is supplied from Tank T-9 and moves the spent carbon through the pipe conveyance system. Bermed containment area in the Process Area (SWMU 23) is interconnected with the bermed area for the Transfer Containment Area (SWMU 9). No evidence of release to the ground/concrete. Tank T-6 (SWMU 13) also appears in the photo.



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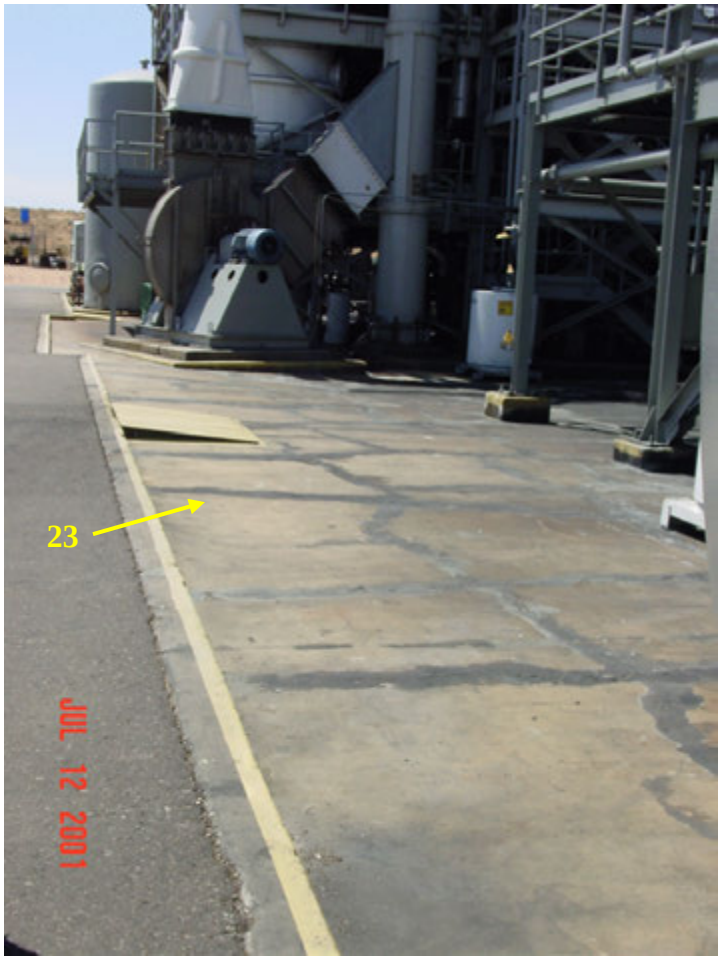
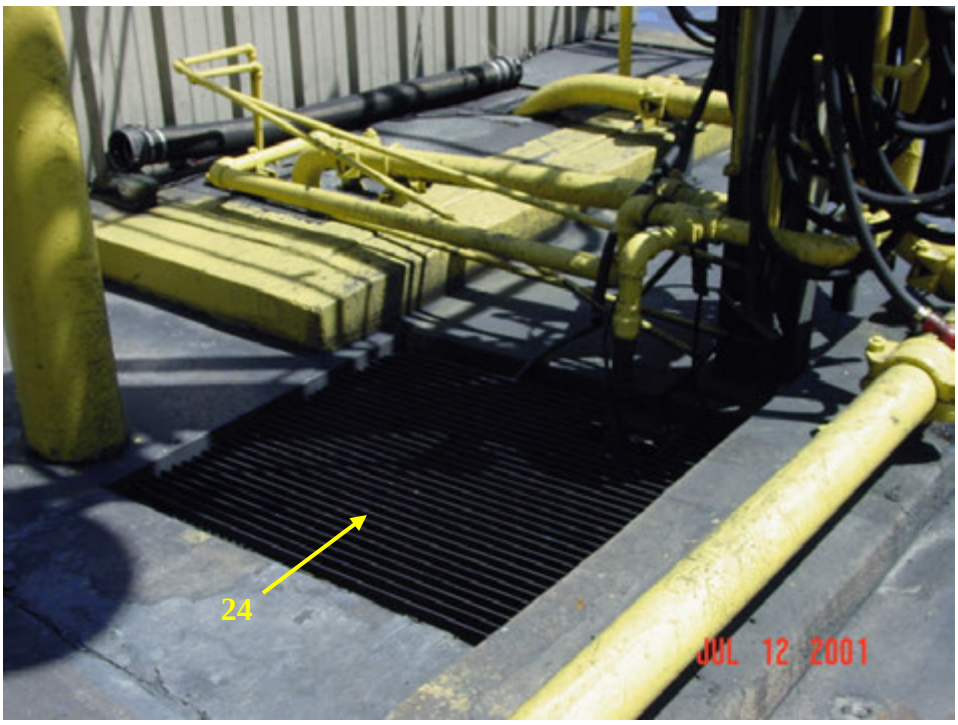
Parker, Arizona

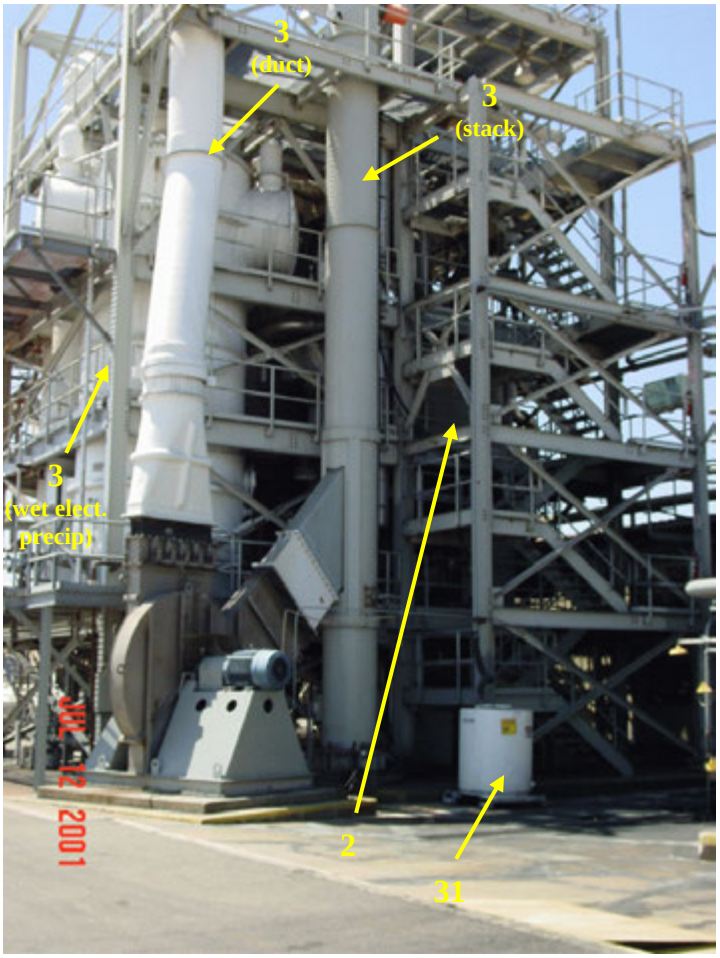
Photograph No.: F-21
Photographer: Andrea Austin
SWMU No.: 23
SWMU Name: Bermed Containment Area in Process Area
Date: 07/12/2001
SWMU Description: Concrete pad and bermed secondary containment area under platforms for the reactivation furnaces. Cracks have been sealed with a polyresin, Sikadur 35®. No evidence of a spill.



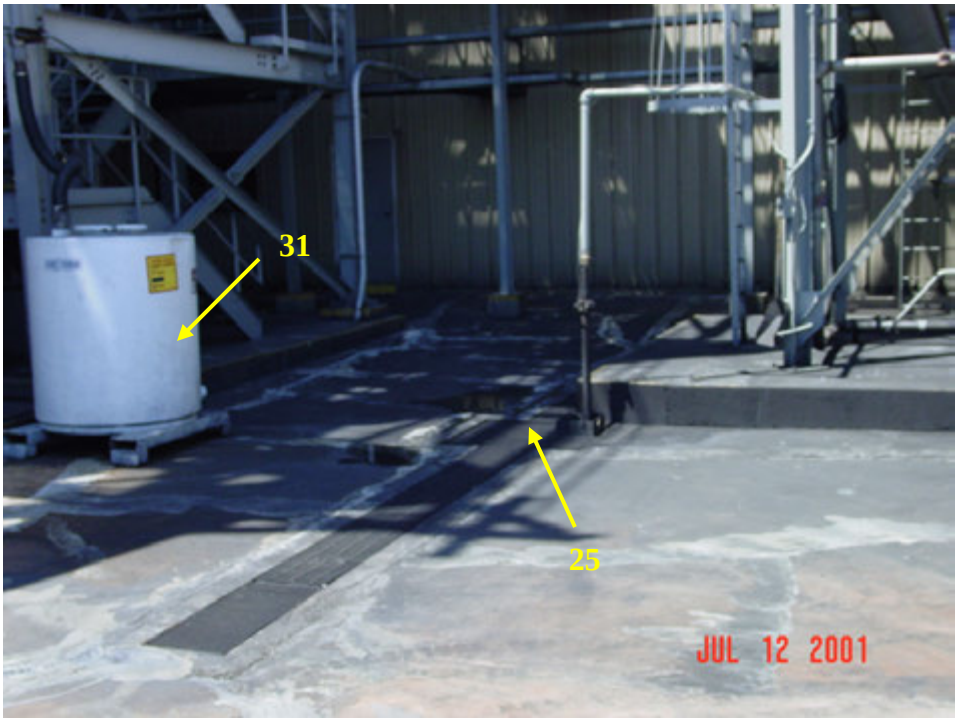
Photograph No.: F-22
Photographer: Andrea Austin
SWMU No.: 24
SWMU Name: Sump by Unloading Hopper No. 1 (H-1)
Date: 07/12/2001
SWMU Description: Sump collects wastewater such as washdown water from trucks unloading spent carbon into unloading hopper (H-1) (SWMU 4), and from (SWMU 9). Captured liquid is then transferred to Tank T-9 (SWMU 16) and T-12 (SWMU 17) via a closed piping system. No evidence of overflow release to the ground.



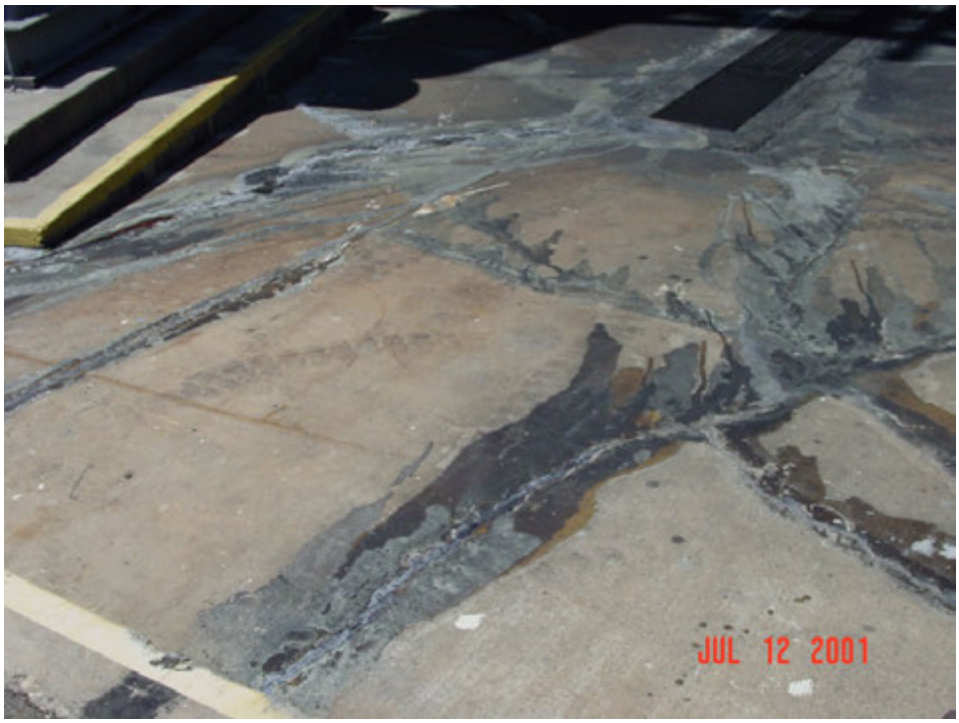
Photograph No.: F-23
Photographer: Andrea Austin
SWMU No.: 2, 3, and 31
SWMU Name: SWMU 2: Reactivation Furnace No. 2 (RF-2)
SWMU 3: Air Pollution Control Equipment
SWMU 31: Carbon Adsorber No. 3 (WS-3)
Date: 07/12/2001
SWMU Description: RF-2 (SWMU 2) is the gray vessel at the center of the photograph, inside the platform. On the left-hand side is the wet electrostatic precipitator. The wide white duct comes from the top of the wet electrostatic precipitator and goes to the bottom of the stack for RF-2. The small carbon canister (SWMU 31) at the foot of the platform is the carbon adsorber used to control volatile emissions from Tank T-18 (SWMU 15), the feed tank to the reactivation furnace, RF-2. No evidence of release was observed.



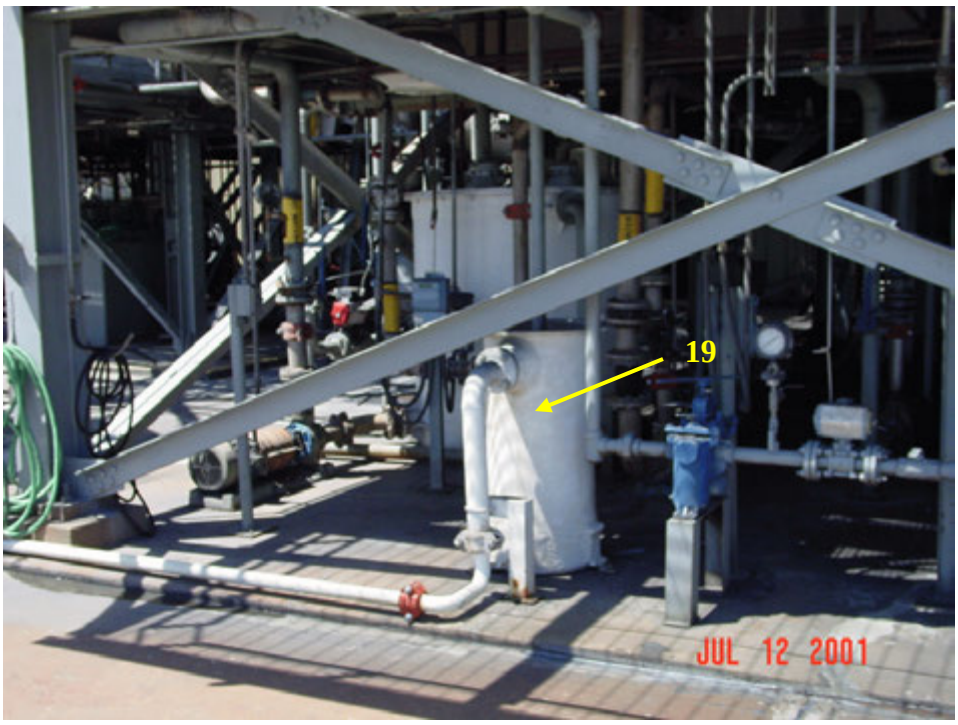
Photograph No.: F-24
Photographer: Andrea Austin
SWMU No.: 25 and 31
SWMU Name: Sump by Tank T-9 and Carbon Adsorber No. 3 (WS-3)
Date: 07/12/2001
SWMU Description: The trench and sump drain the bermed containment area (SWMU 23) of water or spills. Small pools of water were observed adjacent to trench. Rainwater also flows into trench and sump to be conveyed to Tank T-12 (SWMU 16) or T-9 (SWMU17).



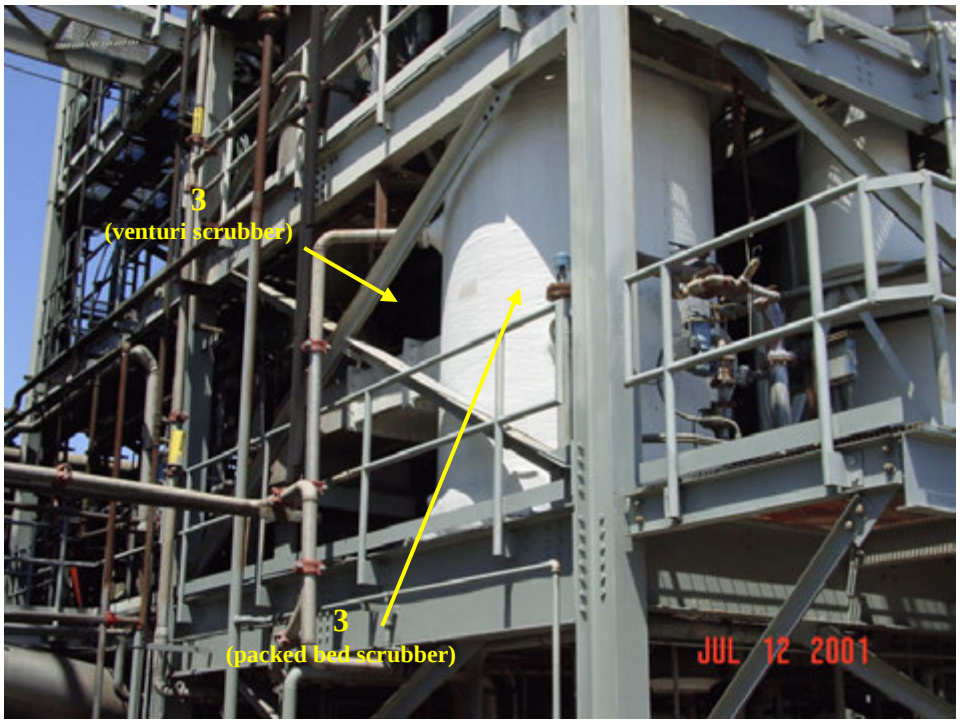
Photograph No.: F-25
Photographer: Andrea Austin
SWMU No.: 23
SWMU Name: Repaired Containment Area
Date: 07/12/2001
SWMU Description: Cracks in the Process Area have been filled in and patched with a polyresin, Sikadur 35®.



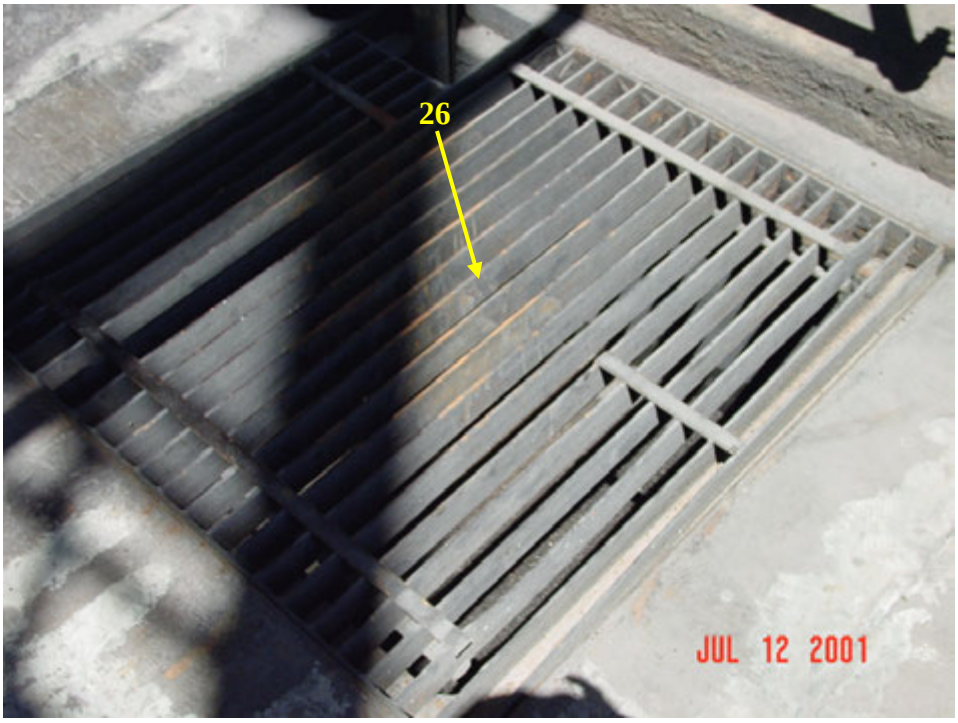
Photograph No.: F-26
Photographer: Andrea Austin
SWMU No.: 19
SWMU Name: RF-2 Scrubber Water Equalization Tank T-19
Date: 07/12/2001
SWMU Description: Treatment of scrubber water from air pollution equipment. Cracks near Tank T-19 have been sealed with a polyresin, Sikadur 35®. No evidence of a release.



Photograph No.: F-27
Photographer: Andrea Austin
SWMU No.: 3
SWMU Name: Air Pollution Control Equipment (RF-2)
Date: 07/12/2001
SWMU Description: Left vessel (brown/gray) is the venturi scrubber. White vessel on the right is the packed bed scrubber. The venturi scrubber is designed to remove particulates, and the packed bed scrubber is designed to remove acid gases from the gases leaving the afterburner. Equipment in excellent condition. No evidence of leaks in the air pollution control equipment.



Photograph No.: F-28
Photographer: Andrea Austin
SWMU No.: 26
SWMU Name: Sump under the Venturi Scrubber by cooling screw
Date: 07/12/2001
SWMU Description: Collects spilled process water and rain water from the process containment area. Water is recycled via piping back to Tank T-9 (SWMU 16) or T-12 (SWMU 17). No evidence of overflow from the sump.



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Parker, Arizona

Photograph No.: F-29
Photographer: Andrea Austin
SWMU No.: 18
SWMU Name: Wastewater Storage Tank (T-11)
Date: 07/12/2001
SWMU Description: Wastewater going to the Publicly Owned Treatment Works (POTW) goes through Tank T-11. All cracks in secondary containment have been repaired with a polyresin, Sikadur 35®.





Photograph No.: F-30
Photographer: Andrea Austin
SWMU No.: 1
SWMU Name: Reactivation Furnace No. 1 (RF-1)
Date: 07/12/2001
SWMU Description: The idle RF-1 within the platform structure on secondary containment in the Process Area. No evidence of release of hazardous constituents to the containment area under the platform.

Photograph No.: F-31
Photographer: Andrea Austin
SWMU No.: 27
SWMU Name: Wastewater Conveyance Piping to Wastewater Treatment Tank
Date: 07/12/2001
SWMU Description: Heat Exchanger, cooling tower, and piping for wastewater discharged to the local POTW. The water originates from T-11 (SWMU 18).



Photograph No.: F-32
Photographer: Andrea Austin
SWMU No.: 28
SWMU Name: Wastewater Lift Station
Date: 07/12/2001
SWMU Description: At entrance road to the facility on the eastside. Wastewater treated onsite was conveyed by piping system to this lift station where the wastewater was lifted/ pumped to the POTW. No evidence of release, such as stained soil, was observed. Lift station not used since early 1996.



Photograph No.: F-33
Photographer: Andrea Austin
Location: Entrance to Facility. Not a SWMU.
Date: 07/12/2001
Description: At road entering plant (off Mutahar Street), monitoring well for POTW testing for discharge limits, located adjacent to the Lift Station.



Photograph No.: F-34
Photographer: Andrea Austin
Location: Eastside of the Facility.
Date: 07/12/2001
SWMU Description: Facility at entrance gate, off of Mutahar Street (road entering plant).

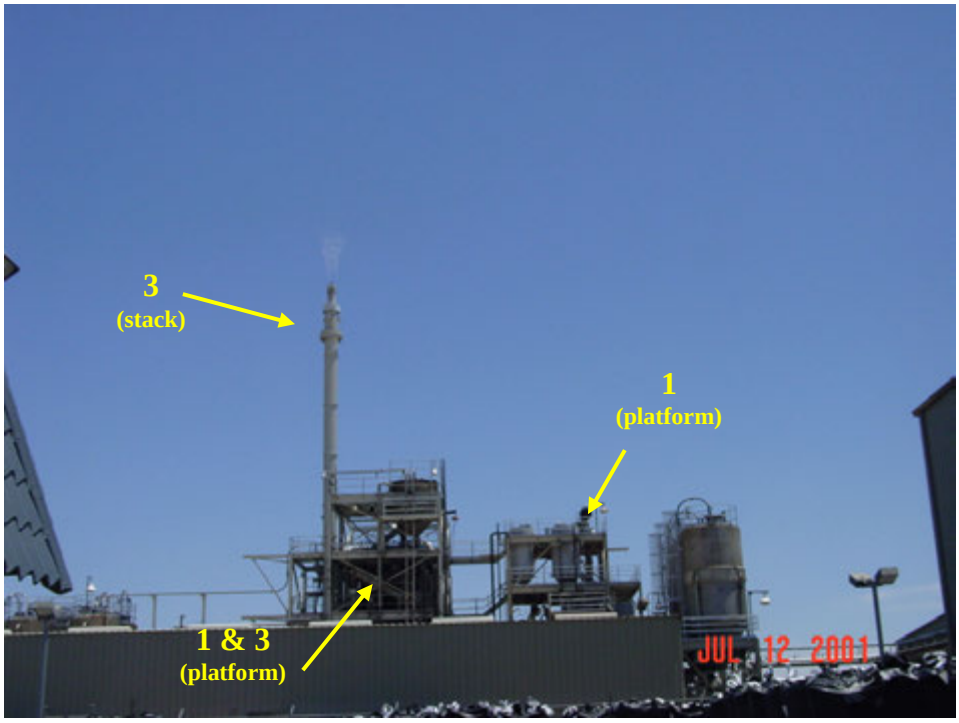


Westates Carbon-Arizona, Inc., RFA
Parker, Arizona

Photograph No.: F-35
Photographer: Andrea Austin
Direction: Northeast
Name: Main Office
Date: 07/12/2001
Description: Entrance to the Westates Carbon Reactivation Facility. Black bags at right (background) contain reactivated carbon.



Photograph No.: F-36
Photographer: Andrea Austin
SWMU No.: 1, 2, 3
SWMU Name: Air Pollution Control Equipment
Date: 07/12/2001
SWMU Description: Facing Northwest, platform structures for RF-1 and RF-2 and air pollution control equipment. (SWMUs 1, 2, and 3 not clearly visible.) Exhaust from the stack is barely visible. Tanks to the right of RF-1 platform hold reactivated carbon. Black Bags of reactivated carbon visible in foreground.



Photograph No.:	F-37
Photographer:	Andrea Austin
SWMU No.:	1, 2, and 3 (not visible)
SWMU Name:	Platform structure for RF-2 and RF-1 and air pollution control equipment (SWMU 3) Stack on the Reactivation Furnace No. 2 (RF-2).
Date:	07/12/2001
SWMU Description:	Exhaust emitted from RF-2 air pollution control equipment via the stack is barely visible.



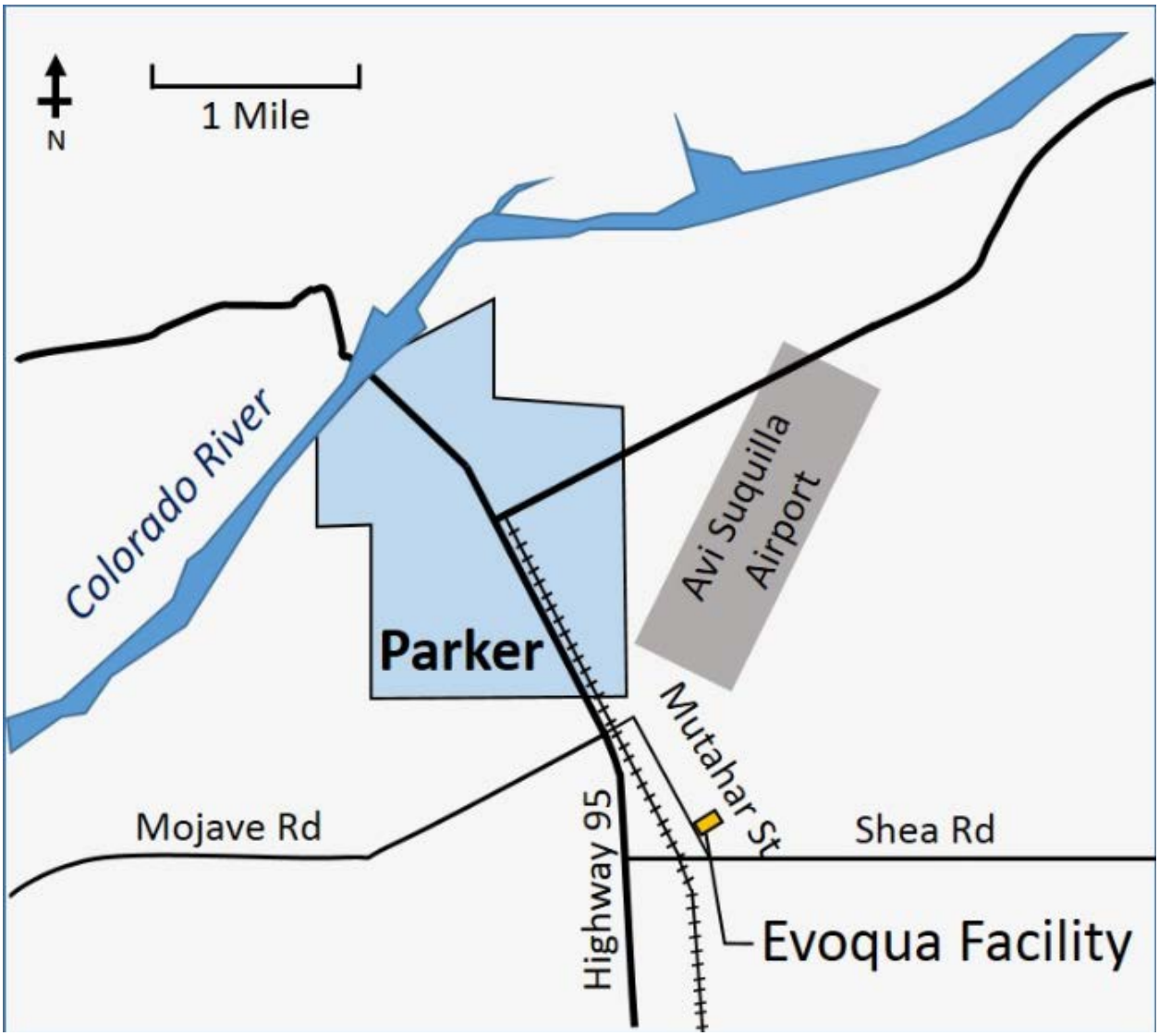
END OF PHOTOGRAPHIC DOCUMENTATION

Appendix C

Site Location Map

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT



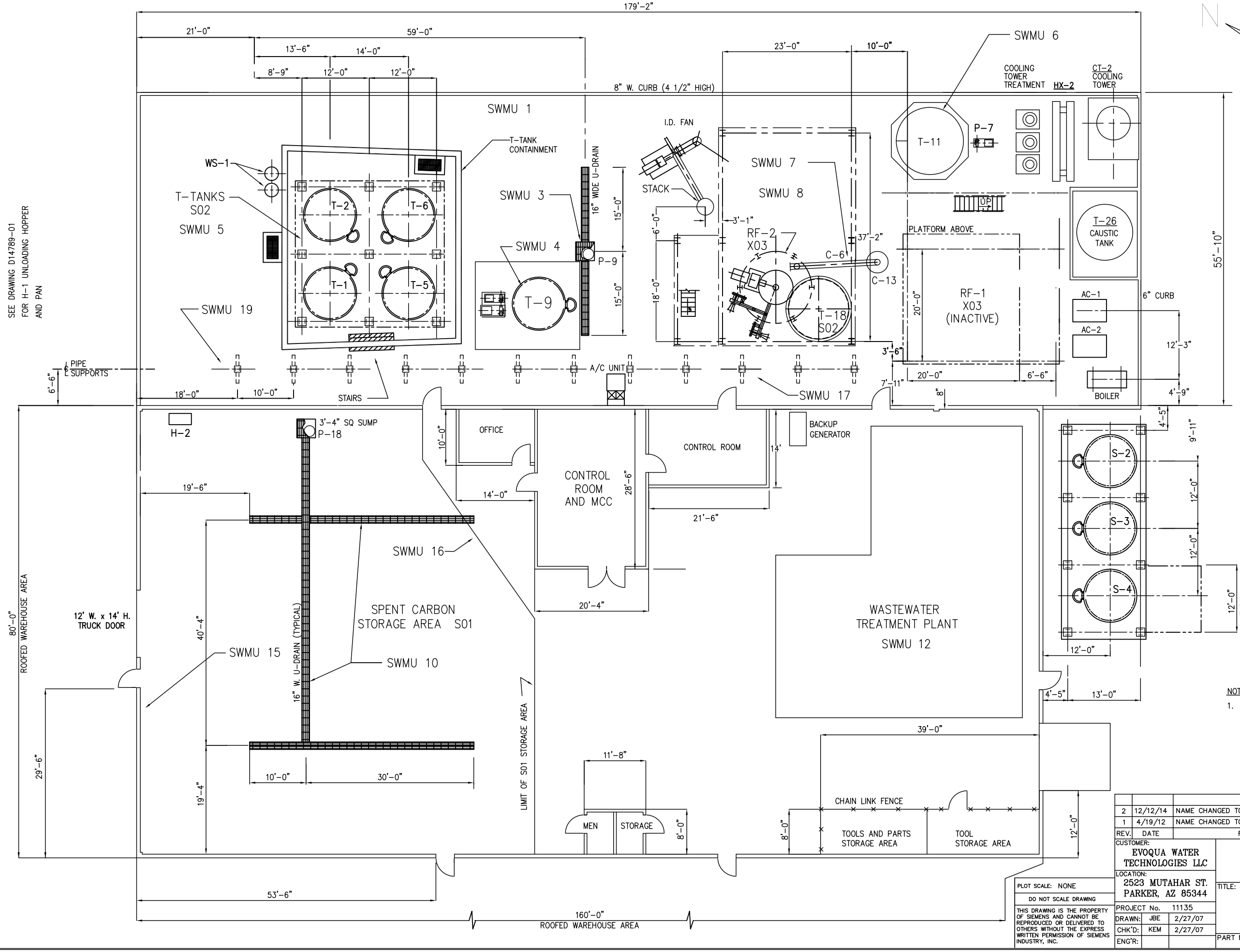
Evoqua Facility Map

Appendix D1

HWMUs, SWMUs, and AOC Location Map
(New Unit Names)
(Figures J-1 to J-7 of Application Section J)

US EPA ARCHIVE DOCUMENT

DWG: D14789-10



Solid Waste Management Units

1. Bermed containment in process area.
2. Sump by H-1.
3. Sump by storage tank, T-9.
4. Recycle water tank, T-9.
5. Rainwater/Recycle water tank, T-12.
6. Wastewater tank, T-11 system.
7. Sump by cooling screw.
8. RF-2 Scrubber water equalization tank, T-19.
9. Hazardous waste debris bin.
10. Spent carbon storage warehouse grated trenches and sump.
11. Hopper containment pad
12. WWTP.
13. Wastewater lift station and piping ayatem (old).
14. Spent carbon unloading area containment pad.
15. Satellite Accumulation Area
16. Satellite Accumulation Area
17. Satellite Accumulation Area
18. Satellite Accumulation Area
19. Satellite Accumulation Area

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
2	12/12/14	NAME CHANGED TO EVOQUA WATER TECH., UPDATE SWMUs	JBE		
1	4/19/12	NAME CHANGED TO SIEMENS INDUSTRY, INC., UPDATE SWMUs	JBE	KEM	

CUSTOMER: EVOQUA WATER TECHNOLOGIES LLC

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PLOT SCALE: NONE

DO NOT SCALE DRAWING

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PROJECT No.	11135	
DRAWN:	JBE	2/27/07
CHK'D:	KEM	2/27/07
ENG'R:		

EVOQUA WATER TECHNOLOGIES LLC
Parker, AZ

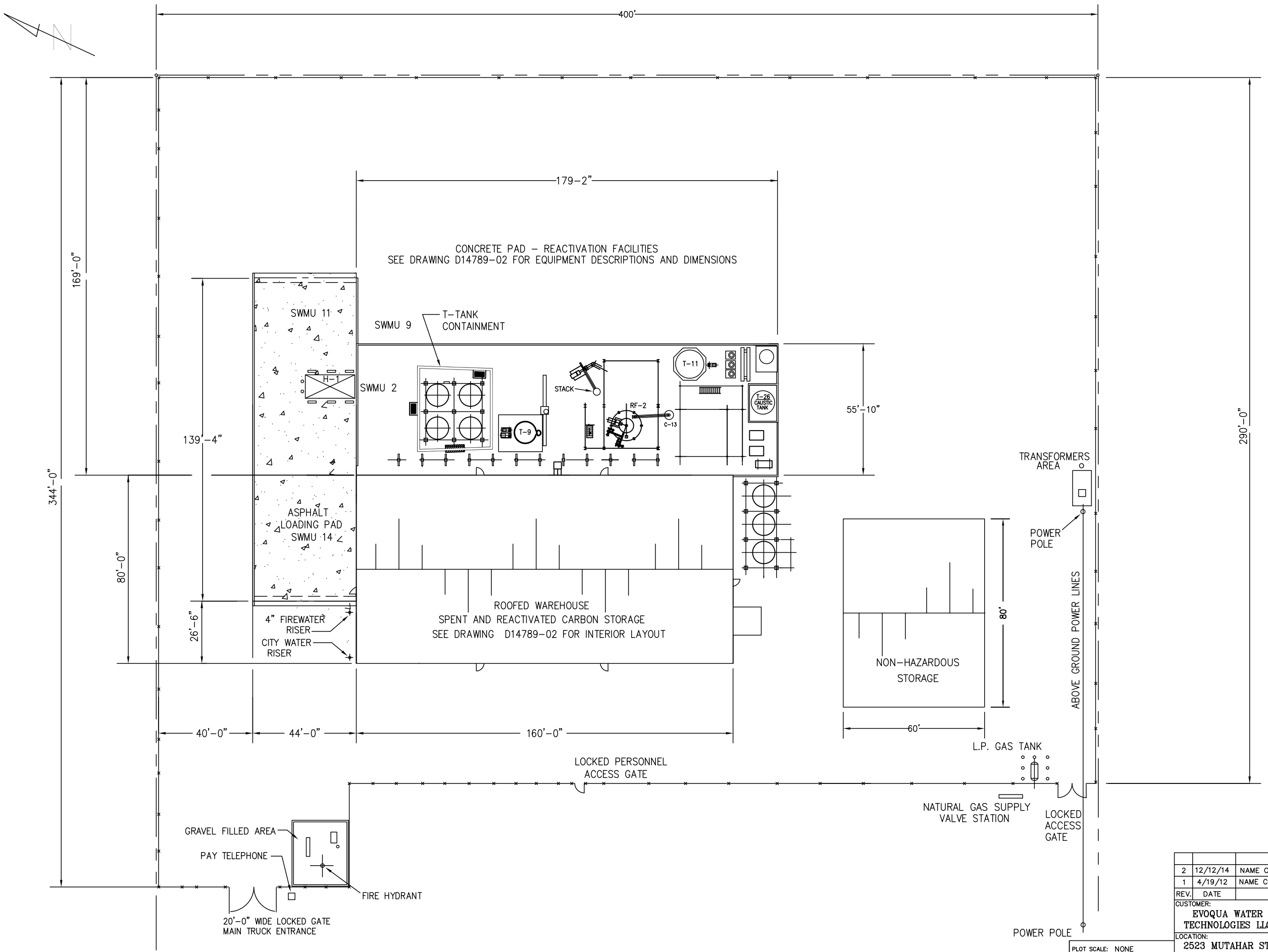
TITLE:

REACTIVATION FACILITY
SWMU LOCATION – FIGURE J-1

PART No. | DWG No. D14789-10 | REV. 2

PRINT DATE: 12/15/14

DWG: D14789-11



SEE SITE PLAN
DRAWING D14789-08

Solid Waste Management Units

1. Bermed containment in process area.
2. Sump by H-1.
3. Sump by storage tank, T-9.
4. Recycle water tank, T-9.
5. Rainwater/Recycle water tank, T-12.
6. Wastewater tank, T-11 system.
7. Sump by cooling screw.
8. RF-2 Scrubber water equalization tank, T-19.
9. Hazardous waste debris bin.
10. Spent carbon storage warehouse grated trenches and sump.
11. Hopper containment pad
12. WWTP.
13. Wastewater lift station and piping ayatem (old).
14. Spent carbon unloading area containment pad.
15. Satellite Accumulation Area
16. Satellite Accumulation Area
17. Satellite Accumulation Area
18. Satellite Accumulation Area
19. Satellite Accumulation Area

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REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
2	12/12/14	NAME CHANGED TO EVOQUA WATER TECH., UPDATE SWMUs	JBE		
1	4/19/12	NAME CHANGED TO SIEMENS INDUSTRY, INC., UPDATE SWMUs	JBE	KEM	

CUSTOMER: EVOQUA WATER TECHNOLOGIES LLC

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PLOT SCALE: NONE

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PROJECT No.		
DRAWN:	JBE	2/27/07
CHK'D:	KEM	2/27/07
ENG'R:		

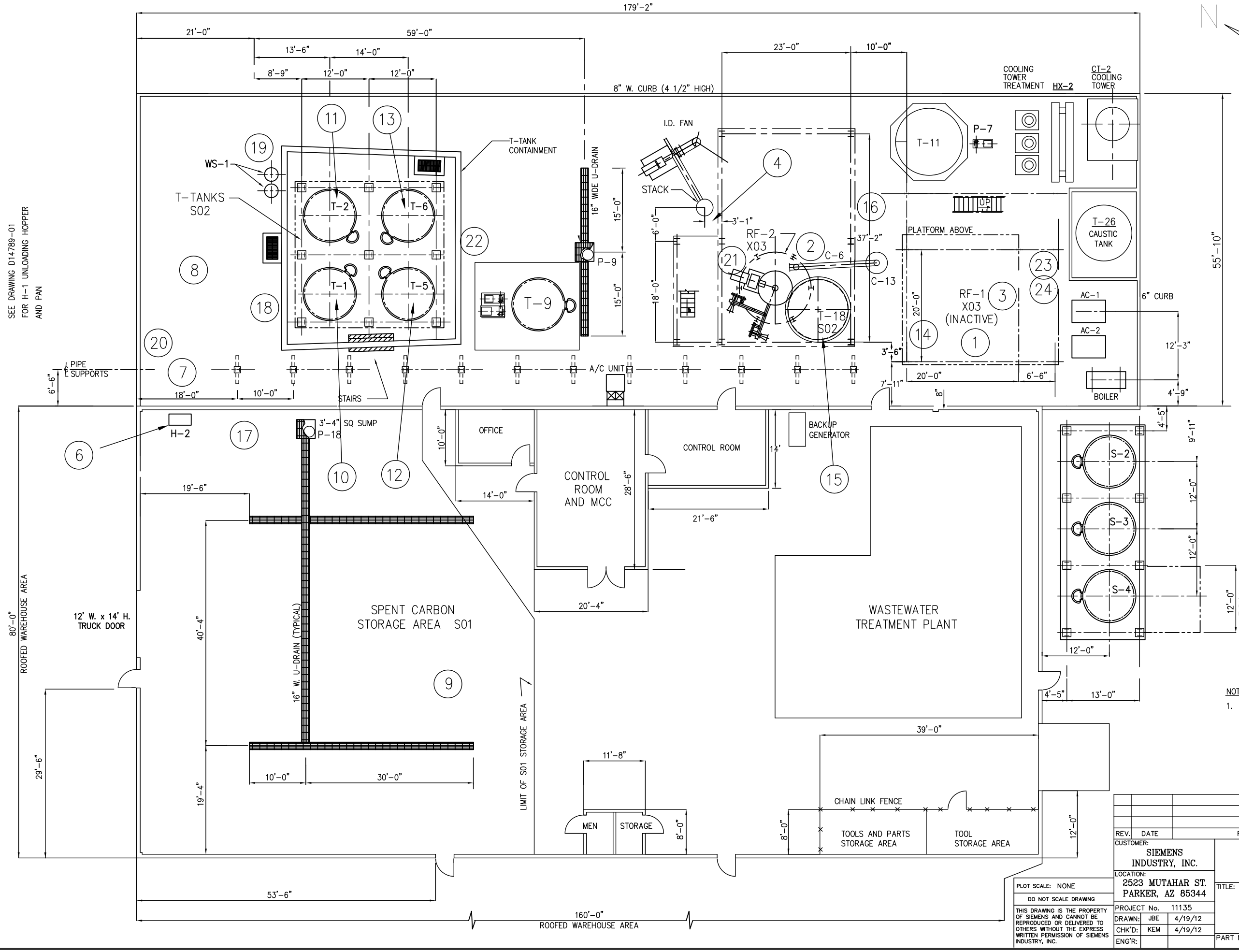
EVOQUA WATER TECHNOLOGIES LLC
Parker, AZ

TITLE:
REACTIVATION FACILITY
SWMU LOCATION - FIGURE J-2

PART No. | DWG No. D14789-11 | REV. 2

PRINT DATE: 12/15/14

DWG: D14789-12



Hazardous Waste Management Units

1. Spent carbon reactivation furnace – RF-1 and Associated Equipment (Dewater screw).
2. Spent carbon reactivation furnace RF-2 and Associated Equipment (Dewater Screw, Weigh Belt).
3. Afterburner, Venturi scrubber, Packed bed scrubber, Emissions stack.
4. Afterburner, Venturi scrubber, Packed bed scrubber,Wet electrostatic precipitator, Induced draft fan, Emissions stack.
5. Spent carbon unloading hopper H-1.
6. Spent carbon unloading hopper H-2.
7. Hopper air pollution control equipment piping and baghouse.
8. Spent carbon slurry and recycle water transfer system.
9. Spent carbon storage warehouse.
10. Spent carbon slurry storage tank, T-1.
11. Spent carbon slurry storage tank, T-2.
12. Spent carbon slurry storage tank, T-5.
13. Spent carbon slurry storage tank, T-6.
14. Furnace Feed System Tank T-8, and Ancillary Equipment
15. T-18 and Ancillary Equipment.
16. Wastewater conveyance piping to wastewater treatment tank.
17. Spent carbon storage warehouse barrel washer.
18. Carbon adsorber – PV1000.
19. Carbon adsorber WS-1.
20. Carbon adsorber WS-2.
21. Carbon adsorber WS-3.
22. Slurry transfer inclined plate settler tank.
23. Scrubber recycle tank T-17
24. Filter press.
25. New Facility Discharge Piping System.

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R

PLOT SCALE: NONE

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CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.	11135	
DRAWN:	JBE	4/19/12
CHK'D:	KEM	4/19/12
ENG'R:		

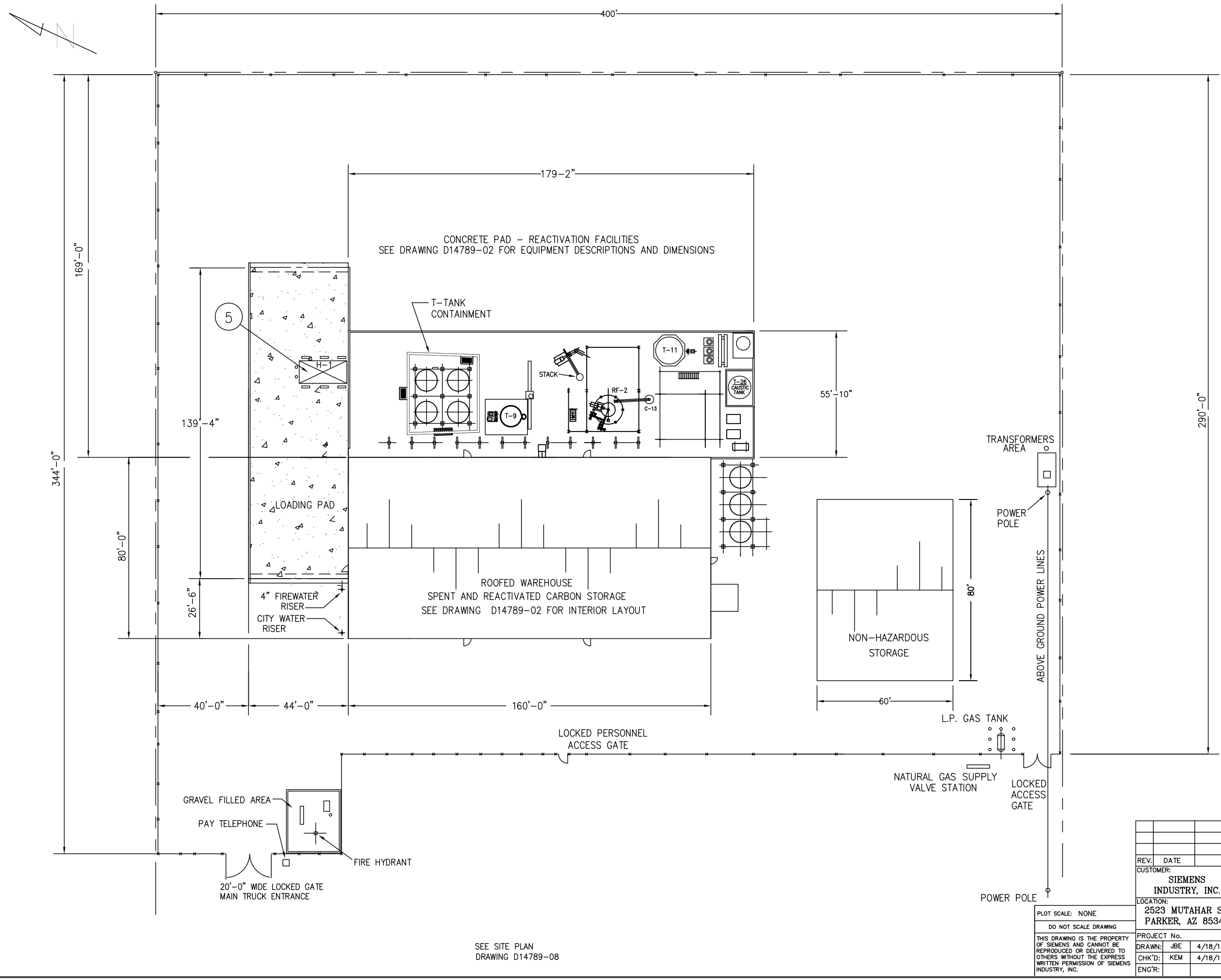
SIEMENS INDUSTRY, INC.
Parker, AZ

TITLE:
REACTIVATION FACILITY
HWMU LOCATION – FIGURE J-3

PART No. | DWG No. D14789-12 | REV. 0

PRINT DATE: 4/19/12

DWG: D14789-13



SEE SITE PLAN
DRAWING D14789-08

Hazardous Waste Management Units

1. Spent carbon reactivation furnace - RF-1 and Associated Equipment (Dewater screw).
2. Spent carbon reactivation furnace RF-2 and Associated Equipment (Dewater Screw, Weigh Belt).
3. Afterburner, Venturi scrubber, Packed bed scrubber, Emissions stack.
4. Afterburner, Venturi scrubber, Packed bed scrubber,Wet electrostatic precipitator, Induced draft fan, Emissions stack.
5. Spent carbon unloading hopper H-1.
6. Spent carbon unloading hopper H-2.
7. Hopper air pollution control equipment piping and baghouse.
8. Spent carbon slurry and recycle water transfer system.
9. Spent carbon storage warehouse.
10. Spent carbon slurry storage tank, T-1.
11. Spent carbon slurry storage tank, T-2.
12. Spent carbon slurry storage tank, T-5.
13. Spent carbon slurry storage tank, T-6.
14. Furnace Feed System Tank T-8, and Ancillary Equipment
15. T-18 and Ancillary Equipment.
16. Wastewater conveyance piping to wastewater treatment tank.
17. Spent carbon storage warehouse barrel washer.
18. Carbon adsorber - PV1000.
19. Carbon adsorber WS-1.
20. Carbon adsorber WS-2.
21. Carbon adsorber WS-3.
22. Slurry transfer inclined plate settler tank.
23. Scrubber recycle tank T-17
24. Filter press.
25. New Facility Discharge Piping System.

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R

CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.

DRAWN:	JBE	4/18/12
CHK'D:	KEM	4/18/12
ENG'R:		

PLOT SCALE: NONE

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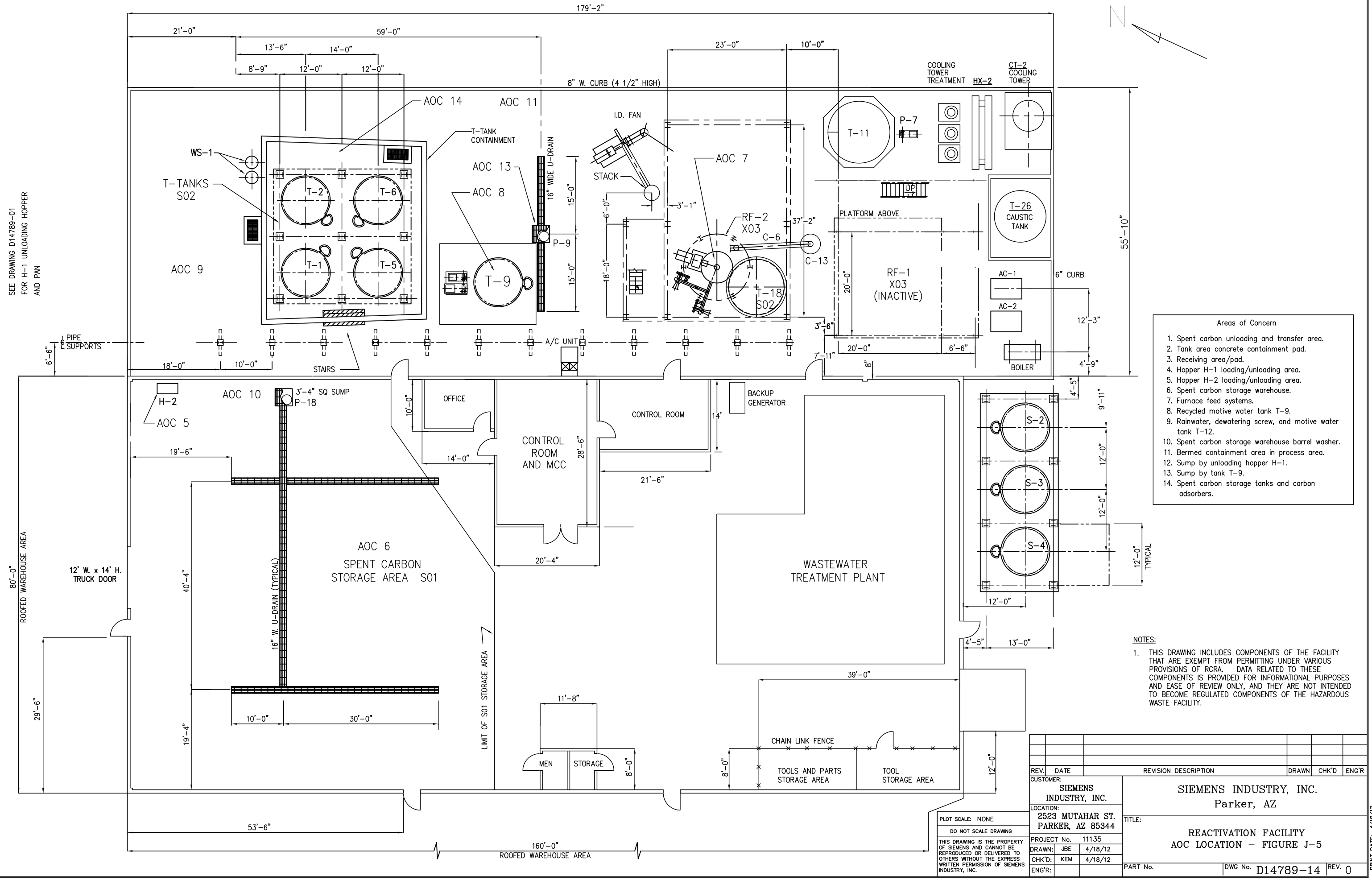
SIEMENS INDUSTRY, INC..
Parker, AZ

TITLE:
REACTIVATION FACILITY
HWMU LOCATION - FIGURE J-4

PART No. | DWG No. D14789-13 | REV. 0

PRINT DATE: 4/18/12

DWG: D14789-14



Areas of Concern

1. Spent carbon unloading and transfer area.
2. Tank area concrete containment pad.
3. Receiving area/pad.
4. Hopper H-1 loading/unloading area.
5. Hopper H-2 loading/unloading area.
6. Spent carbon storage warehouse.
7. Furnace feed systems.
8. Recycled motive water tank T-9.
9. Rainwater, dewatering screw, and motive water tank T-12.
10. Spent carbon storage warehouse barrel washer.
11. Bermed containment area in process area.
12. Sump by unloading hopper H-1.
13. Sump by tank T-9.
14. Spent carbon storage tanks and carbon adsorbers.

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R

PLOT SCALE: NONE

DO NOT SCALE DRAWING

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CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.	11135	
DRAWN:	JBE	4/18/12
CHK'D:	KEM	4/18/12
ENG'R:		

SIEMENS INDUSTRY, INC.
Parker, AZ

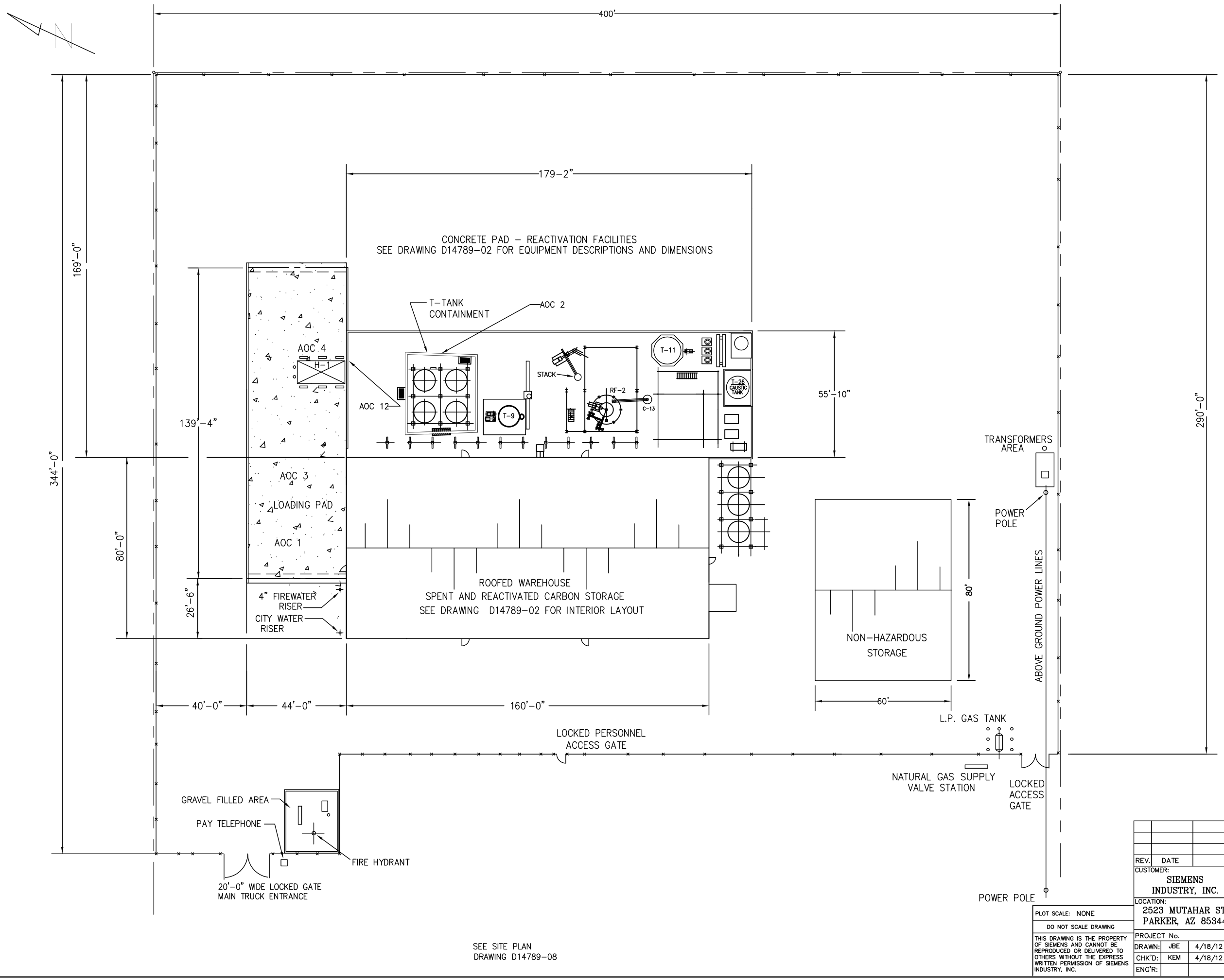
TITLE:

REACTIVATION FACILITY
AOC LOCATION – FIGURE J-5

PART No. | DWG No. D14789-14 | REV. 0

PRINT DATE: 4/18/12

DWG: D14789-15



Areas of Concern

1. Spent carbon unloading and transfer area.
2. Tank area concrete containment pad.
3. Receiving area/pad.
4. Hopper H-1 loading/unloading area.
5. Hopper H-2 loading/unloading area.
6. Spent carbon storage warehouse.
7. Furnace feed systems.
8. Recycled motive water tank T-9.
9. Rainwater, dewatering screw, and motive water tank T-12.
10. Spent carbon storage warehouse barrel washer.
11. Bermed containment area in process area.
12. Sump by unloading hopper H-1.
13. Sump by tank T-9.
14. Spent carbon storage tanks and carbon adsorbers.

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

SEE SITE PLAN
DRAWING D14789-08

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R

CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.

DRAWN:	JBE	4/18/12
CHK'D:	KEM	4/18/12
ENG'R:		

PLOT SCALE: NONE

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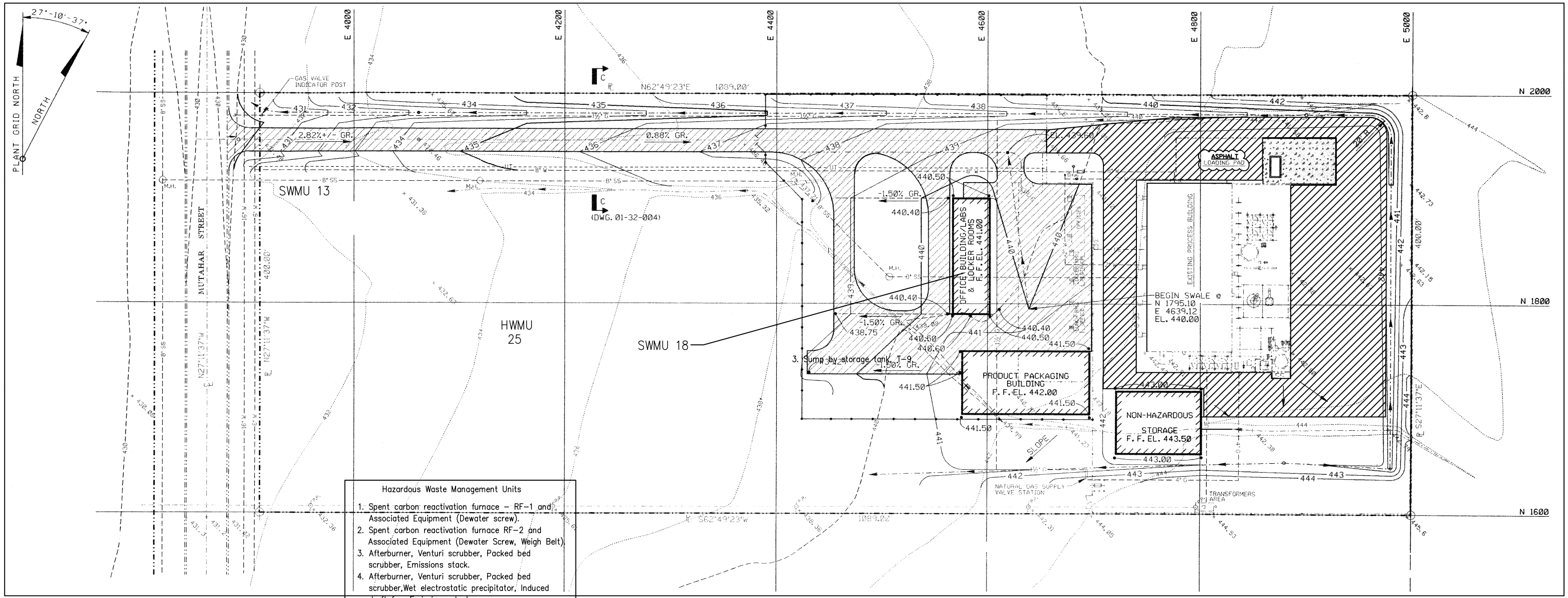
SIEMENS INDUSTRY, INC..
Parker, AZ

TITLE:
REACTIVATION FACILITY
AOC LOCATION - FIGURE J-6

PART No. | DWG No. D14789-15 | REV. 0

PRINT DATE: 4/18/12

DWG: D14789-16



Hazardous Waste Management Units

1. Spent carbon reactivation furnace – RF-1 and Associated Equipment (Dewater screw).
2. Spent carbon reactivation furnace RF-2 and Associated Equipment (Dewater Screw, Weigh Belt).
3. Afterburner, Venturi scrubber, Packed bed scrubber, Emissions stack.
4. Afterburner, Venturi scrubber, Packed bed scrubber,Wet electrostatic precipitator, Induced draft fan, Emissions stack.
5. Spent carbon unloading hopper H-1.
6. Spent carbon unloading hopper H-2.
7. Hopper air pollution control equipment piping and baghouse.
8. Spent carbon slurry and recycle water transfer system.
9. Spent carbon storage warehouse.
10. Spent carbon slurry storage tank, T-1.
11. Spent carbon slurry storage tank, T-2.
12. Spent carbon slurry storage tank, T-5.
13. Spent carbon slurry storage tank, T-6.
14. Furnace Feed System Tank T-8, and Ancillary Equipment
15. T-18 and Ancillary Equipment.
16. Wastewater conveyance piping to wastewater treatment tank.
17. Spent carbon storage warehouse barrel washer.
18. Carbon adsorber – PV1000.
19. Carbon adsorber WS-1.
20. Carbon adsorber WS-2.
21. Carbon adsorber WS-3.
22. Slurry transfer inclined plate settler tank.
23. Scrubber recycle tank T-17
24. Filter press.
25. New Facility Discharge Piping System.

Solid Waste Management Units

1. Bermed containment in process area.
2. Sump by H-1.
3. Sump by storage tank, T-9.
4. Recycle water tank, T-9.
5. Rainwater/Recycle water tank, T-12.
6. Wastewater tank, T-11 system.
7. Sump by cooling screw.
8. RF-2 Scrubber water equalization tank, T-19.
9. Hazardous waste debris bin.
10. Spent carbon storage warehouse grated trenches and sump.
11. Hopper containment pad
12. WWTP.
13. Wastewater lift station and piping system (old).
14. Spent carbon unloading area containment pad.
15. Satellite Accumulation Area
16. Satellite Accumulation Area
17. Satellite Accumulation Area
18. Satellite Accumulation Area
19. Satellite Accumulation Area

Areas of Concern

1. Spent carbon unloading and transfer area.
2. Tank area concrete containment pad.
3. Receiving area/pad.
4. Hopper H-1 loading/unloading area.
5. Hopper H-2 loading/unloading area.
6. Spent carbon storage warehouse.
7. Furnace feed systems.
8. Recycled motive water tank T-9.
9. Rainwater, dewatering screw, and motive water tank T-12.
10. Spent carbon storage warehouse barrel washer.
11. Bermed containment area in process area.
12. Sump by unloading hopper H-1.
13. Sump by tank T-9.
14. Spent carbon storage tanks and carbon adsorbers.

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.
2. THIS DRAWING IS BASED ON PARKER FACILITY DRAWING 01-32-002P

100'
SCALE

NO	DWN	CK'D	APP	REVISIONS	DATE
1	JBE			CHANGE TO EVOQUA, UPDATE SWMUs	12/12/14

CBE CHAVOND-BARRY ENGINEERING CORP.
400 Route 518 • P.O. Box 205 • Blawenburg, New Jersey 08504

EVOQUA WATER TECHNOLOGIES LLC
PARKER, AZ

REACTIVATION FACILITY
SWMU, HWMU, AND AOC LOCATION
FIGURE J-7

DRAWN	DATE	CHECKED	DATE	APPROVED	DATE
JBE	4/18/12	KEM	4/18/12		

SCALE	DWG. NO.	REV.
AS SHOWN	D14789-16	1

PRINT DATE: 12/15/14

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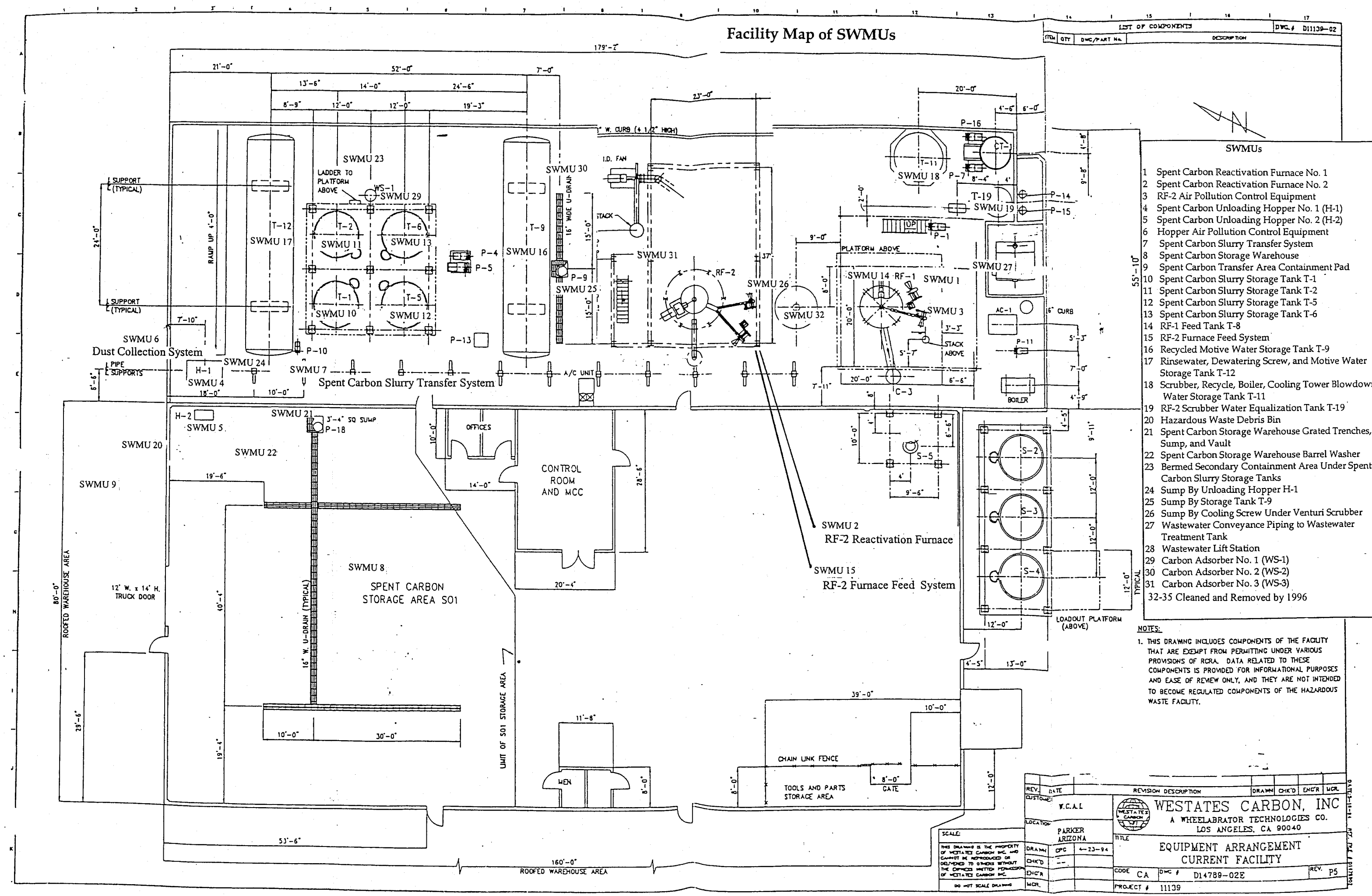
Appendix D2

SWMUs Location Map (Old Unit Names)

US EPA ARCHIVE DOCUMENT

Facility Map of SWMUs



SWMUs

1. Spent Carbon Reactivation Furnace No. 1
2. Spent Carbon Reactivation Furnace No. 2
3. RF-2 Air Pollution Control Equipment
4. Spent Carbon Unloading Hopper No. 1 (H-1)
5. Spent Carbon Unloading Hopper No. 2 (H-2)
6. Hopper Air Pollution Control Equipment
7. Spent Carbon Slurry Transfer System
8. Spent Carbon Storage Warehouse
9. Spent Carbon Transfer Area Containment Pad
10. Spent Carbon Slurry Storage Tank T-1
11. Spent Carbon Slurry Storage Tank T-2
12. Spent Carbon Slurry Storage Tank T-5
13. Spent Carbon Slurry Storage Tank T-6
14. RF-1 Feed Tank T-8
15. RF-2 Furnace Feed System
16. Recycled Motive Water Storage Tank T-9
17. Rinsewater, Dewatering Screw, and Motive Water Storage Tank T-12
18. Scrubber, Recycle, Boiler, Cooling Tower Blowdown Water Storage Tank T-11
19. RF-2 Scrubber Water Equalization Tank T-19
20. Hazardous Waste Debris Bin
21. Spent Carbon Storage Warehouse Grated Trenches, Sump, and Vault
22. Spent Carbon Storage Warehouse Barrel Washer
23. Bermed Secondary Containment Area Under Spent Carbon Slurry Storage Tanks
24. Sump By Unloading Hopper H-1
25. Sump By Storage Tank T-9
26. Sump By Cooling Screw Under Venturi Scrubber
27. Wastewater Conveyance Piping to Wastewater Treatment Tank
28. Wastewater Lift Station
29. Carbon Adsorber No. 1 (WS-1)
30. Carbon Adsorber No. 2 (WS-2)
31. Carbon Adsorber No. 3 (WS-3)

32-35 Cleaned and Removed by 1996

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

LIST OF COMPONENTS — DWG # D11139-02

ITEM	QTY	DWG/PART NO.	DESCRIPTION

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R	MGR.

CUSTOMER: W.C.A.I.

LOCATION: PARKER ARIZONA

SCALE:

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DO NOT SCALE DRAWING

DRAWN	DPC	4-23-94
CHK'D	---	
ENG'R		
MGR.		

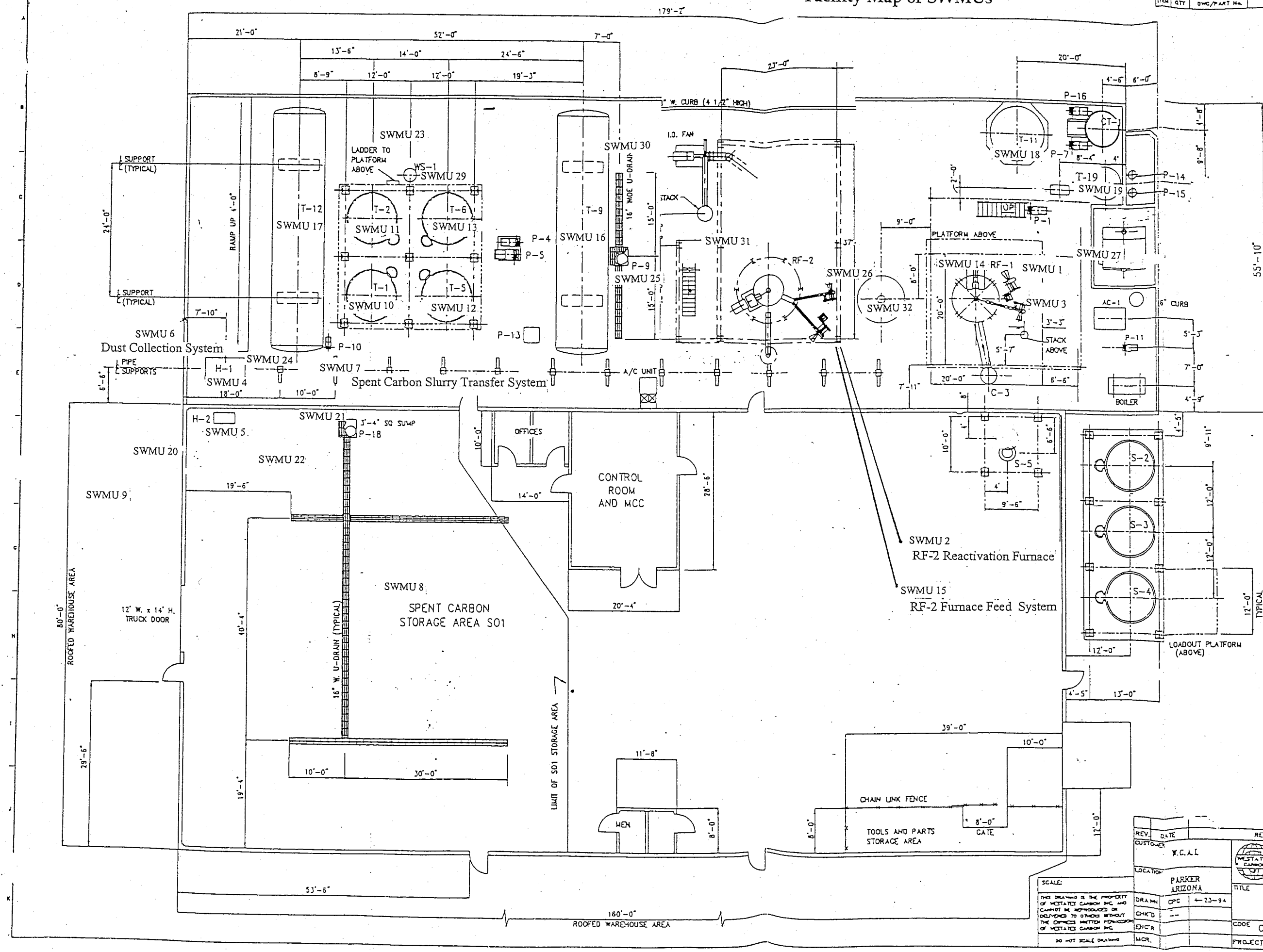
WESTATES CARBON, INC
A WHEELABRATOR TECHNOLOGIES CO.
LOS ANGELES, CA 90040

TITLE: EQUIPMENT ARRANGEMENT CURRENT FACILITY

CODE CA | DWG # D14789-02E | REV. P5

PROJECT # 11139

Facility Map of SWMUs



	SWMUs
1	Spent Carbon Reactivation Furnace RF-1
2	Spent Carbon Reactivation Furnace RF-2
3	RF-2 Air Pollution Control Equipment
4	Spent Carbon Unloading Hopper H-1
5	Spent Carbon Unloading Hopper H-2
6	Hopper Air Pollution Control Equipment, Piping and Baghouse
7	Spent Carbon Slurry and Recycle Water Transfer System
8	Spent Carbon Storage Warehouse
9	Spent Carbon Transfer Area Containment Pad
10	Spent Carbon Slurry Storage Tank, T-1
11	Spent Carbon Slurry Storage Tank, T-2
12	Spent Carbon Slurry Storage Tank, T-5
13	Spent Carbon Slurry Storage Tank, T-6
14	Furnace Feed System
15	Furnace Feed System
16	Recycled Motive Water Storage Tank, T-9
17	Rainwater, Dewatering Screw, and Motive Water Storage Tank, T-12
18	Wastewater Storage Tank, T-11
19	RF-2 Scrubber Water Equalization Tank, T-19
20	Hazardous Waste Debris Bin
21	Spent Carbon Storage Warehouse, Grated Trenches and Sump
22	Spent Carbon Storage Warehouse Barrel Wash
23	Bermed Containment Area Under Spent Carbo Slurry Storage Tanks
25	Sump By Storage Tank, T-9
26	Sump By Cooling Screw Under Venturi Scrubber Tank
27	Wastewater Conveyance Piping to Wastewater Treatment Tank
29	Carbon Adsorber WS-1
30	Carbon Adsorber WS-2
31	Carbon Adsorber WS-3
32	Carbon Adsorber PV-50
AOC 1	Area of Possible Carbon Dust/Particulate Deposition
AOC 2	September 26, 1998 Spill Area
33-35	Cleaned and Removed by 1996

LIST OF COMPONENTS — DWG. # D11139-02

ITEM	QTY	DWG/PART No.	DESCRIPTION

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R	MGR.

CUSTOMER: W.C.A.I.
LOCATION: PARKER ARIZONA
SCALE:

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DO NOT SCALE DRAWING

DRAWN: CPC ← 23-94
CHK'D: --
ENG'R:
MGR.:

WESTATES CARBON, INC
A WHEELABRATOR TECHNOLOGIES CO.
LOS ANGELES, CA 90040

TITLE: EQUIPMENT ARRANGEMENT CURRENT FACILITY

CODE CA | DWG # D14789-02E | REV. P5
PROJECT # 11139

11-11-94 | 10:42:36 AM | CAD / D14789-02E

Appendix E

Carbon Reactivation Flow Diagrams

US EPA ARCHIVE DOCUMENT

USFILTER WESTATES
CARBON REACTIVATION DIAGRAM

CARBON ADSORBER WS–1
SPENT CARBON STORAGE TANK T–1
SPENT CARBON STORAGE TANK T–2
SPENT CARBON STORAGE TANK T–5
SPENT CARBON STORAGE TANK T–6
BAGHOUSE
CARBON ADSORBER WS–2
OUTDOOR SPENT CARBON HOPPER H–1
INDOOR SPENT CARBON HOPPER H–2
CITY WATER
DRUM WASH
TO ATMOSPHERE
EXHAUST STACK
CONTINUOUS EMISSION MONITORS O_2 & CO FLOW
CARBON ADSORBER WS–3
SPENT CARBON FEED TANK H–18
DEWATERING SCREW
MAKE–UP CITY WATER
RECYCLE WATER TANK T–9
WEIGH BELT CONVEYOR
ROTARY AIRLOCK
MULTIPLE HEARTH CARBON REACTIVATION FURNACE
STEAM
AIR
NATURAL GAS
AFTER–BURNER
AIR
NATURAL GAS
EMERGENCY CITY WATER
CAUSTIC
CAUSTIC
PACKED BED SCRUBBER
GAS COOLER/ VENTURI SCRUBBER
CITY WATER
EQUAL. TANK T–19
PURGE AIR
PURGE AIR
CITY WATER
WET ELECTROSTATIC PRECIPITATOR
ID FAN
BAGHOUSE
DUST
PRODUCT COOLER
TRANS–PORTER C–13
604 VALVE
FLOWMETER 612
PRODUCT SCREEN
PRODUCT BAGGERS
PRODUCT STORAGE TANK S–2
PRODUCT STORAGE TANK S–3
PRODUCT STORAGE TANK S–4
TRANS–PORTER C–4
CARBON ADSORBER
PWW STORAGE TANK T–11
HEAT EXCHANGER
WASTEWATER TREATMENT PLANT
PREMIX TANK (pH ADJUSTMENT)
CHEMICAL TREATMENT CHAMBERS
CLARIFIER
CLEAR H2O CHAMBER
MULTI–MEDIA FILTERS
BACKWASH H2O TANK
SLUDGE AGING TANK
PLATE/FRAME FILTER PRESS
CONTINUOUS EFFLUENT MONITORS pH, TEMP., TDS, FLOW
TO POTW

DRAWN BY: DWH DATE: 8/4/05 REF. FILE: Emachines\Archive\oji_c\WESTATES\Schematic\schematic 07–05\24X36ACAD05.dwg

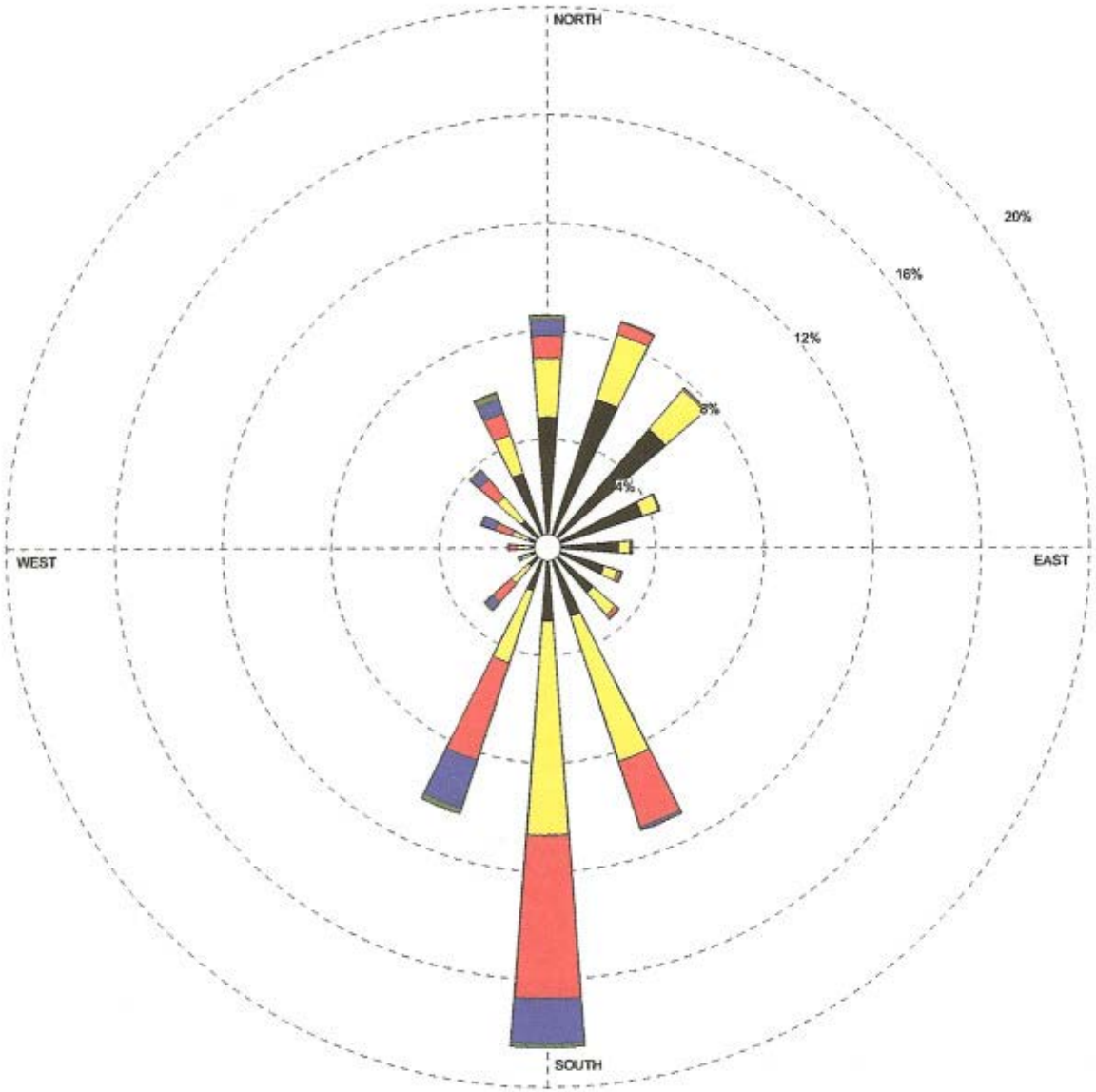
Appendix F

Wind Rose – From Appendix II of Application Reference 5

US EPA ARCHIVE DOCUMENT

WIND ROSE PLOT

FIGURE 2. Windrose for Parker, Arizona 1997 - 2001



Wind Speed (m/s) > 10.8 8.8-10.8 5.7- 8.8 3.6- 5.7 2.1- 3.6 0.5- 2.1	MODELER **CHV**		COMPANY NAME **Focus Environmental, Inc.**
	DISPLAY **Wind Speed**	UNIT **m/s**	SOURCE **Arizona Meteorological Network (AZMET) - Parker, Arizona**
	AVG. WIND SPEED **2.64 m/s**	CALM WINDS **2.01%**	
	ORIENTATION **Direction (blowing from)**	PLOT YEAR-DATE-TIME **97 98 99 00 01** **January 1 - December 31** **Midnight - 11 PM**	PROJECT/PLOT NO. **FIGURE 2**

Appendix G

August 1996 Soil Testing and Analytical Results Prior to Paving "Inside the Fence Area" of the Facility

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

FILE COPY

Date: August 7, 1996

To: File

From: Monte McCue

Re: **Sampling Plan Prior To Paving**

A sampling plan has been developed for the "inside the fence" area of the facility prior to paving.

The plan consists of taking ten (10) samples from randomly chosen grids. Attachment A reflects the random numbers generated on a Lotus spreadsheet.

Attachment B shows grids which are 10' x 10' in size and cover all areas that are currently indigenous soil but will be paved.

Attachment C, Drawing 01-32-001, is a more detailed arrangement of the grids

Testing on each of the ten (10) soil samples will consist of:

1. **Metals (6010)**
   a. Barium
   b. Cadmium
   c. Chromium, total
   d. Lead
   e. Arsenic
2. **Semi-Volatile Organics (EPA 8270)**
3. **Volatile Organics (EPA 8260)**
4. **Organochlorine Pesticides and PCB's (EPA 8080)**
5. **Alcohol Scan (EPA 8015 Modified)**

ATTACHMENT A

WESTATES CARBON-ARIZONA, INC.
RANDOM NUMBER GENERATOR
FOR SOIL SAMPLES

MMC 8/7/96

FILE COPY

NUMBER OF10' SQUARES: 715

DATE: 8/7/96

Number generated on Lotus spreadsheet using the formula - @INT(@RAN*+G7)

RANDOM NUMBERS FOR 10' GRIDS

*	136	211	166
*	67	415	661
*	84	76	251
*	6	473	534
*	620	55	608
*	239	393	692
*	203	23	538
*	236	188	379
*	267	392	635
*	568	690	212
	707	171	320
	515	715	518
	442	154	619
	521	559	39
	498	702	468
	617	399	98
	560	368	5
	634	402	423
	656	30	641

US EPA ARCHIVE DOCUMENT

Westates Carbon-Arizona, Inc.

2523 Mutahar Street
Post Office Box E
Parker, AZ 85344
Tel. 520-669-5758
Fax. 520-669-5775/5776

Date: August 23, 1996

To: August 8, 1996 Soil Testing File

cc: Bill Carlson (w/o attachments)
Matt Killeen (w/o attachments)
Steve Richmond (w/o attachments)

From: Monte McCue MMc

FILE COPY

Re: *Summary Of August 8, 1996 Soil Analyses*

According to the ***Sample Plan*** formulated on August 7, 1996 for sampling soils "inside the fence" prior to paving, samples were taken from 10 separate 10'x10' grids chosen at random. The following is a summary of the results which were analyzed by Del-Mar Analytical in Irvine, California and the conclusions based on those results:

1. ***Metals (Method 6010)***

Sample Description	Arsenic (D.L.=1.0 ppm)	Barium (D.L.=0.5 ppm)	Cadmium (D.L.=0.1 ppm)	Chromium, Total (D.L.=0.5 ppm)	Lead (D.L.=1.0 ppm
Grid 006	2.1	120	<0.10	4.8	4.9
Grid 067	3.1	140	<0.10	4.2	3.6
Grid 084	6.9	140	<0.10	9.0	7.1
Grid 136	3.1	120	<0.10	5.7	4.1
Grid 203	4.4	100	<0.10	5.7	4.1
Grid 236	8.1	130	<0.10	7.3	4.4
Grid 239	1.8	52	<0.10	3.1	2.6
Grid 267	4.2	150	<0.10	6.7	6.2
Grid 568	1.8	48	<0.10	2.8	3.1
Grid 620	1.8	61	<0.10	3.5	3.5

Metals Conclusion:

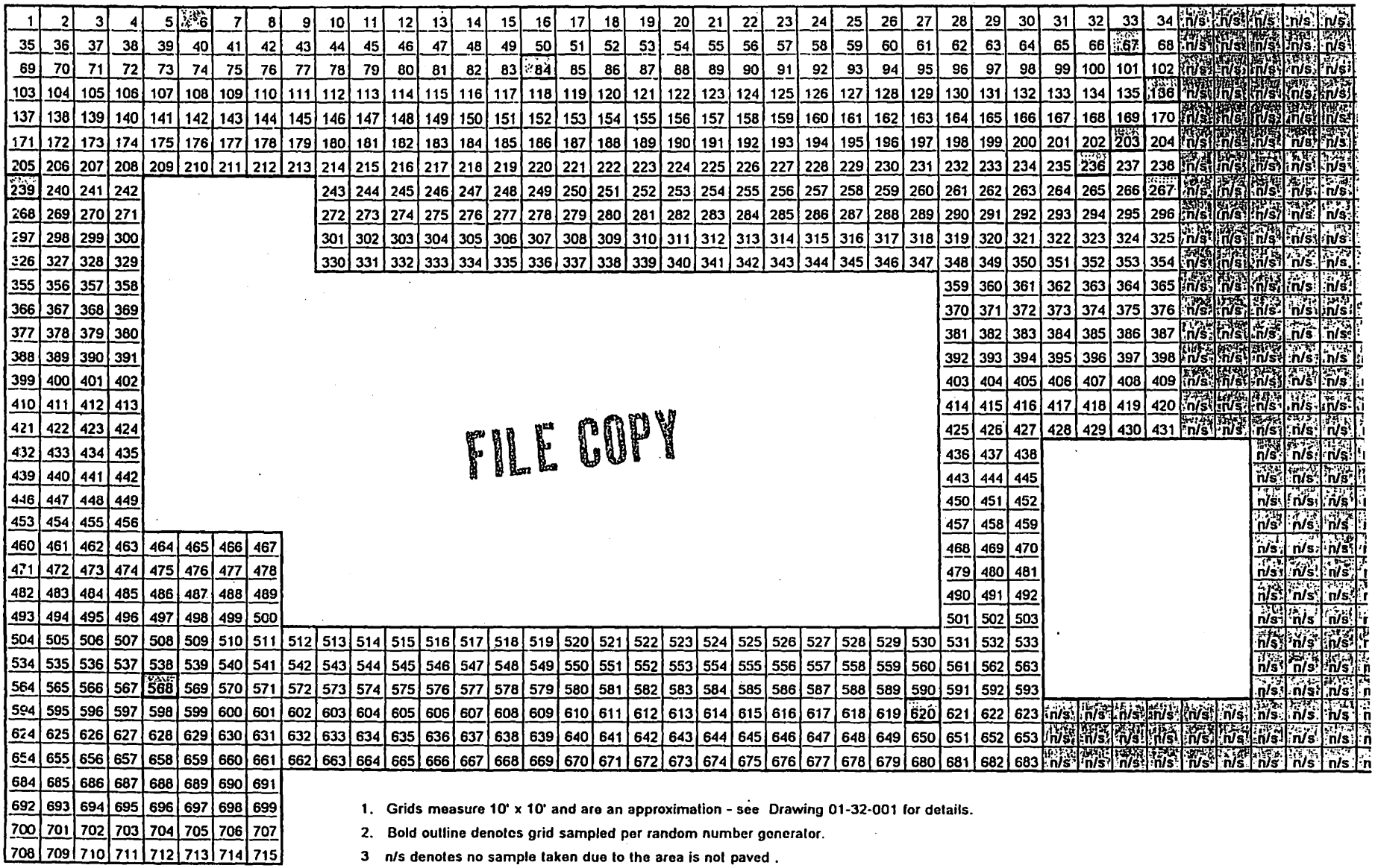
A. The highest result for each metal clearly falls below the TCLP levels (using the divide by 20 rule --- see USEPA December 31, 1987 letter from Gail Ann Hansen - Methods Section WR-562B to Ms. Joanna Cole) found in 40 CFR 261.24:

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

ATTACHMENT P

Westates Carbon-Arizona, Inc.
Sample Plan Prior To Paving



1. Grids measure 10' x 10' and are an approximation - see Drawing 01-32-001 for details.
2. Bold outline denotes grid sampled per random number generator.
3. n/s denotes no sample taken due to the area is not paved .

Metal	Highest August 8, 1996 Result (6010) (ppm)	Result Divided By 20 (For TCLP) (ppm)	RCRA TCLP (ppm) 40 CFR 261.24
Arsenic	8.1	0.40	5.0
Barium	150	7.70	100.0
Cadmium	<0.10	<0.005	1.0
Chromium	9.0	0.45	5.0
Lead	7.1	0.36	5.0

It is clear from the above table that, at worse case, no soil exhibits the toxicity characteri Additionally, the WCAI facility has not accepted, to date, any wastes that were listed hazardous wastes due to metal contents and therefore none of the analytical results suggests that the soil samples contained any listed hazardous wastes.

B. The attached calculations, performed by Jay Berry (WTI-Hampton), show that statistically the level of *chromium* and *lead* are similar (using the National Bureau of Standards' Experimental Statistics Handbook) to the non-impacted samples of soil collected and analyzed in November 1994 and April 1995. Consequently, the chromium and lead levels in the sampled soils are consistent with background levels detected previously at this site.

C. The following comparisons were made using the state of New York's *Determination of Soil Cleanup Objectives and Cleanup Levels*, the state of Connecticut's *Remediation Standard*, EPA's *Proposed RCRA Corrective Action Guidelines* and EPA Region IX *Preliminary Remediation Goals (PRG's) 1996:*

Metal	WCAI Highest Result Aug 8, 1996 (EPA 6010)) (ppm)	State Of New York *Determination Of Soil Cleanup Objectives And Cleanup Levels* (ppm)	State Of Connecticut *Remediation Standard*		*Proposed RCRA Corrective Action Guidelines* (ppm) FR 30865-66 July 27, 1990	EPA Region IX Preliminary Remediation Goals (PRG's) 1996 (ppm)
			Residential (ppm)	Commercial (ppm)		
Arsenic	8.1	7.5 or SB*	10	10	80	220
Barium	150	300 or SB*	4,700	140,000	4000	100,000
Cadmium	<0.10	1 or SB*	34	1000	40	8,500
Chromium	9.0	10 or SB*	100	100	400 (Cr VI)	450
Lead	7.1	4-61 or 200-500	500	1000	None Listed	1,000

Notes: SB is Site Background In PPM
SB's - Arsenic -3-12, Barium-15-600, Cadmium-0.1-1, Chromium 1.5-40, Lead 4-61.

The August 1996 analytical results establish for each analyte either there has been no change from background metal levels or that the metal levels are considerably less than the required levels of soil cleanup objectives.

2. Semi-Volatile Organics (EPA Method 8270)

Conclusion: The attached analytical reflects no detectable levels of semi-volatile organics in the soil.

3. Volatile Organics (EPA 8260)

Conclusion: The attached analytical reflects no detectable levels of volatile organics in the soil.

4. Organochlorine Pesticides and PCB's (EPA Method 8080)

The only organochlorine pesticides and PCB's analyte that was detected was 4,4'-DDE (5.3 ppb (0.0053 ppm) which is 0.3 ppb above the detection limit). This occurred in Sample Grid - 267.

Conclusion: 4,4'-DDE is neither a toxicity characteristic nor a listed waste and WCAI has no record of receiving 4,4'-DDE. The surrounding community does have intensive agricultural activities and it appears that the soil did not contain the analyte as a result of WCAI's operation. The following is a comparison of the levels of 4,4'-DDE found in WCAI's soil, the state of New York's Recommended Soil Cleanup Objectives, EPA's Proposed RCRA Corrective Action Guidelines and EPA Region IX Preliminary Remediation Goals (PRG's) 1996: :

Analyte	WCAI Sample Result (ppm)	New York's January 24, 1994 Recommended Soil Cleanup Objectives (ppm)	EPA's July 27,1990 Proposed RCRA Corrective Action Guidelines (FR 30866) (ppm)	EPA Region IX Preliminary Remediation Goals (PRG's) 1996 (ppm)
4,4'-DDE	0.0053	2.1	2.0	5.6

Final Conclusion

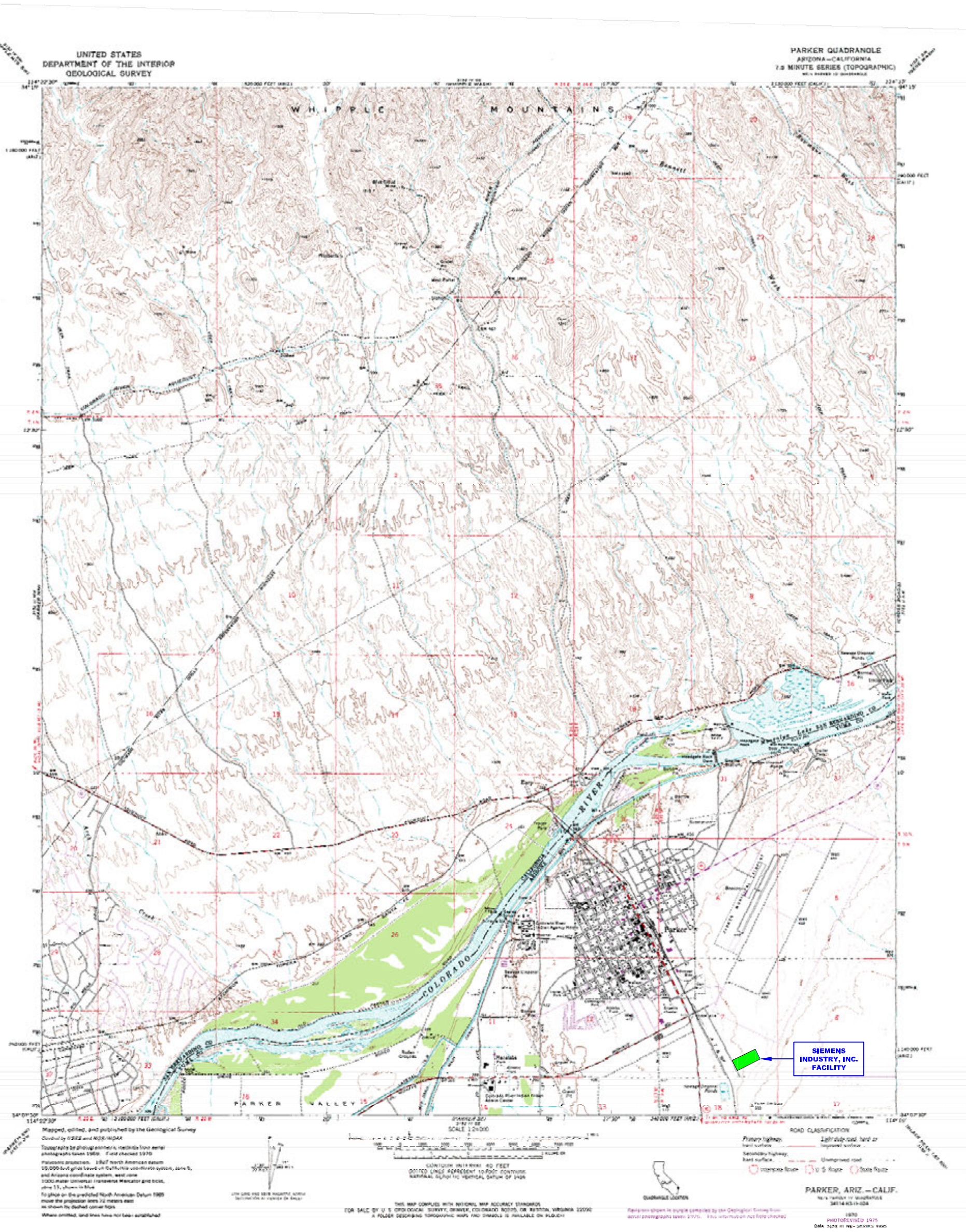
Based on the analytical results received and the above comparisons and conclusions, the soil at the WCAI facility ("inside the fence") has not been impacted or contaminated by the operations of WCAI.

US EPA ARCHIVE DOCUMENT

Appendix H

Surface Flow Diagram and Topographic Map

US EPA ARCHIVE DOCUMENT



NOTES:

1. SEE ATTACHED SIEMENS INDUSTRY, INC. DRAWING D–14789–02 FOR DETAILED LOCATION OF S01, S02, AND X03.
2. THERE ARE NO INJECTION WELLS ASSOCIATED WITH THIS FACILITY.
3. THERE ARE NO SPRINGS, DRINKING WATER WELLS, NOR SURFACE WATER BODIES LOCATED WITHIN 1/4 MILE OF THIS FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
1	3/15/12	NAME CHANGED TO SIEMENS INDUSTRY, INC.	JBE	KEM	

PLOT SCALE: AS NOTED

DO NOT SCALE DRAWING

THIS DRAWING IS THE PROPERTY OF SIEMENS AND CANNOT BE REPRODUCED OR DELIVERED TO OTHERS WITHOUT THE EXPRESS WRITTEN PERMISSION OF SIEMENS INDUSTRY, INC.

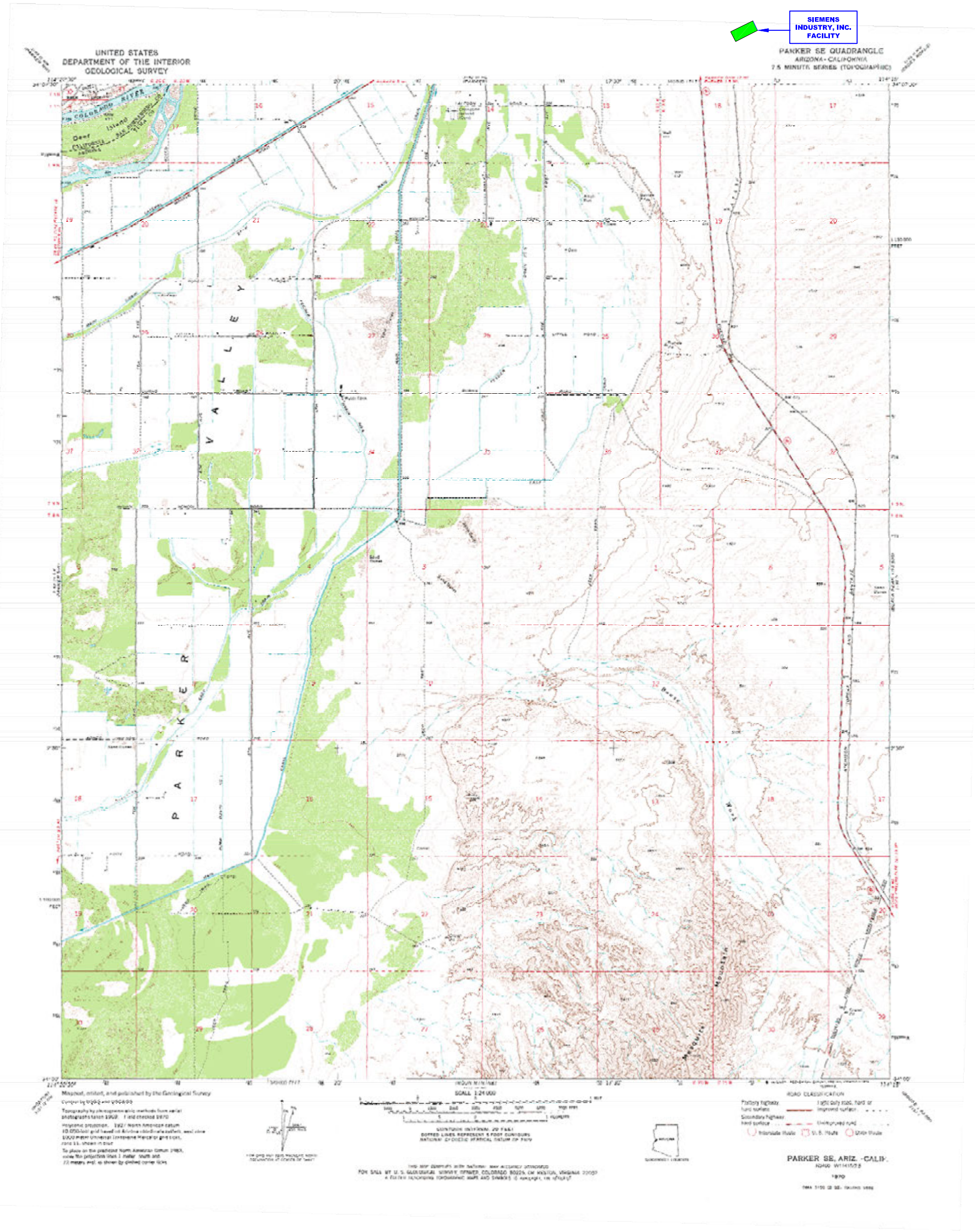
CUSTOMER:	SIEMENS INDUSTRY, INC.	
LOCATION:	2523 MUTAHAR ST. PARKER, AZ 85344	
PROJECT No.		
DRAWN:	JBE	1/22/07
CHK'D:	KEM	1/22/07
ENG'R:		

SIEMENS INDUSTRY, INC.
Parker, AZ

TITLE:
U.S.G.S. SURVEY – PARKER, AZ
TOPOGRAPHIC MAP

DWG No. C–100604 | SHEET No. 1 of 2 | REV. 1

PRINT DATE: 4/19/12



NOTES:

1. SEE ATTACHED SIEMENS WATER TECHNOLOGIES CORP. DRAWING D-14789-02 FOR DETAILED LOCATION OF S01, S02, AND X03.
2. THERE ARE NO INJECTION WELLS ASSOCIATED WITH THIS FACILITY.
3. THERE ARE NO SPRINGS, DRINKING WATER WELLS, NOR SURFACE WATER BODIES LOCATED WITHIN 1/4 MILE OF THIS FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
1	3/15/12	NAME CHANGED TO SIEMENS INDUSTRY, INC.	JBE	KEM	

PLOT SCALE: AS NOTED

DO NOT SCALE DRAWING

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CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.

DRAWN:	JBE	1/22/07
CHK'D:	KEM	1/22/07
ENG'R:		

SIEMENS INDUSTRY, INC.
Parker, AZ

TITLE: U.S.G.S. SURVEY – PARKER SE, AZ TOPOGRAPHIC MAP

DWG No. C-100604 | SHEET No. 2 of 2 | REV. 1

PRINT DATE: 4/19/12

Appendix I

Lift Station and Facility Motive Water Spill Responses

US EPA ARCHIVE DOCUMENT

USFilter

2523 MUTAHAR STREET
P.O. BOX 3308
PARKER, AZ 85344

TELEPHONE 520-669-5758
FACSIMILE 520-669-5775

February 26, 2001

VIA Certified Mail – 7099 3400 0017 6279 6347

Ms. Karen Scheuermann
USEPA Region IX
Mail Code WST-4
75 Hawthorne Street
San Francisco, CA 94105

Ms. Scheuermann:

Attached please find the analytical documentation you requested for the following two spills which occurred at Westates Carbon:

- November 10th , 1994

- April 17th, 1995

Please note that the analytical covers impacted and non-impacted soils which is noted on the analytical sheets.

If you have any questions please call me at (520)669-5758.

Sincerely,

Roy Provins
EH and S Manager

US EPA ARCHIVE DOCUMENT

a VIVENDI water company

Del Mar Analytical

285[illegible]on Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-

Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Westates Carbon
Sample Descript: Soil, Background
Lab Number: 4110611

Sampled: Nov 10, 1994
Received: Nov 10, 1994
Analyzed: Nov 14, 1994
Reported: Nov 14, 1994

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Acenaphthene	200	N.D.	Dimethyl phthalate	200	N.D.
Acenaphthylene	200	N.D.	4,6-Dinitro-2-methylphenol	500	N.D.
Aniline	300	N.D.	2,4-Dinitrophenol	500	N.D.
Anthracene	200	N.D.	2,4-Dinitrotoluene	200	N.D.
Azobenzene	300	N.D.	2,6-Dinitrotoluene	200	N.D.
Benzidine	2,000	N.D.	Di-N-octyl phthalate	1,000	N.D.
Benzoic Acid	1,000	N.D.	Fluoranthene	200	N.D.
Benz(a)anthracene	200	N.D.	Fluorene	200	N.D.
Benzo(b)fluoranthene	400	N.D.	Hexachlorobenzene	200	N.D.
Benzo(k)fluoranthene	400	N.D.	Hexachlorobutadiene	200	N.D.
Benzo(g,h,i)perylene	300	N.D.	Hexachlorocyclopentadiene	1,000	N.D.
Benzo(a)pyrene	400	N.D.	Hexachloroethane	400	N.D.
Benzyl alcohol	400	N.D.	Indeno(1,2,3-cd)pyrene	400	N.D.
Bis(2-chloroethoxy)methane	200	N.D.	Isophorone	200	N.D.
Bis(2-chloroethyl)ether	200	N.D.	2-Methylnaphthalene	200	N.D.
Bis(2-chloroisopropyl)ether	200	N.D.	2-Methylphenol	300	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.	4-Methylphenol	300	N.D.
4-Bromophenyl phenyl ether	300	N.D.	Naphthalene	300	N.D.
Butyl benzyl phthalate	1,000	N.D.	2-Nitroaniline	400	N.D.
4-Chloroaniline	200	N.D.	3-Nitroaniline	400	N.D.
2-Chloronaphthalene	200	N.D.	4-Nitroaniline	1,000	N.D.
4-Chloro-3-methylphenol	200	N.D.	Nitrobenzene	1,000	N.D.
2-Chlorophenol	500	N.D.	2-Nitrophenol	200	N.D.
4-Chlorophenyl phenyl ether	200	N.D.	4-Nitrophenol	1,000	N.D.
Chrysene	200	N.D.	N-Nitrosodiphenylamine	400	N.D.
Dibenz(a,h)anthracene	500	N.D.	N-Nitroso-di-N-propylamine	300	N.D.
Dibenzofuran	200	N.D.	Pentachlorophenol	1,000	N.D.
Di-N-butyl phthalate	500	N.D.	Phenanthrene	200	N.D.
1,3-Dichlorobenzene	200	N.D.	Phenol	300	N.D.
1,4-Dichlorobenzene	200	N.D.	Pyrene	300	N.D.
1,2-Dichlorobenzene	200	N.D.	1,2,4-Trichlorobenzene	200	N.D.
3,3-Dichlorobenzidine	1,000	N.D.	2,4,5-Trichlorophenol	300	N.D.
2,4-Dichlorophenol	200	N.D.	2,4,6-Trichlorophenol	300	N.D.
Diethyl phthalate	200	N.D.			
2,4-Dimethylphenol	500	N.D.			

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution.
Detection limits for this sample have been raised by a factor of 2.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Surrogate Standard Recoveries (Accept. Limits):	
2-Fluorophenol (25-121)	56%
Phenol-d6 (24-113)	58%
2,4,6-Tribromophenol (19-122)	68%
Nitrobenzene-d5 (23-120)	66%
2-Fluorobiphenyl (30-115)	69%
Terphenyl-d14 (18-137)	85%

Michael R. Giles
Laboratory Manager

Results pertain only to samples tested in the laboratory. This report shall not be

US EPA ARCHIVE DOCUMENT

Del Mar Analytical

2851 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-1
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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1

Westates Carbon Arizona	Client Project ID: Westates Carbon	Sampled: Nov 10, 1994
2523 Mutahar St., P.O. Box E		Received: Nov 10, 1994
Parker, AZ 85344	Sample Descript: Soil, Background	Analyzed: Nov 14, 1994
Attention: Marcia Going	Lab Number: 4110611	Reported: Nov 14, 1994

SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

No additional peaks > 250 µg/kg were identified by the Mass Spectral Library.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Michael R. Giles
Laboratory Manager

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA/NIH library. Positive identification or specification between isomers cannot be made without retention time standards.

Results pertain only to samples tested in the laboratory. This report shall not be

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Del Mar Analytical

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Arizona	Client Project ID: Westates Carbon	Sampled: Nov 10, 1994
2523 Mutahar St., P.O. Box E		Received: Nov 10, 1994
Parker, AZ 85344	Sample Descript: Soil, Spill Soil	Analyzed: Nov 14, 1994
Attention: Marcia Going	Lab Number: 4110526	Reported: Nov 14, 1994

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Acenaphthene	100	N.D.	Dimethyl phthalate	100	N.D.
Acenaphthylene	100	N.D.	4,6-Dinitro-2-methylphenol	250	N.D.
Aniline	150	N.D.	2,4-Dinitrophenol	250	N.D.
Anthracene	100	N.D.	2,4-Dinitrotoluene	100	N.D.
Azobenzene	150	N.D.	2,6-Dinitrotoluene	100	N.D.
Benzidine	1,000	N.D.	Di-N-octyl phthalate	500	N.D.
Benzoic Acid	500	N.D.	Fluoranthene	100	N.D.
Benz(a)anthracene	100	N.D.	Fluorene	100	N.D.
Benzo(b)fluoranthene	200	N.D.	Hexachlorobenzene	100	N.D.
Benzo(k)fluoranthene	200	N.D.	Hexachlorobutadiene	100	N.D.
Benzo(g,h,i)perylene	150	N.D.	Hexachlorocyclopentadiene	500	N.D.
Benzo(a)pyrene	200	N.D.	Hexachloroethane	200	N.D.
Benzyl alcohol	200	N.D.	Indeno(1,2,3-cd)pyrene	200	N.D.
Bis(2-chloroethoxy)methane	100	N.D.	Isophorone	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.	2-Methylnaphthalene	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.	2-Methylphenol	150	N.D.
Bis(2-ethylhexyl)phthalate	250	N.D.	4-Methylphenol	150	N.D.
4-Bromophenyl phenyl ether	150	N.D.	Naphthalene	150	N.D.
Butyl benzyl phthalate	500	N.D.	2-Nitroaniline	200	N.D.
4-Chloroaniline	100	N.D.	3-Nitroaniline	200	N.D.
2-Chloronaphthalene	100	N.D.	4-Nitroaniline	500	N.D.
4-Chloro-3-methylphenol	100	N.D.	Nitrobenzene	500	N.D.
2-Chlorophenol	250	N.D.	2-Nitrophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.	4-Nitrophenol	500	N.D.
Chrysene	100	N.D.	N-Nitrosodiphenylamine	200	N.D.
Dibenz(a,h)anthracene	250	N.D.	N-Nitroso-di-N-propylamine	150	N.D.
Dibenzofuran	100	N.D.	Pentachlorophenol	500	N.D.
Di-N-butyl phthalate	250	N.D.	Phenanthrene	100	N.D.
1,3-Dichlorobenzene	100	N.D.	Phenol	150	N.D.
1,4-Dichlorobenzene	100	N.D.	Pyrene	150	N.D.
1,2-Dichlorobenzene	100	N.D.	1,2,4-Trichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.	2,4,5-Trichlorophenol	150	N.D.
2,4-Dichlorophenol	100	N.D.	2,4,6-Trichlorophenol	150	N.D.
Diethyl phthalate	100	N.D.			
2,4-Dimethylphenol	250	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Michael R. Giles
Laboratory Manager

Surrogate Standard Recoveries (Accept. Limits):	
2-Fluorophenol (25-121)	58%
Phenol-d6 (24-113)	63%
2,4,6-Tribromophenol (19-122)	73%
Nitrobenzene-d5 (23-120)	64%
2-Fluorobiphenyl (30-115)	66%
Terphenyl-d14 (18-137)	64%

Results pertain only to samples tested in the laboratory. This report shall not be

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Del Mar Analytical

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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-184
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-133

Westates Carbon Arizona	Client Project ID: Westates Carbon	Sampled: Nov 10, 1994
2523 Mutahar St., P.O. Box E		Received: Nov 10, 1994
Parker, AZ 85344	Sample Descript: Soil, Spill Soil	Analyzed: Nov 11, 1994
Attention: Marcia Going	Lab Number: 4110526	Reported: Nov 14, 1994

SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)

No additional peaks > 250 µg/kg were identified by the Mass Spectral Library.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Michael R. Giles
Laboratory Manager

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA/NIH library. Positive identification or specification between isomers cannot be made without retention time standards.

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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-

Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Westates Carbon
Sample Descript: Soil, Background
Lab Number: 4110611

Sampled: Nov 10, 1994
Received: Nov 10, 1994
Analyzed: Nov 11, 1994
Reported: Nov 14, 1994

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromochloromethane	5.0	N.D.	Methylene chloride	10	N.D.
Bromodichloromethane	2.0	N.D.	Naphthalene	5.0	N.D.
Bromoform	2.0	N.D.	n-Propylbenzene	2.0	N.D.
Bromomethane	5.0	N.D.	Styrene	2.0	N.D.
n-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
sec-Butylbenzene	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	Tetrachloroethene	2.0	N.D.
Carbon tetrachloride	5.0	N.D.	Toluene	2.0	N.D.
Chlorobenzene	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloroethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
Chloroform	2.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
Chloromethane	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
2-Chlorotoluene	5.0	N.D.	Trichloroethene	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
Dibromochloromethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
Dibromomethane	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	m,p-Xylenes	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.			
Dichlorodifluoromethane	5.0	N.D.			
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
Ethylbenzene	2.0	N.D.			
Hexachlorobutadiene	5.0	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

DEL MAR ANALYTICAL, PHOENIX (AZ # AZ0426)

Michael R. Giles
Laboratory Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	95%
Toluene-d8 (81-117)	93%
4-Bromofluorobenzene (74-121)	105%

Results pertain only to samples tested in the laboratory. This report shall not be

US EPA ARCHIVE DOCUMENT

Del Mar Analytical

[redacted]on Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-

Westates Carbon Arizona	Client Project ID: Westates Carbon	Sampled: Nov 10, 1994
2523 Mutahar St., P.O. Box E		Received: Nov 10, 1994
Parker, AZ 85344	Sample Descript: Soil, Background	Analyzed: Nov 11, 1994
Attention: Marcia Going	Lab Number: 4110611	Reported: Nov 14, 1994

VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

No additional peaks > 250 µg/kg were identified by the Mass Spectral Library.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Michael R. Giles
Laboratory Manager

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA/NIH library. Positive identification or specification between isomers cannot be made without retention time standards.

Results pertain only to samples tested in the laboratory. This report shall not be

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Westates Carbon
Sample Descript: Soil, Spill Soil
Lab Number: 4110526

Sampled: Nov 10, 1994
Received: Nov 10, 1994
Analyzed: Nov 11, 1994
Reported: Nov 14, 1994

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromochloromethane	5.0	N.D.	Methylene chloride	10	N.D.
Bromodichloromethane	2.0	N.D.	Naphthalene	5.0	N.D.
Bromoform	2.0	N.D.	n-Propylbenzene	2.0	N.D.
Bromomethane	5.0	N.D.	Styrene	2.0	N.D.
n-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
sec-Butylbenzene	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	Tetrachloroethene	2.0	N.D.
Carbon tetrachloride	5.0	N.D.	Toluene	2.0	N.D.
Chlorobenzene	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloroethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
Chloroform	2.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
Chloromethane	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
2-Chlorotoluene	5.0	N.D.	Trichloroethene	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
Dibromochloromethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
Dibromomethane	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	m,p-Xylenes	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.			
Dichlorodifluoromethane	5.0	N.D.			
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
Ethylbenzene	2.0	N.D.			
Hexachlorobutadiene	5.0	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

DEL MAR ANALYTICAL, PHOENIX (AZ # AZ0426)

Michael R. Giles
Laboratory Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	92%
Toluene-d8 (81-117)	92%
4-Bromofluorobenzene (74-121)	108%

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Arizona	Client Project ID: Westates Carbon	Sampled: Nov 10, 1994
2523 Mutahar St., P.O. Box E		Received: Nov 10, 1994
Parker, AZ 85344	Sample Descript: Soil, Spill Soil	Analyzed: Nov 14, 1994
Attention: Marcia Going	Lab Number: 4110526	Reported: Nov 14, 1994

SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)

No additional peaks > 250 µg/kg were identified by the Mass Spectral Library.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Michael R. Giles
Laboratory Manager

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA/NIH library. Positive identification or specification between isomers cannot be made without retention time standards.

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968

Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Westates Carbon
Sample Descript: Soil, Background
Lab Number: 4110611

Sampled: Nov 10, 1994
Received: Nov 10, 1994
Analyzed: Nov 14, 1994
Reported: Nov 14, 1994

ORGANOCHLORINE PESTICIDES AND PCBs (EPA 8080)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Aldrin	5.0	N.D.
alpha-BHC	5.0	N.D.
beta-BHC	5.0	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	5.0	N.D.
Chlordane	10	N.D.
4,4'-DDD	10	N.D.
4,4'-DDE	5.0	N.D.
4,4'-DDT	10	N.D.
Dieldrin	5.0	N.D.
Endosulfan I	10	N.D.
Endosulfan II	5.0	N.D.
Endosulfan sulfate	50	N.D.
Endrin	10	N.D.
Endrin aldehyde	15	N.D.
Heptachlor	5.0	N.D.
Heptachlor epoxide	5.0	N.D.
Methoxychlor	150	N.D.
Toxaphene	180	N.D.
PCB-1016	50	N.D.
PCB-1221	50	N.D.
PCB-1232	50	N.D.
PCB-1242	50	N.D.
PCB-1248	50	N.D.
PCB-1254	50	N.D.
PCB-1260	50	N.D.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Michael R. Giles
Laboratory Manager

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Westates Carbon Arizona	Client Project ID: Westates Carbon	Sampled: Nov 10, 1994
2523 Mutahar St., P.O. Box E		Received: Nov 10, 1994
Parker, AZ 85344	Sample Descript: Soil, Spill Soil	Analyzed: Nov 14, 1994
Attention: Marcia Going	Lab Number: 4110526	Reported: Nov 14, 1994

ORGANOCHLORINE PESTICIDES AND PCBs (EPA 8080)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Aldrin	5.0	N.D.
alpha-BHC	5.0	N.D.
beta-BHC	5.0	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	5.0	N.D.
Chlordane	10	N.D.
4,4'-DDD	10	N.D.
4,4'-DDE	5.0	N.D.
4,4'-DDT	10	N.D.
Dieldrin	5.0	N.D.
Endosulfan I	10	N.D.
Endosulfan II	5.0	N.D.
Endosulfan sulfate	50	N.D.
Endrin	10	N.D.
Endrin aldehyde	15	N.D.
Heptachlor	5.0	N.D.
Heptachlor epoxide	5.0	N.D.
Methoxychlor	150	N.D.
Toxaphene	180	N.D.
PCB-1016	50	N.D.
PCB-1221	50	N.D.
PCB-1232	50	N.D.
PCB-1242	50	N.D.
PCB-1248	50	N.D.
PCB-1254	50	N.D.
PCB-1260	50	N.D.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Michael R. Giles
Laboratory Manager

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1358

Westates Carbon Inc.
2523 Mutahar Street
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: WCAI
Sample Descript: Soil
First Sample #: DL01185

Sampled: Dec 6, 1994
Received: Dec 7, 1994
Analyzed: Dec 19, 1994
Reported: Dec 20, 1994

LEAD (EPA 6010)

Laboratory Number	Sample Description	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
DL01185	Impacted I	0.50	1.2
DL01186	Impacted II	0.50	1.6
DL01187	Impacted III	0.50	2.0
DL01188	Impacted IV	0.50	1.0
DL01189	Impacted V	0.50	1.8
DL01190	Impacted VI	0.50	1.3
DL01191	Soil I	0.50	1.3
DL01192	Soil II	0.50	1.5
DL01193	Soil III	0.50	1.7
DL01194	Soil IV	0.50	1.2

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8277 FAX (602) 968-1358

Westates Carbon Inc.	Client Project ID: WCAI	Sampled: Dec 6, 1994
2523 Mutahar Street		Received: Dec 7, 1994
Parker, AZ 85344	Sample Descript: Soil	Analyzed: Dec 19, 1994
Attention: Marcia Going	First Sample #: DL01195	Reported: Dec 20, 1994

LEAD (EPA 6010)

Laboratory Number	Sample Description	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
DL01195	Soil V	0.50	N.D.
DL01196	Soil VI	0.50	1.8

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

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Westates Carbon Inc.
2523 Mutahar Street
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: WCAI
Sample Descript: Soil
First Sample #: DL01185

Sampled: Dec 6, 1994
Received: Dec 7, 1994
Analyzed: Dec 19, 1994
Reported: Dec 20, 1994

CHROMIUM (EPA 6010)

Laboratory Number	Sample Description	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
DL01185	Impacted I	0.50	4.8
DL01186	Impacted II	0.50	2.5
DL01187	Impacted III	0.50	2.8
DL01188	Impacted IV	0.50	3.8
DL01189	Impacted V	0.50	3.8
DL01190	Impacted VI	0.50	4.6
DL01191	Soil I	0.50	5.0
DL01192	Soil II	0.50	3.9
DL01193	Soil III	0.50	2.6
DL01194	Soil IV	0.50	4.0

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Inc.	Client Project ID: WCAI	Sampled: Dec 6, 1994
2523 Mutahar Street		Received: Dec 7, 1994
Parker, AZ 85344	Sample Descript: Soil	Analyzed: Dec 19, 1994
Attention: Marcia Going	First Sample #: DL01195	Reported: Dec 20, 1994

CHROMIUM (EPA 6010)

Laboratory Number	Sample Description	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
DL01195	Soil V	0.50	4.2
DL01196	Soil VI	0.50	4.7

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Inc.
2523 Mutahar Street
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: WCAI
Sample Descript: Soil
First Sample #: DL01185

Sampled: Dec 6, 1994
Received: Dec 7, 1994
Analyzed: Dec 19, 1994
Reported: Dec 20, 1994

BARIUM (EPA 6010)

Laboratory Number	Sample Description	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
DL01185	Impacted I	0.50	78
DL01186	Impacted II	0.50	46
DL01187	Impacted III	0.50	66
DL01188	Impacted IV	0.50	57
DL01189	Impacted V	0.50	64
DL01190	Impacted VI	0.50	58
DL01191	Soil I	0.50	73
DL01192	Soil II	0.50	71
DL01193	Soil III	0.50	60
DL01194	Soil IV	0.50	71

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Inc.	Client Project ID: WCAI	Sampled: Dec 6, 1994
2523 Mutahar Street		Received: Dec 7, 1994
Parker, AZ 85344	Sample Descript: Soil	Analyzed: Dec 19, 1994
Attention: Marcia Going	First Sample #: DL01195	Reported: Dec 20, 1994

BARIUM (EPA 6010)

Laboratory Number	Sample Description	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
DL01195	Soil V	0.50	63
DL01196	Soil VI	0.50	73

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Westates Carbon
Sample Descript: Soil, Background
Lab Number: 4110611

Sampled: Nov 10, 1994
Received: Nov 10, 1994
Analyzed: Nov 14, 1994
Reported: Nov 14, 1994

ALCOHOL SCAN by GC/FID (EPA 8015 Modified)

Analyte	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
1-Butanol	5.0	N.D.
2-Butanol	5.0	N.D.
Ethanol	5.0	N.D.
Isobutanol (2-Methyl-1-Propanol)	5.0	N.D.
Isopropanol	5.0	N.D.
Methanol	5.0	N.D.
2-Methyl-1-Butanol	5.0	N.D.
2-Methyl-2-Butanol	5.0	N.D.
3-Methyl-1-Butanol (Isoamyl Alcohol)	5.0	N.D.
2-Methyl-2-Propanol	5.0	N.D.
1-Pentanol	5.0	N.D.
3-Pentanol	5.0	N.D.
1-Propanol	5.0	N.D.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Michael R. Giles
Laboratory Manager

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Westates Carbon
Sample Descript: Soil, Spill Soil
Lab Number: 4110526

Sampled: Nov 10, 1994
Received: Nov 10, 1994
Analyzed: Nov 14, 1994
Reported: Nov 14, 1994

ALCOHOL SCAN by GC/FID (EPA 8015 Modified)

Analyte	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
1-Butanol	5.0	N.D.
2-Butanol	5.0	N.D.
Ethanol	5.0	N.D.
Isobutanol (2-Methyl-1-Propanol)	5.0	N.D.
Isopropanol	5.0	N.D.
Methanol	5.0	N.D.
2-Methyl-1-Butanol	5.0	N.D.
2-Methyl-2-Butanol	5.0	N.D.
3-Methyl-1-Butanol (Isoamyl Alcohol)	5.0	N.D.
2-Methyl-2-Propanol	5.0	N.D.
1-Pentanol	5.0	N.D.
3-Pentanol	5.0	N.D.
1-Propanol	5.0	N.D.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Michael R. Giles
Laboratory Manager

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Westates Carbon

Sample Descript: Soil, Background
Lab Number: 4110611

Sampled: Nov 10, 1994
Relogged: Nov 21, 1994
Analyzed: Nov 23, 1994
Reported: Dec 1, 1994

LABORATORY ANALYSIS

Analyte	EPA Method	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
Barium	6010	0.50	41
Cadmium	6010	0.10	N.D.
Chromium	6010	0.50	3.1
Lead	6010	1.0	3.9

Analysis was completed at Del Mar Analytical-Irvine (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Michael R. Giles
Laboratory Manager

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Westates Carbon
Sample Descript: Soil, Spill Soil
Lab Number: 4110526

Sampled: Nov 10, 1994
Relogged: Nov 21, 1994
Analyzed: Nov 23, 1994
Reported: Dec 1, 1994

LABORATORY ANALYSIS

Analyte	EPA Method	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
Barium	6010	0.50	83
Cadmium	6010	0.10	N.D.
Chromium	6010	0.50	4.4
Lead	6010	1.0	4.2

Analysis was completed at Del Mar Analytical-Irvine (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Michael R. Giles
Laboratory Manager

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FINAL CONCLUSIONS FOR NOVEMBER 10, 1994
LIFT STATION INCIDENT

It is very apparent, based on the analysis of organics and metals for both the impacted and non-impacted soil are statistically the same. Therefore, there is no supporting evidence of contamination to the soil due to the spill which occurred at the Westates Carbon-Arizona, Inc. lift station on November 10, 1994.

Attached to this conclusion are two methods of statistic evaluation for the metals which show the hypothesis is accepted.

The soil will be handled as a clean material.

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12/23/94

(1) Choose α

Let $\alpha = 0.05$ (95% confidence interval, i.e. the interval includes the true average "95% of the time".

(2) $N = 7$

$p'_{1-\alpha/2} = 0.347$ (From Table A-13)

(3) $\bar{X}_A = 13.1/7 = 1.87$ = Impacted

$\bar{X}_B = 11.9/7 = 1.70$ = Non-impacted

(4) $W_A = 4.2 - 1 = 3.2$

$W_B = 3.9 - .5 = 3.4$

(5) $p' = \dfrac{\bar{X}_A - \bar{X}_B}{\frac{1}{2}(W_A + W_B)} = \dfrac{(1.87 - 1.70)}{\frac{1}{2}(3.2 + 3.4)} = \dfrac{0.17}{3.3} = 0.0515$

(6) If $|p'| > p_{1-\alpha/2}$, conclude that the averages of the two products differ, otherwise there is no reason to believe that the averages of A and B differ.

(7) Since 0.0515 is not larger than 0.306 there is no reason to believe that the average of the impacted samples varies from the non-impacted.

MPK

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, 18' non
Lab Number: 5040625

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 20, 1995
Reported: Apr 28, 1995

TOTAL METALS

Analyte	EPA Method	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
Barium	6010	0.50	83
Chromium	6010	0.50	6.2
Lead	6010	0.50	4.6

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, 59' non
Lab Number: 5040627

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 20, 1995
Reported: Apr 28, 1995

TOTAL METALS

Analyte	EPA Method	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
Barium	6010	0.50	63
Chromium	6010	0.50	3.5
Lead	6010	0.50	3.0

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled:	Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received:	Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, 483' non	Analyzed:	Apr 20, 1995
Attention: Marcia Going	Lab Number: 5040628	Reported:	Apr 28, 1995

TOTAL METALS

Analyte	EPA Method	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
Barium	6010	0.50	53
Chromium	6010	0.50	6.3
Lead	6010	0.50	2.5

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled:	Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received:	Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, Road End Non	Analyzed:	Apr 26, 1995
Attention: Marcia Going	Lab Number: 5040630	Reported:	Apr 28, 1995

TOTAL METALS

Analyte	EPA Method	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
Barium	6010	0.50	28
Chromium	6010	0.50	1.9
Lead	6010	1.0	2.1

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled:	Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received:	Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, 20' impacted	Analyzed:	Apr 20, 1995
Attention: Marcia Going	Lab Number: 5040626	Reported:	Apr 28, 1995

TOTAL METALS

Analyte	EPA Method	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
Barium	6010	0.50	97
Chromium	6010	0.50	9.5
Lead	6010	0.50	5.4

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, Road End Impacted	Analyzed: Apr 20, 1995
Attention: Marcia Going	Lab Number: 5040629	Reported: Apr 28, 1995

TOTAL METALS

Analyte	EPA Method	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
Barium	6010	0.50	54
Chromium	6010	0.50	3.5
Lead	6010	0.50	2.1

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Water, 483' impacted
Lab Number: 5040631

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 20, 1995
Reported: Apr 28, 1995

TOTAL METALS

Analyte	EPA Method	Detection Limit mg/L (ppm)	Sample Result mg/L (ppm)
Barium	200.7	0.050	0.24
Chromium	200.7	0.0050	0.013
Lead	239.2	0.0050	0.029

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Water, Road End Impacted
Lab Number: 5040629

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 20, 1995
Reported: Apr 28, 1995

TOTAL METALS

Analyte	EPA Method	Detection Limit mg/L (ppm)	Sample Result mg/L (ppm)
Barium	200.7	0.050	0.33
Chromium	200.7	0.0050	N.D.
Lead	239.2	0.0050	N.D.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, 18' non
Lab Number: 5040625

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 21-22, 1995
Reported: Apr 28, 1995

ALCOHOL SCAN by GC/FID (EPA 8015 Modified)

Analyte	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
1-Butanol	5.0	N.D.
2-Butanol	5.0	N.D.
Ethanol	5.0	N.D.
Isobutanol (2-Methyl-1-Propanol)	5.0	N.D.
Isopropanol	5.0	N.D.
Methanol	5.0	N.D.
2-Methyl-1-Butanol	5.0	N.D.
2-Methyl-2-Butanol	5.0	N.D.
3-Methyl-1-Butanol (Isoamyl Alcohol)	5.0	N.D.
2-Methyl-2-Propanol	5.0	N.D.
1-Pentanol	5.0	N.D.
3-Pentanol	5.0	N.D.
1-Propanol	5.0	N.D.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Gary Steube
Laboratory Director

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, 59' non
Lab Number: 5040627

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 21-22, 1995
Reported: Apr 28, 1995

ALCOHOL SCAN by GC/FID (EPA 8015 Modified)

Analyte	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
1-Butanol	5.0	N.D.
2-Butanol	5.0	N.D.
Ethanol	5.0	N.D.
Isobutanol (2-Methyl-1-Propanol)	5.0	N.D.
Isopropanol	5.0	N.D.
Methanol	5.0	N.D.
2-Methyl-1-Butanol	5.0	N.D.
2-Methyl-2-Butanol	5.0	N.D.
3-Methyl-1-Butanol (Isoamyl Alcohol)	5.0	N.D.
2-Methyl-2-Propanol	5.0	N.D.
1-Pentanol	5.0	N.D.
3-Pentanol	5.0	N.D.
1-Propanol	5.0	N.D.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, 483' non
Lab Number: 5040628

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 21-22, 1995
Reported: Apr 28, 1995

ALCOHOL SCAN by GC/FID (EPA 8015 Modified)

Analyte	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
1-Butanol	5.0	N.D.
2-Butanol	5.0	N.D.
Ethanol	5.0	N.D.
Isobutanol (2-Methyl-1-Propanol)	5.0	N.D.
Isopropanol	5.0	N.D.
Methanol	5.0	N.D.
2-Methyl-1-Butanol	5.0	N.D.
2-Methyl-2-Butanol	5.0	N.D.
3-Methyl-1-Butanol (Isoamyl Alcohol)	5.0	N.D.
2-Methyl-2-Propanol	5.0	N.D.
1-Pentanol	5.0	N.D.
3-Pentanol	5.0	N.D.
1-Propanol	5.0	N.D.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-15

Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, Road End Non	Analyzed: Apr 26, 1995
Attention: Marcia Going	Lab Number: 5040630	Reported: Apr 28, 1995

ALCOHOL SCAN by GC/FID (EPA 8015 Modified)

Analyte	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
1-Butanol	5.0	N.D.
2-Butanol	5.0	37
Ethanol	5.0	N.D.
Isobutanol (2-Methyl-1-Propanol)	5.0	N.D.
Isopropanol	5.0	25
Methanol	5.0	N.D.
2-Methyl-1-Butanol	5.0	N.D.
2-Methyl-2-Butanol	5.0	N.D.
3-Methyl-1-Butanol (Isoamyl Alcohol)	5.0	N.D.
2-Methyl-2-Propanol	5.0	N.D.
1-Pentanol	5.0	N.D.
3-Pentanol	5.0	N.D.
1-Propanol	5.0	N.D.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Laboratory Director

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, 20' Impacted
Lab Number: 5040626

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 21-22, 1995
Reported: Apr 28, 1995

ALCOHOL SCAN by GC/FID (EPA 8015 Modified)

Analyte	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
1-Butanol	5.0	N.D.
2-Butanol	5.0	N.D.
Ethanol	5.0	N.D.
Isobutanol (2-Methyl-1-Propanol)	5.0	N.D.
Isopropanol	5.0	N.D.
Methanol	5.0	N.D.
2-Methyl-1-Butanol	5.0	N.D.
2-Methyl-2-Butanol	5.0	N.D.
3-Methyl-1-Butanol (Isoamyl Alcohol)	5.0	N.D.
2-Methyl-2-Propanol	5.0	N.D.
1-Pentanol	5.0	N.D.
3-Pentanol	5.0	N.D.
1-Propanol	5.0	N.D.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, Road End Impacted
Lab Number: 5040629

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 21-22, 1995
Reported: Apr 28, 1995

ALCOHOL SCAN by GC/FID (EPA 8015 Modified)

Analyte	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
1-Butanol	5.0	N.D.
2-Butanol	5.0	N.D.
Ethanol	5.0	N.D.
Isobutanol (2-Methyl-1-Propanol)	5.0	N.D.
Isopropanol	5.0	N.D.
Methanol	5.0	N.D.
2-Methyl-1-Butanol	5.0	N.D.
2-Methyl-2-Butanol	5.0	N.D.
3-Methyl-1-Butanol (Isoamyl Alcohol)	5.0	N.D.
2-Methyl-2-Propanol	5.0	N.D.
1-Pentanol	5.0	N.D.
3-Pentanol	5.0	N.D.
1-Propanol	5.0	N.D.

Analysis was completed at Del Mar Analytical-IRVINE (AZ042B)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Laboratory Director

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Water, 483' impacted
Lab Number: 5040631

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 21-22, 1995
Reported: Apr 28, 1995

ALCOHOL SCAN by GC/FID (EPA 8015 Modified)

Analyte	Detection Limit mg/L (ppm)	Sample Result mg/L (ppm)
1-Butanol	5.0	N.D.
2-Butanol	5.0	N.D.
Ethanol	5.0	N.D.
Isobutanol (2-Methyl-1-Propanol)	5.0	N.D.
Isopropanol	5.0	N.D.
Methanol	5.0	N.D.
2-Methyl-1-Butanol	5.0	N.D.
2-Methyl-2-Butanol	5.0	N.D.
3-Methyl-1-Butanol (Isoamyl Alcohol)	5.0	N.D.
2-Methyl-2-Propanol	5.0	N.D.
1-Pentanol	5.0	N.D.
3-Pentanol	5.0	N.D.
1-Propanol	5.0	N.D.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-133

Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Water, Road End Impacted	Analyzed: Apr 21-22, 1995
Attention: Marcia Going	Lab Number: 5040629	Reported: Apr 28, 1995

ALCOHOL SCAN by GC/FID (EPA 8015 Modified)

Analyte	Detection Limit mg/L (ppm)	Sample Result mg/L (ppm)
1-Butanol	5.0	N.D.
2-Butanol	5.0	N.D.
Ethanol	5.0	N.D.
Isobutanol (2-Methyl-1-Propanol)	5.0	N.D.
Isopropanol	5.0	N.D.
Methanol	5.0	N.D.
2-Methyl-1-Butanol	5.0	N.D.
2-Methyl-2-Butanol	5.0	N.D.
3-Methyl-1-Butanol (Isoamyl Alcohol)	5.0	N.D.
2-Methyl-2-Propanol	5.0	N.D.
1-Pentanol	5.0	N.D.
3-Pentanol	5.0	N.D.
1-Propanol	5.0	N.D.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, 18' Non
Lab Number: 5040625

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 20, 1995
Reported: Apr 28, 1995

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Acenaphthene	100	N.D.	Dimethyl phthalate	100	N.D.
Acenaphthylene	100	N.D.	4,6-Dinitro-2-methylphenol	250	N.D.
Aniline	150	N.D.	2,4-Dinitrophenol	250	N.D.
Anthracene	100	N.D.	2,4-Dinitrotoluene	100	N.D.
Azobenzene	150	N.D.	2,6-Dinitrotoluene	100	N.D.
Benzidine	1,000	N.D.	Di-N-octyl phthalate	500	N.D.
Benzoic Acid	500	N.D.	Fluoranthene	100	N.D.
Benz(a)anthracene	100	N.D.	Fluorene	100	N.D.
Benzo(b)fluoranthene	200	N.D.	Hexachlorobenzene	100	N.D.
Benzo(k)fluoranthene	200	N.D.	Hexachlorobutadiene	100	N.D.
Benzo(g,h,i)perylene	150	N.D.	Hexachlorocyclopentadiene	500	N.D.
Benzo(a)pyrene	200	N.D.	Hexachloroethane	200	N.D.
Benzyl alcohol	200	N.D.	Indeno(1,2,3-cd)pyrene	200	N.D.
Bis(2-chloroethoxy)methane	100	N.D.	Isophorone	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.	2-Methylnaphthalene	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.	2-Methylphenol	150	N.D.
Bis(2-ethylhexyl)phthalate	250	N.D.	4-Methylphenol	150	N.D.
4-Bromophenyl phenyl ether	150	N.D.	Naphthalene	150	N.D.
Butyl benzyl phthalate	500	N.D.	2-Nitroaniline	200	N.D.
4-Chloroaniline	100	N.D.	3-Nitroaniline	200	N.D.
2-Chloronaphthalene	100	N.D.	4-Nitroaniline	500	N.D.
4-Chloro-3-methylphenol	100	N.D.	Nitrobenzene	500	N.D.
2-Chlorophenol	250	N.D.	2-Nitrophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.	4-Nitrophenol	500	N.D.
Chrysene	100	N.D.	N-Nitrosodiphenylamine	200	N.D.
Dibenz(a,h)anthracene	250	N.D.	N-Nitroso-di-N-propylamine	150	N.D.
Dibenzofuran	100	N.D.	Pentachlorophenol	500	N.D.
Di-N-butyl phthalate	250	N.D.	Phenanthrene	100	N.D.
1,3-Dichlorobenzene	100	N.D.	Phenol	150	N.D.
1,4-Dichlorobenzene	100	N.D.	Pyrene	150	N.D.
1,2-Dichlorobenzene	100	N.D.	1,2,4-Trichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.	2,4,5-Trichlorophenol	150	N.D.
2,4-Dichlorophenol	100	N.D.	2,4,6-Trichlorophenol	150	N.D.
Diethyl phthalate	100	N.D.			
2,4-Dimethylphenol	250	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
2 Fluorophenol (25-121)	72%
Phenol-d6 (24-113)	68%
2,4,6-Tribromophenol (19-122)	76%
Nitrobenzene-d5 (23-120)	66%
2-Fluorobiphenyl (30-115)	73%
Terphenyl-d14 (18-137)	85%

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, 59' Non	Analyzed: Apr 20, 1995
Attention: Marcia Going	Lab Number: 5040627	Reported: Apr 28, 1995

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Acenaphthene	100	N.D.	Dimethyl phthalate	100	N.D.
Acenaphthylene	100	N.D.	4,6-Dinitro-2-methylphenol	250	N.D.
Aniline	150	N.D.	2,4-Dinitrophenol	250	N.D.
Anthracene	100	N.D.	2,4-Dinitrotoluene	100	N.D.
Azobenzene	150	N.D.	2,6-Dinitrotoluene	100	N.D.
Benzidine	1,000	N.D.	Di-N-octyl phthalate	500	N.D.
Benzoic Acid	500	N.D.	Fluoranthene	100	N.D.
Benz(a)anthracene	100	N.D.	Fluorene	100	N.D.
Benzo(b)fluoranthene	200	N.D.	Hexachlorobenzene	100	N.D.
Benzo(k)fluoranthene	200	N.D.	Hexachlorobutadiene	100	N.D.
Benzo(g,h,i)perylene	150	N.D.	Hexachlorocyclopentadiene	500	N.D.
Benzo(a)pyrene	200	N.D.	Hexachloroethane	200	N.D.
Benzyl alcohol	200	N.D.	Indeno(1,2,3-cd)pyrene	200	N.D.
Bis(2-chloroethoxy)methane	100	N.D.	Isophorone	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.	2-Methylnaphthalene	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.	2-Methylphenol	150	N.D.
Bis(2-ethylhexyl)phthalate	250	N.D.	4-Methylphenol	150	N.D.
4-Bromophenyl phenyl ether	150	N.D.	Naphthalene	150	N.D.
Butyl benzyl phthalate	500	N.D.	2-Nitroaniline	200	N.D.
4-Chloroaniline	100	N.D.	3-Nitroaniline	200	N.D.
2-Chloronaphthalene	100	N.D.	4-Nitroaniline	500	N.D.
4-Chloro-3-methylphenol	100	N.D.	Nitrobenzene	500	N.D.
2-Chlorophenol	250	N.D.	2-Nitrophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.	4-Nitrophenol	500	N.D.
Chrysene	100	N.D.	N-Nitrosodiphenylamine	200	N.D.
Dibenz(a,h)anthracene	250	N.D.	N-Nitroso-di-N-propylamine	150	N.D.
Dibenzofuran	100	N.D.	Pentachlorophenol	500	N.D.
Di-N-butyl phthalate	250	N.D.	Phenanthrene	100	N.D.
1,3-Dichlorobenzene	100	N.D.	Phenol	150	N.D.
1,4-Dichlorobenzene	100	N.D.	Pyrene	150	N.D.
1,2-Dichlorobenzene	100	N.D.	1,2,4-Trichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.	2,4,5-Trichlorophenol	150	N.D.
2,4-Dichlorophenol	100	N.D.	2,4,6-Trichlorophenol	150	N.D.
Diethyl phthalate	100	N.D.			
2,4-Dimethylphenol	250	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
2-Fluorophenol (25-121)	71%
Phenol-d6 (24-113)	65%
2,4,6-Tribromophenol (19-122)	82%
Nitrobenzene-d5 (23-120)	65%
2-Fluorobiphenyl (30-115)	76%
Terphenyl-d14 (18-137)	91%

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, 483' Non
Lab Number: 5040628

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 20, 1995
Reported: Apr 28, 1995

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Acenaphthene	100	N.D.	Dimethyl phthalate	100	N.D.
Acenaphthylene	100	N.D.	4,6-Dinitro-2-methylphenol	250	N.D.
Aniline	150	N.D.	2,4-Dinitrophenol	250	N.D.
Anthracene	100	N.D.	2,4-Dinitrotoluene	100	N.D.
Azobenzene	150	N.D.	2,6-Dinitrotoluene	100	N.D.
Benzidine	1,000	N.D.	Di-N-octyl phthalate	500	N.D.
Benzoic Acid	500	N.D.	Fluoranthene	100	N.D.
Benz(a)anthracene	100	N.D.	Fluorene	100	N.D.
Benzo(b)fluoranthene	200	N.D.	Hexachlorobenzene	100	N.D.
Benzo(k)fluoranthene	200	N.D.	Hexachlorobutadiene	100	N.D.
Benzo(g,h,i)perylene	150	N.D.	Hexachlorocyclopentadiene	500	N.D.
Benzo(a)pyrene	200	N.D.	Hexachloroethane	200	N.D.
Benzyl alcohol	200	N.D.	Indeno(1,2,3-cd)pyrene	200	N.D.
Bis(2-chloroethoxy)methane	100	N.D.	Isophorone	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.	2-Methylnaphthalene	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.	2-Methylphenol	150	N.D.
Bis(2-ethylhexyl)phthalate	250	N.D.	4-Methylphenol	150	N.D.
4-Bromophenyl phenyl ether	150	N.D.	Naphthalene	150	N.D.
Butyl benzyl phthalate	500	N.D.	2-Nitroaniline	200	N.D.
4-Chloroaniline	100	N.D.	3-Nitroaniline	200	N.D.
2-Chloronaphthalene	100	N.D.	4-Nitroaniline	500	N.D.
4-Chloro-3-methylphenol	100	N.D.	Nitrobenzene	500	N.D.
2-Chlorophenol	250	N.D.	2-Nitrophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.	4-Nitrophenol	500	N.D.
Chrysene	100	N.D.	N-Nitrosodiphenylamine	200	N.D.
Dibenz(a,h)anthracene	250	N.D.	N-Nitroso-di-N-propylamine	150	N.D.
Dibenzofuran	100	N.D.	Pentachlorophenol	500	N.D.
Di-N-butyl phthalate	250	N.D.	Phenanthrene	100	N.D.
1,3-Dichlorobenzene	100	N.D.	Phenol	150	N.D.
1,4-Dichlorobenzene	100	N.D.	Pyrene	150	N.D.
1,2-Dichlorobenzene	100	N.D.	1,2,4-Trichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.	2,4,5-Trichlorophenol	150	N.D.
2,4-Dichlorophenol	100	N.D.	2,4,6-Trichlorophenol	150	N.D.
Diethyl phthalate	100	N.D.			
2,4-Dimethylphenol	250	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
2 Fluorophenol (25-121)	80%
Phenol-d6 (24-113)	77%
2,4,6-Tribromophenol (19-122)	88%
Nitrobenzene-d5 (23-120)	76%
2-Fluorobiphenyl (30-115)	81%
Terphenyl-d14 (18-137)	95%

Results pertain only to samples tested in the laboratory. This report shall not be

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, Road End Non
Lab Number: 5040630

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 26, 1995
Reported: Apr 28, 1995

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Acenaphthene	100	N.D.	Dimethyl phthalate	100	N.D.
Acenaphthylene	100	N.D.	4,6-Dinitro-2-methylphenol	250	N.D.
Aniline	150	N.D.	2,4-Dinitrophenol	250	N.D.
Anthracene	100	N.D.	2,4-Dinitrotoluene	100	N.D.
Azobenzene	150	N.D.	2,6-Dinitrotoluene	100	N.D.
Benzidine	1,000	N.D.	Di-N-octyl phthalate	500	N.D.
Benzoic Acid	500	N.D.	Fluoranthene	100	N.D.
Benz(a)anthracene	100	N.D.	Fluorene	100	N.D.
Benzo(b)fluoranthene	200	N.D.	Hexachlorobenzene	100	N.D.
Benzo(k)fluoranthene	200	N.D.	Hexachlorobutadiene	100	N.D.
Benzo(g,h,i)perylene	150	N.D.	Hexachlorocyclopentadiene	500	N.D.
Benzo(a)pyrene	200	N.D.	Hexachloroethane	200	N.D.
Benzyl alcohol	200	N.D.	Indeno(1,2,3-cd)pyrene	200	N.D.
Bis(2-chloroethoxy)methane	100	N.D.	Isophorone	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.	2-Methylnaphthalene	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.	2-Methylphenol	150	N.D.
Bis(2-ethylhexyl)phthalate	250	N.D.	4-Methylphenol	150	N.D.
4-Bromophenyl phenyl ether	150	N.D.	Naphthalene	150	N.D.
Butyl benzyl phthalate	500	N.D.	2-Nitroaniline	200	N.D.
4-Chloroaniline	100	N.D.	3-Nitroaniline	200	N.D.
2-Chloronaphthalene	100	N.D.	4-Nitroaniline	500	N.D.
4-Chloro-3-methylphenol	100	N.D.	Nitrobenzene	500	N.D.
2-Chlorophenol	250	N.D.	2-Nitrophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.	4-Nitrophenol	500	N.D.
Chrysene	100	N.D.	N-Nitrosodiphenylamine	200	N.D.
Dibenz(a,h)anthracene	250	N.D.	N-Nitroso-di-N-propylamine	150	N.D.
Dibenzofuran	100	N.D.	Pentachlorophenol	500	N.D.
Di-N-butyl phthalate	250	N.D.	Phenanthrene	100	N.D.
1,3-Dichlorobenzene	100	N.D.	Phenol	150	N.D.
1,4-Dichlorobenzene	100	N.D.	Pyrene	150	N.D.
1,2-Dichlorobenzene	100	N.D.	1,2,4-Trichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.	2,4,5-Trichlorophenol	150	N.D.
2,4-Dichlorophenol	100	N.D.	2,4,6-Trichlorophenol	150	N.D.
Diethyl phthalate	100	N.D.			
2,4-Dimethylphenol	250	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
2-Fluorophenol (25-121)	83%
Phenol-d6 (24-113)	87%
2,4,6-Tribromophenol (19-122)	90%
Nitrobenzene-d5 (23-120)	80%
2-Fluorobiphenyl (30-115)	86%
Terphenyl-d14 (18-137)	82%

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled:	Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received:	Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, 20' Impacted	Analyzed:	Apr 20, 1995
Attention: Marcia Going	Lab Number: 5040626	Reported:	Apr 28, 1995

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Acenaphthene	100	N.D.	Dimethyl phthalate	100	N.D.
Acenaphthylene	100	N.D.	4,6-Dinitro-2-methylphenol	250	N.D.
Aniline	150	N.D.	2,4-Dinitrophenol	250	N.D.
Anthracene	100	N.D.	2,4-Dinitrotoluene	100	N.D.
Azobenzene	150	N.D.	2,6-Dinitrotoluene	100	N.D.
Benzidine	1,000	N.D.	Di-N-octyl phthalate	500	N.D.
Benzoic Acid	500	N.D.	Fluoranthene	100	N.D.
Benz(a)anthracene	100	N.D.	Fluorene	100	N.D.
Benzo(b)fluoranthene	200	N.D.	Hexachlorobenzene	100	N.D.
Benzo(k)fluoranthene	200	N.D.	Hexachlorobutadiene	100	N.D.
Benzo(g,h,i)perylene	150	N.D.	Hexachlorocyclopentadiene	500	N.D.
Benzo(a)pyrene	200	N.D.	Hexachloroethane	200	N.D.
Benzyl alcohol	200	N.D.	Indeno(1,2,3-cd)pyrene	200	N.D.
Bis(2-chloroethoxy)methane	100	N.D.	Isophorone	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.	2-Methylnaphthalene	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.	2-Methylphenol	150	N.D.
Bis(2-ethylhexyl)phthalate	250	N.D.	4-Methylphenol	150	N.D.
4-Bromophenyl phenyl ether	150	N.D.	Naphthalene	150	N.D.
Butyl benzyl phthalate	500	N.D.	2-Nitroaniline	200	N.D.
4-Chloroaniline	100	N.D.	3-Nitroaniline	200	N.D.
2-Chloronaphthalene	100	N.D.	4-Nitroaniline	500	N.D.
4-Chloro-3-methylphenol	100	N.D.	Nitrobenzene	500	N.D.
2-Chlorophenol	250	N.D.	2-Nitrophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.	4-Nitrophenol	500	N.D.
Chrysene	100	N.D.	N-Nitrosodiphenylamine	200	N.D.
Dibenz(a,h)anthracene	250	N.D.	N-Nitroso-di-N-propylamine	150	N.D.
Dibenzofuran	100	N.D.	Pentachlorophenol	500	N.D.
Di-N-butyl phthalate	250	N.D.	Phenanthrene	100	N.D.
1,3-Dichlorobenzene	100	N.D.	Phenol	150	N.D.
1,4-Dichlorobenzene	100	N.D.	Pyrene	150	N.D.
1,2-Dichlorobenzene	100	N.D.	1,2,4-Trichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.	2,4,5-Trichlorophenol	150	N.D.
2,4-Dichlorophenol	100	N.D.	2,4,6-Trichlorophenol	150	N.D.
Diethyl phthalate	100	N.D.			
2,4-Dimethylphenol	250	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
2-Fluorophenol (25-121)	73%
Phenol-d6 (24-113)	69%
2,4,6-Tribromophenol (19-122)	78%
Nitrobenzene-d5 (23-120)	65%
2-Fluorobiphenyl (30-115)	70%
Terphenyl-d14 (18-137)	83%

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, Road End Impacted
Lab Number: 5040629

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 20, 1995
Reported: Apr 28, 1995

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Acenaphthene	100	N.D.	Dimethyl phthalate	100	N.D.
Acenaphthylene	100	N.D.	4,6-Dinitro-2-methylphenol	250	N.D.
Aniline	150	N.D.	2,4-Dinitrophenol	250	N.D.
Anthracene	100	N.D.	2,4-Dinitrotoluene	100	N.D.
Azobenzene	150	N.D.	2,6-Dinitrotoluene	100	N.D.
Benzidine	1,000	N.D.	Di-N-octyl phthalate	500	N.D.
Benzoic Acid	500	N.D.	Fluoranthene	100	N.D.
Benz(a)anthracene	100	N.D.	Fluorene	100	N.D.
Benzo(b)fluoranthene	200	N.D.	Hexachlorobenzene	100	N.D.
Benzo(k)fluoranthene	200	N.D.	Hexachlorobutadiene	100	N.D.
Benzo(g,h,i)perylene	150	N.D.	Hexachlorocyclopentadiene	500	N.D.
Benzo(a)pyrene	200	N.D.	Hexachloroethane	200	N.D.
Benzyl alcohol	200	N.D.	Indeno(1,2,3-cd)pyrene	200	N.D.
Bis(2-chloroethoxy)methane	100	N.D.	Isophorone	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.	2-Methylnaphthalene	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.	2-Methylphenol	150	N.D.
Bis(2-ethylhexyl)phthalate	250	N.D.	4-Methylphenol	150	N.D.
4-Bromophenyl phenyl ether	150	N.D.	Naphthalene	150	N.D.
Butyl benzyl phthalate	500	N.D.	2-Nitroaniline	200	N.D.
4-Chloroaniline	100	N.D.	3-Nitroaniline	200	N.D.
2-Chloronaphthalene	100	N.D.	4-Nitroaniline	500	N.D.
4-Chloro-3-methylphenol	100	N.D.	Nitrobenzene	500	N.D.
2-Chlorophenol	250	N.D.	2-Nitrophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.	4-Nitrophenol	500	N.D.
Chrysene	100	N.D.	N-Nitrosodiphenylamine	200	N.D.
Dibenz(a,h)anthracene	250	N.D.	N-Nitroso-di-N-propylamine	150	N.D.
Dibenzofuran	100	N.D.	Pentachlorophenol	500	N.D.
Di-N-butyl phthalate	250	N.D.	Phenanthrene	100	N.D.
1,3-Dichlorobenzene	100	N.D.	Phenol	150	N.D.
1,4-Dichlorobenzene	100	N.D.	Pyrene	150	N.D.
1,2-Dichlorobenzene	100	N.D.	1,2,4-Trichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.	2,4,5-Trichlorophenol	150	N.D.
2,4-Dichlorophenol	100	N.D.	2,4,6-Trichlorophenol	150	N.D.
Diethyl phthalate	100	N.D.			
2,4-Dimethylphenol	250	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
2-Fluorophenol (25-121)	78%
Phenol-d6 (24-113)	88%
2,4,6-Tribromophenol (19-122)	81%
Nitrobenzene-d5 (23-120)	65%
2-Fluorobiphenyl (30-115)	77%
Terphenyl-d14 (18-137)	125%

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Water, 483' Impacted
Lab Number: 5040631

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 21, 1995
Reported: Apr 28, 1995

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)	Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Acenaphthene	20	N.D.	Dimethyl phthalate	20	N.D.
Acenaphthylene	20	N.D.	4,6-Dinitro-2-methylphenol	80	N.D.
Aniline	20	N.D.	2,4-Dinitrophenol	200	N.D.
Anthracene	20	N.D.	2,4-Dinitrotoluene	20	N.D.
Azobenzene	40	N.D.	2,6-Dinitrotoluene	20	N.D.
Benzidine	200	N.D.	Di-N-octyl phthalate	80	N.D.
Benzoic Acid	200	N.D.	Fluoranthene	20	N.D.
Benz(a)anthracene	20	N.D.	Fluorene	20	N.D.
Benzo(b)fluoranthene	20	N.D.	Hexachlorobenzene	20	N.D.
Benzo(k)fluoranthene	20	N.D.	Hexachlorobutadiene	20	N.D.
Benzo(g,h,i)perylene	20	N.D.	Hexachlorocyclopentadiene	80	N.D.
Benzo(a)pyrene	20	N.D.	Hexachloroethane	20	N.D.
Benzyl alcohol	40	N.D.	Indeno(1,2,3-cd)pyrene	40	N.D.
Bis(2-chloroethoxy)methane	20	N.D.	Isophorone	20	N.D.
Bis(2-chloroethyl)ether	20	N.D.	2-Methylnaphthalene	20	N.D.
Bis(2-chloroisopropyl)ether	20	N.D.	2-Methylphenol	20	N.D.
Bis(2-ethylhexyl)phthalate	40	N.D.	4-Methylphenol	20	N.D.
4-Bromophenyl phenyl ether	20	N.D.	Naphthalene	20	N.D.
Butyl benzyl phthalate	40	N.D.	2-Nitroaniline	40	N.D.
4-Chloroaniline	20	N.D.	3-Nitroaniline	40	N.D.
2-Chloronaphthalene	20	N.D.	4-Nitroaniline	200	N.D.
4-Chloro-3-methylphenol	40	N.D.	Nitrobenzene	80	N.D.
2-Chlorophenol	20	N.D.	2-Nitrophenol	20	N.D.
4-Chlorophenyl phenyl ether	20	N.D.	4-Nitrophenol	200	N.D.
Chrysene	20	N.D.	N-Nitrosodiphenylamine	20	N.D.
Dibenz(a,h)anthracene	40	N.D.	N-Nitroso-di-N-propylamine	20	N.D.
Dibenzofuran	20	N.D.	Pentachlorophenol	80	N.D.
Di-N-butyl phthalate	40	N.D.	Phenanthrene	20	N.D.
1,3-Dichlorobenzene	20	N.D.	Phenol	20	N.D.
1,4-Dichlorobenzene	20	N.D.	Pyrene	20	N.D.
1,2-Dichlorobenzene	20	N.D.	1,2,4-Trichlorobenzene	20	N.D.
3,3-Dichlorobenzidine	80	N.D.	2,4,5-Trichlorophenol	40	N.D.
2,4-Dichlorophenol	20	N.D.	2,4,6-Trichlorophenol	40	N.D.
Diethyl phthalate	20	N.D.			
2,4-Dimethylphenol	40	N.D.			

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Surrogate Standard Recoveries (Accept. Limits):	
2-Fluorophenol (21-100)	63%
Phenol-d6 (10-94)	62%
2,4,6-Tribromophenol (10-123)	81%
Nitrobenzene-d5 (35-114)	61%
2-Fluorobiphenyl (43-116)	72%
Terphenyl-d14 (33-141)	86%

Denise Van Rooy
Project Manager

Results pertain only to samples tested in the laboratory. This report shall not be

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-13

Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Water, Road End Impacted
Lab Number: 5040629

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 21, 1995
Reported: Apr 28, 1995

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)	Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Acenaphthene	21	N.D.	Dimethyl phthalate	21	N.D.
Acenaphthylene	21	N.D.	4,6-Dinitro-2-methylphenol	85	N.D.
Aniline	21	N.D.	2,4-Dinitrophenol	210	N.D.
Anthracene	21	N.D.	2,4-Dinitrotoluene	21	N.D.
Azobenzene	43	N.D.	2,6-Dinitrotoluene	21	N.D.
Benzidine	210	N.D.	Di-N-octyl phthalate	85	N.D.
Benzoic Acid	210	N.D.	Fluoranthene	21	N.D.
Benz(a)anthracene	21	N.D.	Fluorene	21	N.D.
Benzo(b)fluoranthene	21	N.D.	Hexachlorobenzene	21	N.D.
Benzo(k)fluoranthene	21	N.D.	Hexachlorobutadiene	21	N.D.
Benzo(g,h,i)perylene	21	N.D.	Hexachlorocyclopentadiene	85	N.D.
Benzo(a)pyrene	21	N.D.	Hexachloroethane	21	N.D.
Benzyl alcohol	43	N.D.	Indeno(1,2,3-cd)pyrene	43	N.D.
Bis(2-chloroethoxy)methane	21	N.D.	Isophorone	21	N.D.
Bis(2-chloroethyl)ether	21	N.D.	2-Methylnaphthalene	21	N.D.
Bis(2-chloroisopropyl)ether	21	N.D.	2-Methylphenol	21	N.D.
Bis(2-ethylhexyl)phthalate	43	N.D.	4-Methylphenol	21	N.D.
4-Bromophenyl phenyl ether	21	N.D.	Naphthalene	21	N.D.
Butyl benzyl phthalate	43	N.D.	2-Nitroaniline	43	N.D.
4-Chloroaniline	21	N.D.	3-Nitroaniline	43	N.D.
2-Chloronaphthalene	21	N.D.	4-Nitroaniline	210	N.D.
4-Chloro-3-methylphenol	43	N.D.	Nitrobenzene	85	N.D.
2-Chlorophenol	21	N.D.	2-Nitrophenol	21	N.D.
4-Chlorophenyl phenyl ether	21	N.D.	4-Nitrophenol	210	N.D.
Chrysene	21	N.D.	N-Nitrosodiphenylamine	21	N.D.
Dibenz(a,h)anthracene	43	N.D.	N-Nitroso-di-N-propylamine	21	N.D.
Dibenzofuran	21	N.D.	Pentachlorophenol	85	N.D.
Di-N-butyl phthalate	43	N.D.	Phenanthrene	21	N.D.
1,3-Dichlorobenzene	21	N.D.	Phenol	21	N.D.
1,4-Dichlorobenzene	21	N.D.	Pyrene	21	N.D.
1,2-Dichlorobenzene	21	N.D.	1,2,4-Trichlorobenzene	21	N.D.
3,3-Dichlorobenzidine	85	N.D.	2,4,5-Trichlorophenol	43	N.D.
2,4-Dichlorophenol	21	N.D.	2,4,6-Trichlorophenol	43	N.D.
Diethyl phthalate	21	N.D.			
2,4-Dimethylphenol	43	N.D.			

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.128.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Surrogate Standard Recoveries (Accept. Limits):	
2-Fluorophenol (21-100)	63%
Phenol-d6 (10-94)	64%
2,4,6-Tribromophenol (10-123)	89%
Nitrobenzene-d5 (35-114)	67%
2-Fluorobiphenyl (43-116)	75%
Terphenyl-d14 (33-141)	92%

Denise Van Rooy
Project Manager

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, 18' non	Analyzed: Apr 19, 1995
Attention: Marcia Going	Lab Number: 5040625	Reported: Apr 28, 1995

ORGANOCHLORINE PESTICIDES AND PCBs (EPA 8080)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Aldrin	5.0	N.D.
alpha-BHC	5.0	N.D.
beta-BHC	5.0	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	5.0	N.D.
Chlordane	10	N.D.
4,4'-DDD	10	N.D.
4,4'-DDE	5.0	N.D.
4,4'-DDT	10	N.D.
Dieldrin	5.0	N.D.
Endosulfan I	10	N.D.
Endosulfan II	5.0	N.D.
Endosulfan sulfate	50	N.D.
Endrin	10	N.D.
Endrin aldehyde	15	N.D.
Heptachlor	5.0	N.D.
Heptachlor epoxide	5.0	N.D.
Methoxychlor	150	N.D.
Toxaphene	180	N.D.
PCB-1016	50	N.D.
PCB-1221	50	N.D.
PCB-1232	50	N.D.
PCB-1242	50	N.D.
PCB-1248	50	N.D.
PCB-1254	50	N.D.
PCB-1260	50	N.D.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, 59' non
Lab Number: 5040627

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 19, 1995
Reported: Apr 28, 1995

ORGANOCHLORINE PESTICIDES AND PCBs (EPA 8080)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Aldrin	5.0	N.D.
alpha-BHC	5.0	N.D.
beta-BHC	5.0	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	5.0	N.D.
Chlordane	10	N.D.
4,4'-DDD	10	N.D.
4,4'-DDE	5.0	N.D.
4,4'-DDT	10	N.D.
Dieldrin	5.0	N.D.
Endosulfan I	10	N.D.
Endosulfan II	5.0	N.D.
Endosulfan sulfate	50	N.D.
Endrin	10	N.D.
Endrin aldehyde	15	N.D.
Heptachlor	5.0	N.D.
Heptachlor epoxide	5.0	N.D.
Methoxychlor	150	N.D.
Toxaphene	180	N.D.
PCB-1016	50	N.D.
PCB-1221	50	N.D.
PCB-1232	50	N.D.
PCB-1242	50	N.D.
PCB-1248	50	N.D.
PCB-1254	50	N.D.
PCB-1260	50	N.D.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, 483' non	Analyzed: Apr 19, 1995
Attention: Marcia Going	Lab Number: 5040628	Reported: Apr 28, 1995

ORGANOCHLORINE PESTICIDES AND PCBs (EPA 8080)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Aldrin	5.0	N.D.
alpha-BHC	5.0	N.D.
beta-BHC	5.0	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	5.0	N.D.
Chlordane	10	N.D.
4,4'-DDD	10	N.D.
4,4'-DDE	5.0	N.D.
4,4'-DDT	10	N.D.
Dieldrin	5.0	N.D.
Endosulfan I	10	N.D.
Endosulfan II	5.0	N.D.
Endosulfan sulfate	50	N.D.
Endrin	10	N.D.
Endrin aldehyde	15	N.D.
Heptachlor	5.0	N.D.
Heptachlor epoxide	5.0	N.D.
Methoxychlor	150	N.D.
Toxaphene	180	N.D.
PCB-1016	50	N.D.
PCB-1221	50	N.D.
PCB-1232	50	N.D.
PCB-1242	50	N.D.
PCB-1248	50	N.D.
PCB-1254	50	N.D.
PCB-1260	50	N.D.

Analysis completed at Del Mar AnalyticalHRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled:	Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received:	Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, Road End Non	Analyzed:	Apr 26, 1995
Attention: Marcia Going	Lab Number: 5040630	Reported:	Apr 28, 1995

ORGANOCHLORINE PESTICIDES AND PCBs (EPA 8080)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Aldrin	5.0	N.D.
alpha-BHC	5.0	N.D.
beta-BHC	5.0	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	5.0	N.D.
Chlordane	10	N.D.
4,4'-DDD	10	N.D.
4,4'-DDE	5.0	N.D.
4,4'-DDT	10	N.D.
Dieldrin	5.0	N.D.
Endosulfan I	10	N.D.
Endosulfan II	5.0	N.D.
Endosulfan sulfate	50	N.D.
Endrin	10	N.D.
Endrin aldehyde	15	N.D.
Heptachlor	5.0	N.D.
Heptachlor epoxide	5.0	N.D.
Methoxychlor	150	N.D.
Toxaphene	180	N.D.
PCB-1016	50	N.D.
PCB-1221	50	N.D.
PCB-1232	50	N.D.
PCB-1242	50	N.D.
PCB-1248	50	N.D.
PCB-1254	50	N.D.
PCB-1260	50	N.D.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, 20' impacted	Analyzed: Apr 19, 1995
Attention: Marcia Going	Lab Number: 5040626	Reported: Apr 28, 1995

ORGANOCHLORINE PESTICIDES AND PCBs (EPA 8080)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Aldrin	5.0	N.D.
alpha-BHC	5.0	N.D.
beta-BHC	5.0	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	5.0	N.D.
Chlordane	10	N.D.
4,4'-DDD	10	N.D.
4,4'-DDE	5.0	N.D.
4,4'-DDT	10	N.D.
Dieldrin	5.0	N.D.
Endosulfan I	10	N.D.
Endosulfan II	5.0	N.D.
Endosulfan sulfate	50	N.D.
Endrin	10	N.D.
Endrin aldehyde	15	N.D.
Heptachlor	5.0	N.D.
Heptachlor epoxide	5.0	N.D.
Methoxychlor	150	N.D.
Toxaphene	180	N.D.
PCB-1016	50	N.D.
PCB-1221	50	N.D.
PCB-1232	50	N.D.
PCB-1242	50	N.D.
PCB-1248	50	N.D.
PCB-1254	50	N.D.
PCB-1260	50	N.D.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, Road End Impacted	Analyzed: Apr 19, 1995
Attention: Marcia Going	Lab Number: 5040629	Reported: Apr 28, 1995

ORGANOCHLORINE PESTICIDES AND PCBs (EPA 8080)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Aldrin	5.0	N.D.
alpha-BHC	5.0	N.D.
beta-BHC	5.0	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	5.0	N.D.
Chlordane	10	N.D.
4,4'-DDD	10	N.D.
4,4'-DDE	5.0	N.D.
4,4'-DDT	10	N.D.
Dieldrin	5.0	N.D.
Endosulfan I	10	N.D.
Endosulfan II	5.0	N.D.
Endosulfan sulfate	50	N.D.
Endrin	10	N.D.
Endrin aldehyde	15	N.D.
Heptachlor	5.0	N.D.
Heptachlor epoxide	5.0	N.D.
Methoxychlor	150	N.D.
Toxaphene	180	N.D.
PCB-1016	50	N.D.
PCB-1221	50	N.D.
PCB-1232	50	N.D.
PCB-1242	50	N.D.
PCB-1248	50	N.D.
PCB-1254	50	N.D.
PCB-1260	50	N.D.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Water, 483' Impacted	Analyzed: Apr 20, 1995
Attention: Marcia Going	Lab Number: 5040631	Reported: Apr 28, 1995

ORGANOCHLORINE PESTICIDES AND PCBs (EPA 8080)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Aldrin	0.10	N.D.
alpha-BHC	0.050	N.D.
beta-BHC	0.050	N.D.
delta-BHC	0.40	N.D.
gamma-BHC (Lindane)	0.050	N.D.
Chlordane	0.15	N.D.
4,4'-DDD	0.10	N.D.
4,4'-DDE	0.050	N.D.
4,4'-DDT	0.10	N.D.
Dieldrin	0.10	N.D.
Endosulfan I	0.15	N.D.
Endosulfan II	0.10	N.D.
Endosulfan sulfate	0.75	N.D.
Endrin	0.10	N.D.
Endrin aldehyde	0.25	N.D.
Heptachlor	0.10	N.D.
Heptachlor epoxide	0.10	N.D.
Methoxychlor	10	N.D.
Toxaphene	0.50	N.D.
PCB-1016	1.0	N.D.
PCB-1221	1.0	N.D.
PCB-1232	1.0	N.D.
PCB-1242	1.0	N.D.
PCB-1248	1.0	N.D.
PCB-1254	1.0	N.D.
PCB-1260	1.0	N.D.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Water, Road End Impacted
Lab Number: 5040629

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 20, 1995
Reported: Apr 28, 1995

ORGANOCHLORINE PESTICIDES AND PCBs (EPA 8080)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Aldrin	0.10	N.D.
alpha-BHC	0.050	N.D.
beta-BHC	0.050	N.D.
delta-BHC	0.40	N.D.
gamma-BHC (Lindane)	0.050	N.D.
Chlordane	0.15	N.D.
4,4'-DDD	0.10	N.D.
4,4'-DDE	0.050	N.D.
4,4'-DDT	0.10	N.D.
Dieldrin	0.10	N.D.
Endosulfan I	0.15	N.D.
Endosulfan II	0.10	N.D.
Endosulfan sulfate	0.75	N.D.
Endrin	0.10	N.D.
Endrin aldehyde	0.25	N.D.
Heptachlor	0.10	N.D.
Heptachlor epoxide	0.10	N.D.
Methoxychlor	10	N.D.
Toxaphene	0.50	N.D.
PCB-1016	1.0	N.D.
PCB-1221	1.0	N.D.
PCB-1232	1.0	N.D.
PCB-1242	1.0	N.D.
PCB-1248	1.0	N.D.
PCB-1254	1.0	N.D.
PCB-1260	1.0	N.D.

Analysis completed at Del Mar Analytical-IRVINE (AZ0428)

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, 18' non
Lab Number: 5040625

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 18, 1995
Reported: Apr 28, 1995

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromochloromethane	5.0	N.D.	Methylene chloride	10	N.D.
Bromodichloromethane	2.0	N.D.	Naphthalene	5.0	N.D.
Bromoform	2.0	N.D.	n-Propylbenzene	2.0	N.D.
Bromomethane	5.0	N.D.	Styrene	2.0	N.D.
n-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
sec-Butylbenzene	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	Tetrachloroethene	2.0	N.D.
Carbon tetrachloride	5.0	N.D.	Toluene	2.0	N.D.
Chlorobenzene	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloroethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
Chloroform	2.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
Chloromethane	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
2-Chlorotoluene	5.0	N.D.	Trichloroethene	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
Dibromochloromethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
Dibromomethane	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	m,p-Xylenes	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.			
Dichlorodifluoromethane	5.0	N.D.			
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
Ethylbenzene	2.0	N.D.			
Hexachlorobutadiene	5.0	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.
Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	100%
Toluene-d8 (81-117)	101%
4-Bromofluorobenzene (74-121)	98%

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, 59' non	Analyzed: Apr 18, 1995
Attention: Marcia Going	Lab Number: 5040627	Reported: Apr 28, 1995

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromochloromethane	5.0	N.D.	Methylene chloride	10	N.D.
Bromodichloromethane	2.0	N.D.	Naphthalene	5.0	N.D.
Bromoform	2.0	N.D.	n-Propylbenzene	2.0	N.D.
Bromomethane	5.0	N.D.	Styrene	2.0	N.D.
n-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
sec-Butylbenzene	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	Tetrachloroethene	2.0	N.D.
Carbon tetrachloride	5.0	N.D.	Toluene	2.0	N.D.
Chlorobenzene	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloroethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
Chloroform	2.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
Chloromethane	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
2-Chlorotoluene	5.0	N.D.	Trichloroethene	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
Dibromochloromethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
Dibromomethane	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	m,p-Xylenes	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.			
Dichlorodifluoromethane	5.0	N.D.			
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
Ethylbenzene	2.0	N.D.			
Hexachlorobutadiene	5.0	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	99%
Toluene-d8 (81-117)	100%
4-Bromofluorobenzene (74-121)	86%

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, 483' non	Analyzed: Apr 18, 1995
Attention: Marcia Going	Lab Number: 5040628	Reported: Apr 28, 1995

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromochloromethane	5.0	N.D.	Methylene chloride	10	N.D.
Bromodichloromethane	2.0	N.D.	Naphthalene	5.0	N.D.
Bromoform	2.0	N.D.	n-Propylbenzene	2.0	N.D.
Bromomethane	5.0	N.D.	Styrene	2.0	N.D.
n-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
sec-Butylbenzene	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	Tetrachloroethene	2.0	N.D.
Carbon tetrachloride	5.0	N.D.	Toluene	2.0	N.D.
Chlorobenzene	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloroethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
Chloroform	2.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
Chloromethane	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
2-Chlorotoluene	5.0	N.D.	Trichloroethene	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
Dibromochloromethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
Dibromomethane	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	m,p-Xylenes	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.			
Dichlorodifluoromethane	5.0	N.D.			
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
Ethylbenzene	2.0	N.D.			
Hexachlorobutadiene	5.0	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	101%
Toluene-d8 (81-117)	99%
4-Bromofluorobenzene (74-121)	85%

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, Road End Non	Analyzed: Apr 27, 1995
Attention: Marcia Going	Lab Number: 5040630	Reported: Apr 28, 1995

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromochloromethane	5.0	N.D.	Methylene chloride	10	N.D.
Bromodichloromethane	2.0	N.D.	Naphthalene	5.0	N.D.
Bromoform	2.0	N.D.	n-Propylbenzene	2.0	N.D.
Bromomethane	5.0	N.D.	Styrene	2.0	N.D.
n-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
sec-Butylbenzene	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	Tetrachloroethene	2.0	N.D.
Carbon tetrachloride	5.0	N.D.	Toluene	2.0	N.D.
Chlorobenzene	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloroethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
Chloroform	2.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
Chloromethane	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
2-Chlorotoluene	5.0	N.D.	Trichloroethene	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
Dibromochloromethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
Dibromomethane	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	m,p-Xylenes	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.			
Dichlorodifluoromethane	5.0	N.D.			
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
Ethylbenzene	2.0	N.D.			
Hexachlorobutadiene	5.0	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection

Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	104%
Toluene-d8 (81-117)	100%
4-Bromofluorobenzene (74-121)	87%

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Soil, 20' impacted
Lab Number: 5040626

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 18, 1995
Reported: Apr 28, 1995

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromochloromethane	5.0	N.D.	Methylene chloride	10	N.D.
Bromodichloromethane	2.0	N.D.	Naphthalene	5.0	N.D.
Bromoform	2.0	N.D.	n-Propylbenzene	2.0	N.D.
Bromomethane	5.0	N.D.	Styrene	2.0	N.D.
n-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
sec-Butylbenzene	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	Tetrachloroethene	2.0	N.D.
Carbon tetrachloride	5.0	N.D.	Toluene	2.0	N.D.
Chlorobenzene	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloroethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
Chloroform	2.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
Chloromethane	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
2-Chlorotoluene	5.0	N.D.	Trichloroethene	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
Dibromochloromethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
Dibromomethane	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	m,p-Xylenes	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.			
Dichlorodifluoromethane	5.0	N.D.			
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
Ethylbenzene	2.0	N.D.			
Hexachlorobutadiene	5.0	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.
Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	107%
Toluene-d8 (81-117)	99%
4-Bromofluorobenzene (74-121)	84%

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Westates Carbon Arizona	Client Project ID: Lift Station Release	Sampled: Apr 17, 1995
2523 Mutahar St., P.O. Box E		Received: Apr 17, 1995
Parker, AZ 85344	Sample Descript: Soil, Road End Impacted	Analyzed: Apr 18, 1995
Attention: Marcia Going	Lab Number: 5040629	Reported: Apr 28, 1995

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Detection Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromochloromethane	5.0	N.D.	Methylene chloride	10	N.D.
Bromodichloromethane	2.0	N.D.	Naphthalene	5.0	N.D.
Bromoform	2.0	N.D.	n-Propylbenzene	2.0	N.D.
Bromomethane	5.0	N.D.	Styrene	2.0	N.D.
n-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
sec-Butylbenzene	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	Tetrachloroethene	2.0	N.D.
Carbon tetrachloride	5.0	N.D.	Toluene	2.0	N.D.
Chlorobenzene	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloroethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
Chloroform	2.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
Chloromethane	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
2-Chlorotoluene	5.0	N.D.	Trichloroethene	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
Dibromochloromethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
Dibromomethane	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	m,p-Xylenes	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.			
Dichlorodifluoromethane	5.0	N.D.			
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
Ethylbenzene	2.0	N.D.			
Hexachlorobutadiene	5.0	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.
Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	103%
Toluene-d8 (81-117)	101%
4-Bromofluorobenzene (74-121)	84%

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Water, 483' impacted
Lab Number: 5040631

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 18, 1995
Reported: Apr 28, 1995

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)	Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	2.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromochloromethane	5.0	N.D.	Methylene chloride	10	N.D.
Bromodichloromethane	2.0	N.D.	Naphthalene	5.0	N.D.
Bromoform	2.0	N.D.	n-Propylbenzene	2.0	N.D.
Bromomethane	5.0	N.D.	Styrene	2.0	N.D.
n-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
sec-Butylbenzene	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	Tetrachloroethene	2.0	N.D.
Carbon tetrachloride	5.0	N.D.	Toluene	2.0	N.D.
Chlorobenzene	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloroethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
Chloroform	2.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
Chloromethane	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
2-Chlorotoluene	5.0	N.D.	Trichloroethene	2.0	N.D
4-Chlorotoluene	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
Dibromochloromethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
Dibromomethane	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	m,p-Xylenes	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.			
Dichlorodifluoromethane	5.0	N.D.			
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
Ethylbenzene	2.0	N.D.			
Hexachlorobutadiene	5.0	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.
Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (86-118)	103%
Toluene-d8 (88-110)	99%
4-Bromofluorobenzene (86-115)	87%

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Westates Carbon Arizona
2523 Mutahar St., P.O. Box E
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Lift Station Release
Sample Descript: Water, Road End Impacted
Lab Number: 5040629

Sampled: Apr 17, 1995
Received: Apr 17, 1995
Analyzed: Apr 18, 1995
Reported: Apr 28, 1995

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)	Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Benzene	2.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromochloromethane	5.0	N.D.	Methylene chloride	10	N.D.
Bromodichloromethane	2.0	N.D.	Naphthalene	5.0	N.D.
Bromoform	2.0	N.D.	n-Propylbenzene	2.0	N.D.
Bromomethane	5.0	N.D.	Styrene	2.0	N.D.
n-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
sec-Butylbenzene	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	Tetrachloroethene	2.0	N.D.
Carbon tetrachloride	5.0	N.D.	Toluene	2.0	N.D.
Chlorobenzene	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloroethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
Chloroform	2.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
Chloromethane	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
2-Chlorotoluene	5.0	N.D.	Trichloroethene	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
Dibromochloromethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
Dibromomethane	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	m,p-Xylenes	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.			
Dichlorodifluoromethane	5.0	N.D.			
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
Ethylbenzene	2.0	N.D.			
Hexachlorobutadiene	5.0	N.D.			

Analytes reported as N.D. were not present above the stated limit of detection.
Analysis was completed at Del Mar Analytical-IRVINE (AZ0428)
DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Denise Van Rooy
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (86-118)	104%
Toluene-d8 (88-110)	102%
4-Bromofluorobenzene (86-115)	88%

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Inc.	Client Project ID: Soil Samples & Monthly Monitoring	Sampled: May 24, 1995
2523 Mutahar Street		Received: May 26, 1995
Parker, AZ 85344	Sample Descript: Soil, Non-Impacted Soil	Extracted: Jun 6, 1995
Attention: Marcia Going	Lab Number: EE03525	Analyzed: Jun 6, 1995
		Reported: Jun 12, 1995

LABORATORY ANALYSIS

Analyte	EPA Method	STLC Max. Limit mg/L (ppm)	TTLC Max. Limit mg/Kg (ppm)	Detection Limit mg/Kg (ppm)		TTLC Sample Result mg/Kg (ppm)
Barium	6010	100	10000	0.50		33
Cadmium	6010	1.0	100	0.10		N.D.
Chromium, total	6010	560	2500	0.50		2.1
Lead	6010	5.0	1000	1.0		3.4

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Jon Butler
Project Manager

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Inc.	Client Project ID: Soil Samples & Monthly Monitoring	Sampled: May 24, 1995
2523 Mutahar Street		Received: May 26, 1995
Parker, AZ 85344	Sample Descript: Soil, Impacted Soil	Extracted: Jun 6, 1995
Attention: Marcia Going	Lab Number: EE03524	Analyzed: Jun 6, 1995
		Reported: Jun 12, 1995

LABORATORY ANALYSIS

Analyte	EPA Method	STLC Max. Limit mg/L (ppm)	TTLC Max. Limit mg/Kg (ppm)	Detection Limit mg/Kg (ppm)		TTLC Sample Result mg/Kg (ppm)
Barium	6010	100	10000	0.50		60
Cadmium	6010	1.0	100	0.10		N.D.
Chromium, total	6010	560	2500	0.50		3.1
Lead	6010	5.0	1000	1.0		4.0

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Jon Butler
Project Manager

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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Inc.
2523 Mutahar Street
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Soil Samples & Montly Monitoring
Sample Descript: Soil
First Sample #: EF01710

Sampled: May 22, 1995
Received: May 26, 1995
Extracted: Jun 15, 1995
Analyzed: Jun 16, 1995
Reported: Jun 16, 1995

BARIUM (EPA 6010)

Laboratory Number	Sample Description	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
EF01710	Non-Impacted 18'	0.50	69
EF01711	Non-Impacted 60'	0.50	66
EF01712	Non-Impacted 40'	0.50	190
EF01713	Impacted 1	0.50	53
EF01714	Impacted 2	0.50	68
EF01715	Impacted 3	0.50	61
EF01716	Impacted 4	0.50	72

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Dan Harbs
Project Manager

Results pertain only to samples tested in the laboratory. The report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

US EPA ARCHIVE DOCUMENT

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Inc.
2523 Mutahar Street
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Soil Samples & Montly Monitoring
Sample Descript: Soil
First Sample #: EF01710

Sampled: May 22, 1995
Received: May 26, 1995
Extracted: Jun 15, 1995
Analyzed: Jun 16, 1995
Reported: Jun 16, 1995

CADMIUM (EPA 6010)

Laboratory Number	Sample Description	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
EF01710	Non-Impacted 18'	0.10	N.D.
EF01711	Non-Impacted 60'	0.10	N.D.
EF01712	Non-Impacted 40'	0.10	N.D.
EF01713	Impacted 1	0.10	N.D.
EF01714	Impacted 2	0.10	N.D.
EF01715	Impacted 3	0.10	N.D.
EF01716	Impacted 4	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Dan Harbs
Project Manager

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Del Mar Analytical

2852 Alton Irvine, CA 92714 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Inc.
2523 Mutahar Street
Parker, AZ 85344
Attention: Marcia Going

Client Project ID: Soil Samples & Montly Monitoring
Sample Descript: Soil
First Sample #: EF01710

Sampled: May 22, 1995
Received: May 26, 1995
Extracted: Jun 15, 1995
Analyzed: Jun 16, 1995
Reported: Jun 16, 1995

CHROMIUM (EPA 6010)

Laboratory Number	Sample Description	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
EF01710	Non-Impacted 18'	0.50	6.1
EF01711	Non-Impacted 60'	0.50	5.3
EF01712	Non-Impacted 40'	0.50	5.9
EF01713	Impacted 1	0.50	4.5
EF01714	Impacted 2	0.50	4.4
EF01715	Impacted 3	0.50	5.1
EF01716	Impacted 4	0.50	7.2

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Dan Harbs
Project Manager

Results pertain only to samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

US EPA ARCHIVE DOCUMENT

Del Mar Analytical

2852 Alton[redacted]vine, CA 92714 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370 1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Westates Carbon Inc.	Client Project ID: Soil Samples & Montly Monitoring	Sampled: May 22, 1995
2523 Mutahar Street		Received: May 26, 1995
Parker, AZ 85344	Sample Descript: Soil	Extracted: Jun 15, 1995
Attention: Marcia Going	First Sample #: EF01710	Analyzed: Jun 16, 1995
		Reported: Jun 16, 1995

LEAD (EPA 6010)

Laboratory Number	Sample Description	Detection Limit mg/Kg (ppm)	Sample Result mg/Kg (ppm)
EF01710	Non-Impacted 18'	0.50	3.3
EF01711	Non-Impacted 60'	0.50	3.6
EF01712	Non-Impacted 40'	0.50	15
EF01713	Impacted 1	0.50	2.7
EF01714	Impacted 2	0.50	2.8
EF01715	Impacted 3	0.50	2.8
EF01716	Impacted 4	0.50	3.6

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Dan Harbs
Project Manager

Results pertain only to samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

U.S. FILTER

U.S. FILTER/WESTATES
2523 MUTAHAR STREET
POST OFFICE BOX E
PARKER, AZ 85344

TELEPHONE 520-669-5758
FACSIMILE 520-669-5775

October 5, 1998

La Paz County Emergency Services
1112 Joshua Avenue
Suite 207
Parker Arizona 85344
Attn. Larry Riesland
Acting Local Emergency Planning Coordinator

RE: WESTATES CARBON-ARIZONA, INC. – NOTICE OF IMPLEMENTATION OF CONTINGENCY PLAN IN ACCORDANCE WITH THE EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT

To Larry Riesland:

On September 26th 1998, Westates Carbon-Arizona, Inc. experienced a spill from a truck on site that contained recycle water from the plant that is used to slurry hazardous spent carbon in the treatment process.

The occurrence was caused by a truck driver turning the valve to air out his lines and accidently discharging the water onto the soil just outside the main gate of the plant.

As a requirement of The Emergency Planning and Community Right to Know Act Westates Carbon-Arizona, Inc. is submitting the following attached report.

Please do not hesitate to call me at (520)-669-5758 if you have any questions.

Sincerely,

Monte McCue
Plant Manager

US EPA ARCHIVE DOCUMENT

US Filter/Westates
September 26, 1998 Incident Report

REPORT REQUIREMENT	INFORMATION ON THE INCIDENT
1. The identity of any substance in the release	Motive water used in the treatment process.
2.Indication of whether the substances are extremely hazardous substances	The motive water is not an extremely hazardous substance, but could contain trace quantities of some such substances.
3. An estimate of the quantity of each substance that was released into the environment	Approximately 100 gallons of motive water were released.
4. The time and duration of the release	The release occurred at approximately 2:00 pm and lasted <5 minutes.
5. The medium or media into which the release occurred	The media included soil and rocks just outside the receiving gate for the plant.
6. Any known or anticipated acute or chronic health risks associated with the emergency and, where appropriate, advice regarding medical attention necessary for exposed materials.	There is no evidence there should be a health hazard to anyone coming in contact with the impacted soil or the water.
7. Proper precautions to take as a result of the release.	The impacted soil was removed immediately and stored at the facility warehouse. All precautions were taken during the cleanup. There is no evidence that there should be any special precautions taken by any individual.
8. The name and telephone number of the person or persons to be contacted for further information.	Monte McCue (520)-669-5758.
9. Actions taken to respond to and contain the release.	Several properly trained USF/Westates employees immediately responded with contents of the spill kit to absorb and contain the released material.

US EPA ARCHIVE DOCUMENT

I 0008 790060

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A Z D 9 8 2 4 4 1 2 6 3 — Manifest Document No. 1 2 2 3 9

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Westates Carbon Arizona, Inc.
P.O. Box E
Parker, AZ 85344
4. Generator's Phone (520) 669-5758

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: Allwaste Transportation/Remediation
6. US EPA ID Number: C A D 9 8 0 5 8 4 5 1 0
C. State Transporter's ID
D. Transporter's Phone (602) 252-1186

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
APTUS (Laidlaw Env. Servs.)
11600 North Aptus Road
Aragonite, UT 84029
10. US EPA ID Number: U T D 9 8 1 5 5 2 1 7 7
G. State Facility's ID: UTD981552177
H. Facility's Phone (801) 531-4200

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE, SOLID, N.O.S. (F001,F003),, 9, NA3077, PGIII	X	0 5 6	D M	0 3 0 8 0	G	See Attached
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
11(A) - Profile Number AP406947
P.O. Number 980756
Additonal EPA Waste Codes are attached with manifest.
(VAN 383970)

K. Handling Codes for Wastes Listed Above
07

15. Special Handling Instructions and Additional Information
Wear Appropriate Safty Equipment - Use Guide #171 The Waste Identified in Line 11(A) must
24 - Hour Emergency Number (520) 669-5758 Ext. 16 be managed in accordance with subpart FF
Regulations. (Per 40 CFR Part 61)

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Roy Provins	Roy Provins	11	12	98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
John Dorman	John Dorman	11	23	98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Kevin E. Sund	Kevin E Sund	10	10	98

GENERATOR

TRANSPORTER

Style F15 Labelmaster, An American Labelmark Co., Chicago, IL 60646 (800) 621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

PRINTED ON RECYCLED PAPER PRINTED WITH

safety-kleen

MATERIAL PROFILE

3008812

Safety-Kleen (SK) Use Only	Bill To: ☐ Same as "A" or ☐ Service Center	Customer Number:	SK Line Of Business #:	Facility Profile #:

A. GENERATOR INFORMATION

☒ *Check if Billing Information is same as Generator Information*

Generator Name: Westates Carbon
Facility Address (No P.O. Box): 2523 Mutahar St.
City/State/Zip: Parker · Arizona · 85344
Technical Contact: Roy Provins
Phone: 520-669-5758 Fax: 520-669-5775
Generator Location *(If different from Facility Address)*:

Billing Company:
Billing Address:
City/State/Zip:
Billing Contact:
Phone: Fax:

☐ CESQG ☐ SQG US EPA ID #: AZ0982441263 State Generating ID #:
SIC Code: 4953 Origin Code: ☐1 ☐2 ☐3 ☐4 ☐5 Source Code: A 74 Form Code: B 301 System Code: M 043

B. SHIPPING INFORMATION

☐ *DOT Assistance Requested* ☐ *Check if SK Transportation Services are requested*

US DOT Proper Shipping Name: RQ Hazardous Waste solid n.o.s.
Hazard Class / Division #: 9 ID # (UN / (NA)) 3077 Packing Group (PG): III RQ:

Non-Bulk Shipping Containers

Size		Steel	Poly	Fiber	Quantity	Frequency
55	Gal	☒	☐	☐	66	1 time
____	Gal	☐	☐	☐		
____	Gal	☐	☐	☐		
____	Gal	☐	☐	☐		
Other						

Bulk Shipping Containers

Container Type	Quantity & Size	Frequency
☐ Yd. Box *or* ☐ Super Sack		
☐ Hard Top *or* ☐ Tarped Bin		
☐ End Dump (Tarped) Trailer		
☐ Tank *or* ☐ Vacuum Trailer		
Other		

C. GENERAL MATERIAL & REGULATORY INFORMATION

Name of Material: Soil & rocks
Process Generating The Material: Spill of facility motive water

Yes	No		Yes	No	
☐	☒	Regulated or Licensed Radioactive Waste	☐	☒	Exempt Waste; If Yes, list reference 40 CFR ____
☐	☒	Regulated Medical / Infectious Waste	☐	☒	State Hazardous Waste; State Code ____
☒	☐	Waste Subject To Benzene NESHAP Regulations	☐	☒	Commingled Waste (Two or more hazardous wastes mixed as one)
☐	☒	TSCA Regulated PCB Waste *(List any PCB level in Sec. D)*	☐	☒	Meets LDR Standards or ☐ Partially Meets (For Landfill Only)
☐	☒	Regulated Subpart CC Waste (VOC's ≥ 500 ppm)	☒	☐	EPA Hazardous Waste
☐	☒	Regulated Ozone Depleting Substance			
☐	☒	CERCLA Regulated (Superfund) Waste			
☐	☒	Hazardous Debris (Subject to alternative LDR treatment standards)			

EPA Waste Codes (including any LDR subcategories, e.g., D003 Water Reactive):
See attached list (Receives all Facility received codes)

D. MATERIAL COMPOSITION

Note: List ALL DETECTABLE COMPONENTS by chemical name; e.g., acetone, asbestos, trichloroethylene; list specific dioxins, OSHA carcinogens, PCB's, pesticides, VOC's by chemical name; plus any other material, e.g., sorbent, specific debris type & size.

Material Components & Composition	ppm	☐ wt % ☐ Vol %	Material Components & Composition	ppm	☐ wt % ☐ Vol %
Soil & rocks (About 2/3 of the drums contain soil, 1/3 rocks) No detectable contamination		100%			

☐ Check if you have attached Material Safety Data Sheets (MSDS) and/or additional information concerning this waste. Range Total ≥ 100 %

SALES REPRESENTATIVE

US EPA ARCHIVE DOCUMENT

3008812

E. REACTIVE CHARACTERISTICS

☐ *Check if this waste exhibits No Reactive Characteristics*

Yes	No		Yes	No		Yes	No		Yes	No	
☐	☒	Explosive	☐	☒	Oxidizer	☐	☒	Acid Reactive	☐	☒	Reactive Sulfide _____ ppm
☐	☒	Shock Sensitive	☐	☒	Water Reactive	☐	☒	Alkaline Reactive	☐	☒	Polymerizable
☐	☒	Pyrophoric	☐	☒	Air Reactive	☐	☒	Reactive Cyanide _____ ppm	☐	☒	Other Incompatibles List Below

F. MATERIAL PHYSICAL CHARACTERISTICS @ 70°F.

# of Phases	1	Color	Brown	Flash Point _____ °F (if < 73°F)	pH ☐ Liquids >20% H_2O *or* pH ☒ Non-Aqueous
Liquid %	0	Odor	None	☐ 73 - < 100°F ☐ 100 - 141°F	☐ ≤ 2 pH ☐ > 2 - 4 pH ☒ > 4 - 10 pH
Sludge %	0	Specific Gravity	_____	☐ 142°F - < 200°F ☒ ≥ 200°F	☐ > 10 - < 12.5 pH ☐ ≥ 12.5 pH
Solid %	100	Viscosity	_____	Boiling Point (if < 130°F) _____	Sorbent Added: ☒ None Biodegradable? ☐ Yes ☐ No
Powder %	0	Density	_____	Ash % (Bridgeport Only) _____	BTU's / lb. or Range _____
Gas %	0	☐ lbs./ gal. ☐ lbs./ cu. ft.		Comments _____	

G. ELEMENTAL INFORMATION

☒ *Check if this waste contains No Detectable Elements / Metals, unless listed below.*

Check either; ☐ Total Analysis *or* ☐ TCLP Method, then enter data below.

Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm	Constituent	ppm
Aluminum		Cadmium		Fluorine		Nickel		Sodium	
Antimony		Chlorine		Lead		Phosphorous		Sulfur	
Arsenic		Chromium		Lithium		Potassium		Thallium	
Barium		Cobalt		Manganese		Selenium		Titanium	
Beryllium		Copper		Mercury		Silicon		Vanadium	
Bromine		Iodine		Molybdenum		Silver		Zinc	

H. MATERIAL DISPOSITION OPTIONS

☐ *Check if No Requirement*

1 Recycling / Recovering # 2 Fuels Blending # 3 Incineration # 4 Wastewater Treatment # 5 Landfill # 6 Deepwell Injection

List disposition # in order of preference if more than one. Customer Preference # #3 Other Disposition _____

I. GENERATOR PROFILE CERTIFICATION

I hereby certify that I am an authorized agent of the generator, and warrant on behalf of the generator that the information supplied on this form and on any attachments or supplements hereto is complete and accurate, and that all known or suspected hazards of the material(s) described herein have been disclosed.

Generator's Authorized Signature	Name & Title (Printed or Typed)	Date
Roy Pyron	EH&S Manager	10 / 08 / 98

Comments ~~Son~~ Waste will carry all facility codes although detectable contamination should be nil.

Safety-Kleen Use Only ☐ SKOS ☐ SKVS ☐ Non-haz Evaluation ☐ Standard Industry Profile: SIP Index # _____

SK Sales Rep. Name _____ Employee # _____ Territory/Branch # _____

Waste Approval & Certification

We certify acceptability of this waste stream and that all appropriate permits have been obtained, as indicated by Safety-Kleen's facility approval below:

Safety-Kleen's Authorized Facility Signature	Name & Title (Printed or Typed)	Date
		/ /

Form No. 585-0733 (8/98)

U.S. FILTER

U.S. FILTER/WESTATES
2523 MUTAHAR STREET
POST OFFICE BOX E
PARKER, AZ 85344

TELEPHONE 520-669-5758
FACSIMILE 520-669-5775

VIA CERTIFIED MAIL P 162 444 064
October 5, 1998

Felicia Marcus, Regional Administrator
EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

RE: WESTATES CARBON-ARIZONA, INC. – NOTICE OF IMPLEMENTATION OF CONTINGENCY PLAN IN ACCORDANCE WITH 40 CFR 265.56

Dear Ms. Marcus

On September 26, 1998 Westates Carbon-Arizona Inc. experienced a spill from a truck on site that contained recycle water from the plant that is used to slurry hazardous spent carbon in the treatment process.

The occurrence was caused by the driver opening a valve and accidently discharging the water on the soil just outside the main gate of the plant. The spill happened at 2:00 P.M. and a Westates Carbon employee immediately started containment and clean up procedures.

Per CFR 265.56 Westates Carbon-Arizona, Inc. is submitting the following information to EPA Region IX.:

FACILITY OWNER

Westates Carbon-Arizona
P.O. Box E
Parker, Arizona 85344
Phone: (520) 669-5758

FACILITY ADDRESS

Westates Carbon-Arizona
2523 Mutaher Street
Parker, Arizona 85344
Phone: (520)669-5758

US EPA ARCHIVE DOCUMENT

ENDER:
Complete items 1 and/or 2 for additi_ ervices.
Complete items 3, 4a, and 4b.
Print your name and address on the reverse of this form so that we can return this card to you.
Attach this form to the front of the mailpiece, or on the back if space does not permit.
Write *"Return Receipt Requested"* on the mailpiece below the article number.
The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to re the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery
Consult postmaster for fee.

Article Addressed to:

PA Region IX
5 Hawthorne Street
an Francisco, CA 94105-3901

ttention: Felicia Marcus
egional Administrator

4a. Article Number
P-162-444-064

4b. Service Type
☐ Registered ■ Certified
☐ Express Mail ☐ Insured
■ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
OCT 0 9 1998

Received By: *(Print Name)*
E.P.A. MAILROOM

8. Addressee's Address *(Only if requested and fee is paid)*

Signature: *(Addressee or Agent)*
X
RECEIVED OCT 1 3 1998

Thank you for using Return Receipt Service.

S Form **3811,** December 1994 Domestic Return Receipt

P 162 444 064

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to EPA Region IX	
Street & Number 75 Hawthorne Street	
Post Office, State, & ZIP Code San Francisco Ca 94105	
Postage	$ .55
Certified Fee	1.35
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	1.10
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$ 3.00
Postmark or Date	

PS Form **3800,** April 1995

ENDER:
Complete items 1 and/or 2 for ado_ services.
Complete items 3, 4a, and 4b.
Print your name and address on the reverse of this form so that we can return this card to you.
Attach this form to the front of the mailpiece, or on the back if space does not permit.
Write *"Return Receipt Requested"* on the mailpiece below the article number.
The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery
Consult postmaster for fee.

Article Addressed to:

ttention: Larry Reisland
a Paz County Emergency Services
112 Joshua Ave., Ste. 207
arker, Arizona 85344

4a. Article Number
P-162-444-065

4b. Service Type
☐ Registered ■ Certified
☐ Express Mail ☐ Insured
■ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
10/7/98

Received By: *(Print Name)*
MONICA RAMIREZ

8. Addressee's Address *(Only if requested and fee is paid)*

Signature: *(Addressee or Agent)*
X Monica Ramirez
RECEIVED OCT 0 8 1998

Thank you for using Return Receipt Service.

Form **3811,** December 1994 Domestic Return Receipt

P 162 444 065

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to La Paz County Emergency Services	
Street & Number 1112 Joshua Avenue Suite 207	
Post Office, State, & ZIP Code Parker Arizona 85344	
Postage	$ 3.00
Certified Fee	1.35
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	1.10
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$ 5.45
Postmark or Date	

PS Form **3800,** April 1995

Appendix J

Scrubber Water Analytical Results before T-11
For Subpart CC

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

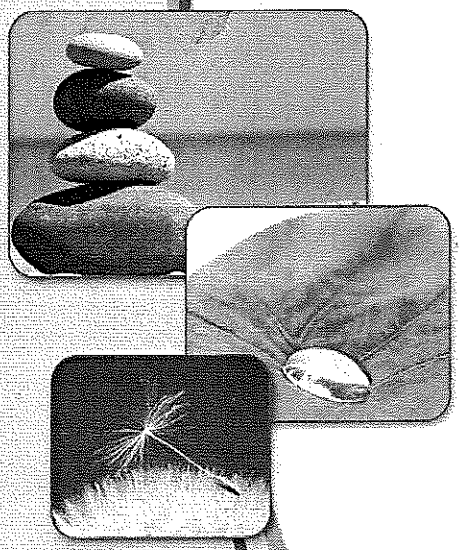
TestAmerica Job ID: 440-125619-1
Client Project/Site: Subpart CC

For:
Evoqua Water Technologies eProcurement
PO BOX 3308 IMA065
Parker, Arizona 85344

Attn: Roy Provins

Authorized for release by:
11/6/2015 3:12:30 PM

Camille Murray, Project Manager I
(949)261-1022
camille.murray@testamericainc.com



LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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US EPA ARCHIVE DOCUMENT

Sample Summary

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-125619-1	Subpart CC (A) 1L AMB	Water	10/27/15 08:00	10/28/15 10:00
440-125619-2	Subpart CC (B) 1L AMB	Water	10/27/15 08:00	10/28/15 10:00
440-125619-3	Subpart CC (C) 1L AMB	Water	10/27/15 08:00	10/28/15 10:00
440-125619-4	Subpart CC (D) 1L AMB	Water	10/27/15 08:00	10/28/15 10:00
440-125619-5	Subpart CC (E) 1L AMB	Water	10/27/15 08:00	10/28/15 10:00
440-125619-6	Subpart CC (F) 1L AMB	Water	10/27/15 08:00	10/28/15 10:00

US EPA ARCHIVE DOCUMENT

Job ID: 440-125619-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-125619-1

Comments
No additional comments.

Receipt
The samples were received on 10/28/2015 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.5° C, 1.0° C and 2.4° C.

GC/MS Semi VOA
Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-290473. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 8270C: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 440-290473 recovered outside control limits for the following analytes: 3-nitroaniline; 3,3'-dichlorobenzidine; 4-chloroaniline; aniline; and 4-nitroaniline.

Method(s) 8270C: The laboratory control sample duplicate (LCSD) for preparation batch 290473 failed below lower acceptance limits for the following analytes: 3-nitroaniline; 3,3'-dichlorobenzidine; 4-chloroaniline; and 4-nitroaniline. These analytes are known historically to be poor performers. The affected samples could not be reextracted within hold times.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8081A: The continuing calibration verification (CCV) associated with batch 440-290855 recovered above the upper control limit for 4,4'-DDD, alpha-BHC, delta-BHC, Endosulfan sulfate, Endrin ketone, Endrin aldehyde, gamma-BHC (Lindane) and Heptachlor. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: Subpart CC (A) 1L AMB (440-125619-1), Subpart CC (B) 1L AMB (440-125619-2), Subpart CC (C) 1L AMB (440-125619-3), Subpart CC (D) 1L AMB (440-125619-4), Subpart CC (E) 1L AMB (440-125619-5), Subpart CC (F) 1L AMB (440-125619-6), (CCV 440-290855/29) and (CCVRT 440-290855/6).

Method(s) 8081A: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 440-290131 recovered outside control limits for the following analyte: Endosulfan sulfate. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8081A/8082: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 440-290131. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (A) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-1
Matrix: Water

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Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
1,2-Dichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
1,3-Dichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
1,4-Dichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
2,4,5-Trichlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
2,4,6-Trichlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
2,4-Dichlorophenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
2,4-Dimethylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
2,4-Dinitrophenol	ND		39		ug/L		10/30/15 08:55	11/03/15 18:02	1
2,4-Dinitrotoluene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
2,6-Dinitrotoluene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
2-Chloronaphthalene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
2-Chlorophenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
2-Methylnaphthalene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
2-Methylphenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
2-Nitroaniline	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
2-Nitrophenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
3,3'-Dichlorobenzidine	ND	*	19		ug/L		10/30/15 08:55	11/03/15 18:02	1
3-Nitroaniline	ND	*	19		ug/L		10/30/15 08:55	11/03/15 18:02	1
4,6-Dinitro-2-methylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
4-Bromophenyl phenyl ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
4-Chloro-3-methylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
4-Chloroaniline	ND	*	9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
4-Chlorophenyl phenyl ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
3-Methylphenol + 4-Methylphenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
4-Nitroaniline	ND	*	19		ug/L		10/30/15 08:55	11/03/15 18:02	1
4-Nitrophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
Acenaphthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Acenaphthylene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Aniline	ND	*	9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Anthracene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Benzidine	ND		39		ug/L		10/30/15 08:55	11/03/15 18:02	1
Benzo[a]anthracene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Benzo[a]pyrene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Benzo[b]fluoranthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Benzo[g,h,i]perylene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Benzo[k]fluoranthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Benzoic acid	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
Benzyl alcohol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
Bis(2-chloroethoxy)methane	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Bis(2-chloroethyl)ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Bis(2-ethylhexyl) phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
Butyl benzyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
Chrysene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Dibenz(a,h)anthracene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
Dibenzofuran	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Diethyl phthalate	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (A) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-1
Matrix: Water

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Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Di-n-butyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
Di-n-octyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
Fluoranthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Fluorene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Hexachlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Hexachlorobutadiene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Hexachlorocyclopentadiene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
Hexachloroethane	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Indeno[1,2,3-cd]pyrene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
Isophorone	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Naphthalene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Nitrobenzene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
N-Nitrosodi-n-propylamine	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
N-Nitrosodiphenylamine	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Pentachlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:02	1
Phenanthrene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Phenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
Pyrene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1
bis (2-chloroisopropyl) ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*56*		*50 - 120*	*10/30/15 08:55*	*11/03/15 18:02*	*1*
2-Fluorophenol (Surr)	*53*		*30 - 120*	*10/30/15 08:55*	*11/03/15 18:02*	*1*
2,4,6-Tribromophenol (Surr)	*72*		*40 - 120*	*10/30/15 08:55*	*11/03/15 18:02*	*1*
Nitrobenzene-d5 (Surr)	*58*		*45 - 120*	*10/30/15 08:55*	*11/03/15 18:02*	*1*
Terphenyl-d14 (Surr)	*71*		*10 - 150*	*10/30/15 08:55*	*11/03/15 18:02*	*1*
Phenol-d6 (Surr)	*54*		*35 - 120*	*10/30/15 08:55*	*11/03/15 18:02*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
4,4'-DDE	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
4,4'-DDT	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
Aldrin	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
alpha-BHC	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
alpha-Chlordane	ND		0.19		ug/L		10/29/15 06:30	11/01/15 17:37	1
beta-BHC	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
Chlordane (technical)	ND		0.97		ug/L		10/29/15 06:30	11/01/15 17:37	1
delta-BHC	ND		0.19		ug/L		10/29/15 06:30	11/01/15 17:37	1
Dieldrin	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
Endosulfan I	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
Endosulfan II	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
Endosulfan sulfate	ND	*	0.19		ug/L		10/29/15 06:30	11/01/15 17:37	1
Endrin	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
Endrin aldehyde	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
Endrin ketone	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
gamma-BHC (Lindane)	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
gamma-Chlordane	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
Heptachlor	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1

US EPA ARCHIVE DOCUMENT

Client Sample ID: Subpart CC (A) 1L AMB

Lab Sample ID: 440-125619-1
Matrix: Water

Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

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Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
Methoxychlor	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:37	1
Toxaphene	ND		4.8		ug/L		10/29/15 06:30	11/01/15 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*		*10 - 150*	*10/29/15 06:30*	*11/01/15 17:37*	*1*
DCB Decachlorobiphenyl (Surr)	*119*		*18 - 134*	*10/29/15 06:30*	*11/01/15 17:37*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:29	1
Aroclor 1221	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:29	1
Aroclor 1232	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:29	1
Aroclor 1242	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:29	1
Aroclor 1248	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:29	1
Aroclor 1254	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:29	1
Aroclor 1260	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*34*		*29 - 115*	*10/29/15 06:30*	*10/30/15 15:29*	*1*

Client Sample ID: Subpart CC (B) 1L AMB

Lab Sample ID: 440-125619-2
Matrix: Water

Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
1,2-Dichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
1,3-Dichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
1,4-Dichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
2,4,5-Trichlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
2,4,6-Trichlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
2,4-Dichlorophenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
2,4-Dimethylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
2,4-Dinitrophenol	ND		39		ug/L		10/30/15 08:55	11/03/15 18:25	1
2,4-Dinitrotoluene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
2,6-Dinitrotoluene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
2-Chloronaphthalene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
2-Chlorophenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
2-Methylnaphthalene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
2-Methylphenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
2-Nitroaniline	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
2-Nitrophenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
3,3'-Dichlorobenzidine	ND	*	19		ug/L		10/30/15 08:55	11/03/15 18:25	1
3-Nitroaniline	ND	*	19		ug/L		10/30/15 08:55	11/03/15 18:25	1
4,6-Dinitro-2-methylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
4-Bromophenyl phenyl ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
4-Chloro-3-methylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (B) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-2
Matrix: Water

5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	ND	*	9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
4-Chlorophenyl phenyl ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
3-Methylphenol + 4-Methylphenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
4-Nitroaniline	ND	*	19		ug/L		10/30/15 08:55	11/03/15 18:25	1
4-Nitrophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
Acenaphthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Acenaphthylene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Aniline	ND	*	9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Anthracene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Benzidine	ND		39		ug/L		10/30/15 08:55	11/03/15 18:25	1
Benzo[a]anthracene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Benzo[a]pyrene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Benzo[b]fluoranthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Benzo[g,h,i]perylene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Benzo[k]fluoranthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Benzoic acid	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
Benzyl alcohol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
Bis(2-chloroethoxy)methane	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Bis(2-chloroethyl)ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Bis(2-ethylhexyl) phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
Butyl benzyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
Chrysene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Dibenz(a,h)anthracene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
Dibenzofuran	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Diethyl phthalate	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Dimethyl phthalate	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Di-n-butyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
Di-n-octyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
Fluoranthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Fluorene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Hexachlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Hexachlorobutadiene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Hexachlorocyclopentadiene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
Hexachloroethane	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Indeno[1,2,3-cd]pyrene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
Isophorone	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Naphthalene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Nitrobenzene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
N-Nitrosodi-n-propylamine	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
N-Nitrosodiphenylamine	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Pentachlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:25	1
Phenanthrene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Phenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
Pyrene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1
bis (2-chloroisopropyl) ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*63*		*50 - 120*	*10/30/15 08:55*	*11/03/15 18:25*	*1*
2-Fluorophenol (Surr)	*58*		*30 - 120*	*10/30/15 08:55*	*11/03/15 18:25*	*1*
2,4,6-Tribromophenol (Surr)	*78*		*40 - 120*	*10/30/15 08:55*	*11/03/15 18:25*	*1*

US EPA ARCHIVE DOCUMENT

Client Sample ID: Subpart CC (B) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-2
Matrix: Water

5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	64		45 - 120	10/30/15 08:55	11/03/15 18:25	1
Terphenyl-d14 (Surr)	81		10 - 150	10/30/15 08:55	11/03/15 18:25	1
Phenol-d6 (Surr)	57		35 - 120	10/30/15 08:55	11/03/15 18:25	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
4,4'-DDE	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
4,4'-DDT	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
Aldrin	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
alpha-BHC	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
alpha-Chlordane	ND		0.19		ug/L		10/29/15 06:30	11/01/15 17:51	1
beta-BHC	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
Chlordane (technical)	ND		0.97		ug/L		10/29/15 06:30	11/01/15 17:51	1
delta-BHC	ND		0.19		ug/L		10/29/15 06:30	11/01/15 17:51	1
Dieldrin	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
Endosulfan I	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
Endosulfan II	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
Endosulfan sulfate	ND	*	0.19		ug/L		10/29/15 06:30	11/01/15 17:51	1
Endrin	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
Endrin aldehyde	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
Endrin ketone	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
gamma-BHC (Lindane)	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
gamma-Chlordane	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
Heptachlor	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
Heptachlor epoxide	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
Methoxychlor	ND		0.097		ug/L		10/29/15 06:30	11/01/15 17:51	1
Toxaphene	ND		4.9		ug/L		10/29/15 06:30	11/01/15 17:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	76		10 - 150	10/29/15 06:30	11/01/15 17:51	1
DCB Decachlorobiphenyl (Surr)	120		18 - 134	10/29/15 06:30	11/01/15 17:51	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:43	1
Aroclor 1221	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:43	1
Aroclor 1232	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:43	1
Aroclor 1242	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:43	1
Aroclor 1248	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:43	1
Aroclor 1254	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:43	1
Aroclor 1260	ND		0.97		ug/L		10/29/15 06:30	10/30/15 15:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	31		29 - 115	10/29/15 06:30	10/30/15 15:43	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (C) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-3
Matrix: Water

5

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
1,2-Dichlorobenzene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
1,3-Dichlorobenzene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
1,4-Dichlorobenzene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
2,4,5-Trichlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
2,4,6-Trichlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
2,4-Dichlorophenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
2,4-Dimethylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
2,4-Dinitrophenol	ND		38		ug/L		10/30/15 08:55	11/03/15 18:48	1
2,4-Dinitrotoluene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
2,6-Dinitrotoluene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
2-Chloronaphthalene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
2-Chlorophenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
2-Methylnaphthalene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
2-Methylphenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
2-Nitroaniline	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
2-Nitrophenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
3,3'-Dichlorobenzidine	ND	*	19		ug/L		10/30/15 08:55	11/03/15 18:48	1
3-Nitroaniline	ND	*	19		ug/L		10/30/15 08:55	11/03/15 18:48	1
4,6-Dinitro-2-methylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
4-Bromophenyl phenyl ether	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
4-Chloro-3-methylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
4-Chloroaniline	ND	*	9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
4-Chlorophenyl phenyl ether	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
3-Methylphenol + 4-Methylphenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
4-Nitroaniline	ND	*	19		ug/L		10/30/15 08:55	11/03/15 18:48	1
4-Nitrophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
Acenaphthene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Acenaphthylene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Aniline	ND	*	9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Anthracene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Benzidine	ND		38		ug/L		10/30/15 08:55	11/03/15 18:48	1
Benzo[a]anthracene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Benzo[a]pyrene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Benzo[b]fluoranthene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Benzo[g,h,i]perylene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Benzo[k]fluoranthene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Benzoic acid	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
Benzyl alcohol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
Bis(2-chloroethoxy)methane	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Bis(2-chloroethyl)ether	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Bis(2-ethylhexyl) phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
Butyl benzyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
Chrysene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Dibenz(a,h)anthracene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
Dibenzofuran	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Diethyl phthalate	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Dimethyl phthalate	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (C) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-3
Matrix: Water

5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
Di-n-octyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
Fluoranthene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Fluorene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Hexachlorobenzene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Hexachlorobutadiene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Hexachlorocyclopentadiene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
Hexachloroethane	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Indeno[1,2,3-cd]pyrene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
Isophorone	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Naphthalene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Nitrobenzene	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
N-Nitrosodi-n-propylamine	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
N-Nitrosodiphenylamine	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Pentachlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 18:48	1
Phenanthrene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Phenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
Pyrene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1
bis (2-chloroisopropyl) ether	ND		9.6		ug/L		10/30/15 08:55	11/03/15 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*57*		*50 - 120*	*10/30/15 08:55*	*11/03/15 18:48*	*1*
2-Fluorophenol (Surr)	*60*		*30 - 120*	*10/30/15 08:55*	*11/03/15 18:48*	*1*
2,4,6-Tribromophenol (Surr)	*69*		*40 - 120*	*10/30/15 08:55*	*11/03/15 18:48*	*1*
Nitrobenzene-d5 (Surr)	*59*		*45 - 120*	*10/30/15 08:55*	*11/03/15 18:48*	*1*
Terphenyl-d14 (Surr)	*76*		*10 - 150*	*10/30/15 08:55*	*11/03/15 18:48*	*1*
Phenol-d6 (Surr)	*62*		*35 - 120*	*10/30/15 08:55*	*11/03/15 18:48*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
4,4'-DDE	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
4,4'-DDT	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
Aldrin	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
alpha-BHC	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
alpha-Chlordane	ND		0.19		ug/L		10/29/15 06:30	11/01/15 18:05	1
beta-BHC	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
Chlordane (technical)	ND		0.95		ug/L		10/29/15 06:30	11/01/15 18:05	1
delta-BHC	ND		0.19		ug/L		10/29/15 06:30	11/01/15 18:05	1
Dieldrin	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
Endosulfan I	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
Endosulfan II	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
Endosulfan sulfate	ND	*	0.19		ug/L		10/29/15 06:30	11/01/15 18:05	1
Endrin	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
Endrin aldehyde	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
Endrin ketone	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
gamma-BHC (Lindane)	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
gamma-Chlordane	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
Heptachlor	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
Heptachlor epoxide	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (C) 1L AMB

Lab Sample ID: 440-125619-3
Matrix: Water

Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

5

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methoxychlor	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:05	1
Toxaphene	ND		4.8		ug/L		10/29/15 06:30	11/01/15 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*62*		*10 - 150*	*10/29/15 06:30*	*11/01/15 18:05*	*1*
DCB Decachlorobiphenyl (Surr)	*95*		*18 - 134*	*10/29/15 06:30*	*11/01/15 18:05*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.95		ug/L		10/29/15 06:30	10/30/15 15:57	1
Aroclor 1221	ND		0.95		ug/L		10/29/15 06:30	10/30/15 15:57	1
Aroclor 1232	ND		0.95		ug/L		10/29/15 06:30	10/30/15 15:57	1
Aroclor 1242	ND		0.95		ug/L		10/29/15 06:30	10/30/15 15:57	1
Aroclor 1248	ND		0.95		ug/L		10/29/15 06:30	10/30/15 15:57	1
Aroclor 1254	ND		0.95		ug/L		10/29/15 06:30	10/30/15 15:57	1
Aroclor 1260	ND		0.95		ug/L		10/29/15 06:30	10/30/15 15:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*41*		*29 - 115*	*10/29/15 06:30*	*10/30/15 15:57*	*1*

Client Sample ID: Subpart CC (D) 1L AMB

Lab Sample ID: 440-125619-4
Matrix: Water

Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
1,2-Dichlorobenzene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
1,3-Dichlorobenzene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
1,4-Dichlorobenzene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
2,4,5-Trichlorophenol	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
2,4,6-Trichlorophenol	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
2,4-Dichlorophenol	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
2,4-Dimethylphenol	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
2,4-Dinitrophenol	ND		39		ug/L		10/30/15 08:55	11/03/15 00:22	1
2,4-Dinitrotoluene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
2,6-Dinitrotoluene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
2-Chloronaphthalene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
2-Chlorophenol	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
2-Methylnaphthalene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
2-Methylphenol	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
2-Nitroaniline	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
2-Nitrophenol	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
3,3'-Dichlorobenzidine	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
3-Nitroaniline	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
4,6-Dinitro-2-methylphenol	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
4-Bromophenyl phenyl ether	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
4-Chloro-3-methylphenol	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
4-Chloroaniline	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (D) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-4
Matrix: Water

5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
3-Methylphenol + 4-Methylphenol	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
4-Nitroaniline	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
4-Nitrophenol	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
Acenaphthene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Acenaphthylene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Aniline	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Anthracene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Benzidine	ND		39		ug/L		10/30/15 08:55	11/03/15 00:22	1
Benzo[a]anthracene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Benzo[a]pyrene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Benzo[b]fluoranthene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Benzo[g,h,i]perylene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Benzo[k]fluoranthene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Benzoic acid	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
Benzyl alcohol	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
Bis(2-chloroethoxy)methane	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Bis(2-chloroethyl)ether	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Bis(2-ethylhexyl) phthalate	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
Butyl benzyl phthalate	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
Chrysene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Dibenz(a,h)anthracene	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
Dibenzofuran	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Diethyl phthalate	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Dimethyl phthalate	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Di-n-butyl phthalate	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
Di-n-octyl phthalate	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
Fluoranthene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Fluorene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Hexachlorobenzene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Hexachlorobutadiene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Hexachlorocyclopentadiene	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
Hexachloroethane	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Indeno[1,2,3-cd]pyrene	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
Isophorone	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Naphthalene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Nitrobenzene	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
N-Nitrosodi-n-propylamine	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
N-Nitrosodiphenylamine	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Pentachlorophenol	ND		20		ug/L		10/30/15 08:55	11/03/15 00:22	1
Phenanthrene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Phenol	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
Pyrene	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1
bis (2-chloroisopropyl) ether	ND		9.8		ug/L		10/30/15 08:55	11/03/15 00:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*71*		*50 - 120*	*10/30/15 08:55*	*11/03/15 00:22*	*1*
2-Fluorophenol (Surr)	*62*		*30 - 120*	*10/30/15 08:55*	*11/03/15 00:22*	*1*
2,4,6-Tribromophenol (Surr)	*85*		*40 - 120*	*10/30/15 08:55*	*11/03/15 00:22*	*1*
Nitrobenzene-d5 (Surr)	*69*		*45 - 120*	*10/30/15 08:55*	*11/03/15 00:22*	*1*

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (D) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-4
Matrix: Water

5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	*78*		*10 - 150*	*10/30/15 08:55*	*11/03/15 00:22*	*1*
Phenol-d6 (Surr)	*67*		*35 - 120*	*10/30/15 08:55*	*11/03/15 00:22*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
4,4'-DDE	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
4,4'-DDT	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
Aldrin	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
alpha-BHC	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
alpha-Chlordane	ND		0.19		ug/L		10/29/15 06:30	11/01/15 18:19	1
beta-BHC	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
Chlordane (technical)	ND		0.95		ug/L		10/29/15 06:30	11/01/15 18:19	1
delta-BHC	ND		0.19		ug/L		10/29/15 06:30	11/01/15 18:19	1
Dieldrin	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
Endosulfan I	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
Endosulfan II	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
Endosulfan sulfate	ND	*	0.19		ug/L		10/29/15 06:30	11/01/15 18:19	1
Endrin	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
Endrin aldehyde	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
Endrin ketone	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
gamma-BHC (Lindane)	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
gamma-Chlordane	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
Heptachlor	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
Heptachlor epoxide	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
Methoxychlor	ND		0.095		ug/L		10/29/15 06:30	11/01/15 18:19	1
Toxaphene	ND		4.8		ug/L		10/29/15 06:30	11/01/15 18:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*76*		*10 - 150*	*10/29/15 06:30*	*11/01/15 18:19*	*1*
DCB Decachlorobiphenyl (Surr)	*102*		*18 - 134*	*10/29/15 06:30*	*11/01/15 18:19*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.95		ug/L		10/29/15 06:30	10/30/15 16:10	1
Aroclor 1221	ND		0.95		ug/L		10/29/15 06:30	10/30/15 16:10	1
Aroclor 1232	ND		0.95		ug/L		10/29/15 06:30	10/30/15 16:10	1
Aroclor 1242	ND		0.95		ug/L		10/29/15 06:30	10/30/15 16:10	1
Aroclor 1248	ND		0.95		ug/L		10/29/15 06:30	10/30/15 16:10	1
Aroclor 1254	ND		0.95		ug/L		10/29/15 06:30	10/30/15 16:10	1
Aroclor 1260	ND		0.95		ug/L		10/29/15 06:30	10/30/15 16:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	*30*		*29 - 115*	*10/29/15 06:30*	*10/30/15 16:10*	*1*

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (E) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-5
Matrix: Water

5

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
1,2-Dichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
1,3-Dichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
1,4-Dichlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
2,4,5-Trichlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
2,4,6-Trichlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
2,4-Dichlorophenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
2,4-Dimethylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
2,4-Dinitrophenol	ND		39		ug/L		10/30/15 08:55	11/03/15 00:44	1
2,4-Dinitrotoluene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
2,6-Dinitrotoluene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
2-Chloronaphthalene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
2-Chlorophenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
2-Methylnaphthalene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
2-Methylphenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
2-Nitroaniline	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
2-Nitrophenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
3,3'-Dichlorobenzidine	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
3-Nitroaniline	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
4,6-Dinitro-2-methylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
4-Bromophenyl phenyl ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
4-Chloro-3-methylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
4-Chloroaniline	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
4-Chlorophenyl phenyl ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
3-Methylphenol + 4-Methylphenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
4-Nitroaniline	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
4-Nitrophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
Acenaphthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Acenaphthylene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Aniline	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Anthracene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Benzidine	ND		39		ug/L		10/30/15 08:55	11/03/15 00:44	1
Benzo[a]anthracene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Benzo[a]pyrene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Benzo[b]fluoranthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Benzo[g,h,i]perylene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Benzo[k]fluoranthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Benzoic acid	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
Benzyl alcohol	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
Bis(2-chloroethoxy)methane	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Bis(2-chloroethyl)ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Bis(2-ethylhexyl) phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
Butyl benzyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
Chrysene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Dibenz(a,h)anthracene	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
Dibenzofuran	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Diethyl phthalate	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Dimethyl phthalate	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1

US EPA ARCHIVE DOCUMENT

Client Sample ID: Subpart CC (E) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-5
Matrix: Water

5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
Di-n-octyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
Fluoranthene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Fluorene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Hexachlorobenzene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Hexachlorobutadiene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Hexachlorocyclopentadiene	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
Hexachloroethane	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Indeno[1,2,3-cd]pyrene	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
Isophorone	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Naphthalene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Nitrobenzene	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
N-Nitrosodi-n-propylamine	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
N-Nitrosodiphenylamine	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Pentachlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 00:44	1
Phenanthrene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Phenol	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
Pyrene	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1
bis (2-chloroisopropyl) ether	ND		9.7		ug/L		10/30/15 08:55	11/03/15 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*51*		*50 - 120*	*10/30/15 08:55*	*11/03/15 00:44*	*1*
2-Fluorophenol (Surr)	*50*		*30 - 120*	*10/30/15 08:55*	*11/03/15 00:44*	*1*
2,4,6-Tribromophenol (Surr)	*66*		*40 - 120*	*10/30/15 08:55*	*11/03/15 00:44*	*1*
Nitrobenzene-d5 (Surr)	*49*		*45 - 120*	*10/30/15 08:55*	*11/03/15 00:44*	*1*
Terphenyl-d14 (Surr)	*67*		*10 - 150*	*10/30/15 08:55*	*11/03/15 00:44*	*1*
Phenol-d6 (Surr)	*51*		*35 - 120*	*10/30/15 08:55*	*11/03/15 00:44*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
4,4'-DDE	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
4,4'-DDT	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
Aldrin	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
alpha-BHC	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
alpha-Chlordane	ND		0.19		ug/L		10/29/15 06:30	11/01/15 18:33	1
beta-BHC	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
Chlordane (technical)	ND		0.96		ug/L		10/29/15 06:30	11/01/15 18:33	1
delta-BHC	ND		0.19		ug/L		10/29/15 06:30	11/01/15 18:33	1
Dieldrin	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
Endosulfan I	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
Endosulfan II	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
Endosulfan sulfate	ND	*	0.19		ug/L		10/29/15 06:30	11/01/15 18:33	1
Endrin	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
Endrin aldehyde	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
Endrin ketone	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
gamma-BHC (Lindane)	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
gamma-Chlordane	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
Heptachlor	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
Heptachlor epoxide	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (E) 1L AMB

Lab Sample ID: 440-125619-5
Matrix: Water

Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

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Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methoxychlor	ND		0.096		ug/L		10/29/15 06:30	11/01/15 18:33	1
Toxaphene	ND		4.8		ug/L		10/29/15 06:30	11/01/15 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*53*		*10 - 150*	*10/29/15 06:30*	*11/01/15 18:33*	*1*
DCB Decachlorobiphenyl (Surr)	*88*		*18 - 134*	*10/29/15 06:30*	*11/01/15 18:33*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.96		ug/L		10/29/15 06:30	10/30/15 16:24	1
Aroclor 1221	ND		0.96		ug/L		10/29/15 06:30	10/30/15 16:24	1
Aroclor 1232	ND		0.96		ug/L		10/29/15 06:30	10/30/15 16:24	1
Aroclor 1242	ND		0.96		ug/L		10/29/15 06:30	10/30/15 16:24	1
Aroclor 1248	ND		0.96		ug/L		10/29/15 06:30	10/30/15 16:24	1
Aroclor 1254	ND		0.96		ug/L		10/29/15 06:30	10/30/15 16:24	1
Aroclor 1260	ND		0.96		ug/L		10/29/15 06:30	10/30/15 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*49*		*29 - 115*	*10/29/15 06:30*	*10/30/15 16:24*	*1*

Client Sample ID: Subpart CC (F) 1L AMB

Lab Sample ID: 440-125619-6
Matrix: Water

Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
1,2-Dichlorobenzene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
1,3-Dichlorobenzene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
1,4-Dichlorobenzene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
2,4,5-Trichlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
2,4,6-Trichlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
2,4-Dichlorophenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
2,4-Dimethylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
2,4-Dinitrophenol	ND		38		ug/L		10/30/15 08:55	11/03/15 19:11	1
2,4-Dinitrotoluene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
2,6-Dinitrotoluene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
2-Chloronaphthalene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
2-Chlorophenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
2-Methylnaphthalene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
2-Methylphenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
2-Nitroaniline	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
2-Nitrophenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
3,3'-Dichlorobenzidine	ND	*	19		ug/L		10/30/15 08:55	11/03/15 19:11	1
3-Nitroaniline	ND	*	19		ug/L		10/30/15 08:55	11/03/15 19:11	1
4,6-Dinitro-2-methylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
4-Bromophenyl phenyl ether	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
4-Chloro-3-methylphenol	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
4-Chloroaniline	ND	*	9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1

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Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (F) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-6
Matrix: Water

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Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
3-Methylphenol + 4-Methylphenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
4-Nitroaniline	ND	*	19		ug/L		10/30/15 08:55	11/03/15 19:11	1
4-Nitrophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
Acenaphthene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Acenaphthylene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Aniline	ND	*	9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Anthracene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Benzidine	ND		38		ug/L		10/30/15 08:55	11/03/15 19:11	1
Benzo[a]anthracene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Benzo[a]pyrene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Benzo[b]fluoranthene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Benzo[g,h,i]perylene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Benzo[k]fluoranthene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Benzoic acid	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
Benzyl alcohol	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
Bis(2-chloroethoxy)methane	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Bis(2-chloroethyl)ether	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Bis(2-ethylhexyl) phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
Butyl benzyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
Chrysene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Dibenz(a,h)anthracene	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
Dibenzofuran	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Diethyl phthalate	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Dimethyl phthalate	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Di-n-butyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
Di-n-octyl phthalate	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
Fluoranthene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Fluorene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Hexachlorobenzene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Hexachlorobutadiene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Hexachlorocyclopentadiene	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
Hexachloroethane	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Indeno[1,2,3-cd]pyrene	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
Isophorone	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Naphthalene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Nitrobenzene	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
N-Nitrosodi-n-propylamine	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
N-Nitrosodiphenylamine	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Pentachlorophenol	ND		19		ug/L		10/30/15 08:55	11/03/15 19:11	1
Phenanthrene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Phenol	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
Pyrene	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1
bis (2-chloroisopropyl) ether	ND		9.6		ug/L		10/30/15 08:55	11/03/15 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*65*		*50 - 120*	*10/30/15 08:55*	*11/03/15 19:11*	*1*
2-Fluorophenol (Surr)	*61*		*30 - 120*	*10/30/15 08:55*	*11/03/15 19:11*	*1*
2,4,6-Tribromophenol (Surr)	*77*		*40 - 120*	*10/30/15 08:55*	*11/03/15 19:11*	*1*
Nitrobenzene-d5 (Surr)	*64*		*45 - 120*	*10/30/15 08:55*	*11/03/15 19:11*	*1*

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (F) 1L AMB
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125619-6
Matrix: Water

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Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	*75*		*10 - 150*	*10/30/15 08:55*	*11/03/15 19:11*	*1*
Phenol-d6 (Surr)	*66*		*35 - 120*	*10/30/15 08:55*	*11/03/15 19:11*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
4,4'-DDE	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
4,4'-DDT	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
Aldrin	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
alpha-BHC	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
alpha-Chlordane	ND		0.19		ug/L		10/29/15 06:30	11/01/15 18:46	1
beta-BHC	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
Chlordane (technical)	ND		0.97		ug/L		10/29/15 06:30	11/01/15 18:46	1
delta-BHC	ND		0.19		ug/L		10/29/15 06:30	11/01/15 18:46	1
Dieldrin	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
Endosulfan I	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
Endosulfan II	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
Endosulfan sulfate	ND	*	0.19		ug/L		10/29/15 06:30	11/01/15 18:46	1
Endrin	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
Endrin aldehyde	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
Endrin ketone	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
gamma-BHC (Lindane)	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
gamma-Chlordane	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
Heptachlor	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
Heptachlor epoxide	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
Methoxychlor	ND		0.097		ug/L		10/29/15 06:30	11/01/15 18:46	1
Toxaphene	ND		4.8		ug/L		10/29/15 06:30	11/01/15 18:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*95*		*10 - 150*	*10/29/15 06:30*	*11/01/15 18:46*	*1*
DCB Decachlorobiphenyl (Surr)	*112*		*18 - 134*	*10/29/15 06:30*	*11/01/15 18:46*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.97		ug/L		10/29/15 06:30	10/30/15 16:38	1
Aroclor 1221	ND		0.97		ug/L		10/29/15 06:30	10/30/15 16:38	1
Aroclor 1232	ND		0.97		ug/L		10/29/15 06:30	10/30/15 16:38	1
Aroclor 1242	ND		0.97		ug/L		10/29/15 06:30	10/30/15 16:38	1
Aroclor 1248	ND		0.97		ug/L		10/29/15 06:30	10/30/15 16:38	1
Aroclor 1254	ND		0.97		ug/L		10/29/15 06:30	10/30/15 16:38	1
Aroclor 1260	ND		0.97		ug/L		10/29/15 06:30	10/30/15 16:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	*36*		*29 - 115*	*10/29/15 06:30*	*10/30/15 16:38*	*1*

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Method Summary

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
8081A	Organochlorine Pesticides (GC)	SW846	TAL IRV
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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Lab Chronicle

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Client Sample ID: Subpart CC (A) 1L AMB

Lab Sample ID: 440-125619-1
Matrix: Water
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1035 mL	2 mL	290473	10/30/15 08:55	IVA	TAL IRV
Total/NA	Analysis	8270C		1	1035 mL	2 mL	291233	11/03/15 18:02	DF	TAL IRV
Total/NA	Prep	3510C			1035 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8081A		1	1035 mL	2 mL	290855	11/01/15 17:37	KS	TAL IRV
Total/NA	Prep	3510C			1035 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8082		1	1035 mL	2 mL	290503	10/30/15 15:29	CN	TAL IRV

Client Sample ID: Subpart CC (B) 1L AMB

Lab Sample ID: 440-125619-2
Matrix: Water
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1030 mL	2 mL	290473	10/30/15 08:55	IVA	TAL IRV
Total/NA	Analysis	8270C		1	1030 mL	2 mL	291233	11/03/15 18:25	DF	TAL IRV
Total/NA	Prep	3510C			1030 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8081A		1	1030 mL	2 mL	290855	11/01/15 17:51	KS	TAL IRV
Total/NA	Prep	3510C			1030 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8082		1	1030 mL	2 mL	290503	10/30/15 15:43	CN	TAL IRV

Client Sample ID: Subpart CC (C) 1L AMB

Lab Sample ID: 440-125619-3
Matrix: Water
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1040 mL	2 mL	290473	10/30/15 08:55	IVA	TAL IRV
Total/NA	Analysis	8270C		1	1040 mL	2 mL	291233	11/03/15 18:48	DF	TAL IRV
Total/NA	Prep	3510C			1050 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8081A		1	1050 mL	2 mL	290855	11/01/15 18:05	KS	TAL IRV
Total/NA	Prep	3510C			1050 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8082		1	1050 mL	2 mL	290503	10/30/15 15:57	CN	TAL IRV

Client Sample ID: Subpart CC (D) 1L AMB

Lab Sample ID: 440-125619-4
Matrix: Water
Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1025 mL	2 mL	290473	10/30/15 08:55	IVA	TAL IRV
Total/NA	Analysis	8270C		1	1025 mL	2 mL	291064	11/03/15 00:22	AI	TAL IRV
Total/NA	Prep	3510C			1050 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8081A		1	1050 mL	2 mL	290855	11/01/15 18:19	KS	TAL IRV
Total/NA	Prep	3510C			1050 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8082		1	1050 mL	2 mL	290503	10/30/15 16:10	CN	TAL IRV

Client Sample ID: Subpart CC (E) 1L AMB

Lab Sample ID: 440-125619-5
Matrix: Water

Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1035 mL	2 mL	290473	10/30/15 08:55	IVA	TAL IRV
Total/NA	Analysis	8270C		1	1035 mL	2 mL	291064	11/03/15 00:44	AI	TAL IRV
Total/NA	Prep	3510C			1045 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8081A		1	1045 mL	2 mL	290855	11/01/15 18:33	KS	TAL IRV
Total/NA	Prep	3510C			1045 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8082		1	1045 mL	2 mL	290503	10/30/15 16:24	CN	TAL IRV

Client Sample ID: Subpart CC (F) 1L AMB

Lab Sample ID: 440-125619-6
Matrix: Water

Date Collected: 10/27/15 08:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1040 mL	2 mL	290473	10/30/15 08:55	IVA	TAL IRV
Total/NA	Analysis	8270C		1	1040 mL	2 mL	291233	11/03/15 19:11	DF	TAL IRV
Total/NA	Prep	3510C			1035 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8081A		1	1035 mL	2 mL	290855	11/01/15 18:46	KS	TAL IRV
Total/NA	Prep	3510C			1035 mL	2 mL	290131	10/29/15 06:30	FTD	TAL IRV
Total/NA	Analysis	8082		1	1035 mL	2 mL	290503	10/30/15 16:38	CN	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

US EPA ARCHIVE DOCUMENT

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-290473/1-A
Matrix: Water
Analysis Batch: 291064

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 290473

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
1,2-Dichlorobenzene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
1,3-Dichlorobenzene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
1,4-Dichlorobenzene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
2,4,5-Trichlorophenol	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
2,4,6-Trichlorophenol	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
2,4-Dichlorophenol	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
2,4-Dimethylphenol	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
2,4-Dinitrophenol	ND		40		ug/L		10/30/15 08:55	11/02/15 19:26	1
2,4-Dinitrotoluene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
2,6-Dinitrotoluene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
2-Chloronaphthalene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
2-Chlorophenol	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
2-Methylnaphthalene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
2-Methylphenol	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
2-Nitroaniline	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
2-Nitrophenol	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
3,3'-Dichlorobenzidine	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
3-Nitroaniline	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
4,6-Dinitro-2-methylphenol	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
4-Bromophenyl phenyl ether	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
4-Chloro-3-methylphenol	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
4-Chloroaniline	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
4-Chlorophenyl phenyl ether	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
3-Methylphenol + 4-Methylphenol	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
4-Nitroaniline	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
4-Nitrophenol	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
Acenaphthene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Acenaphthylene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Aniline	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Anthracene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Benzidine	ND		40		ug/L		10/30/15 08:55	11/02/15 19:26	1
Benzo[a]anthracene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Benzo[a]pyrene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Benzo[b]fluoranthene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Benzo[g,h,i]perylene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Benzo[k]fluoranthene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Benzoic acid	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
Benzyl alcohol	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
Bis(2-chloroethoxy)methane	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Bis(2-chloroethyl)ether	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Bis(2-ethylhexyl) phthalate	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
Butyl benzyl phthalate	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
Chrysene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Dibenz(a,h)anthracene	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
Dibenzofuran	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1

US EPA ARCHIVE DOCUMENT

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-290473/1-A
Matrix: Water
Analysis Batch: 291064

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 290473

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl phthalate	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Dimethyl phthalate	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Di-n-butyl phthalate	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
Di-n-octyl phthalate	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
Fluoranthene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Fluorene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Hexachlorobenzene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Hexachlorobutadiene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Hexachlorocyclopentadiene	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
Hexachloroethane	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Indeno[1,2,3-cd]pyrene	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
Isophorone	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Naphthalene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Nitrobenzene	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
N-Nitrosodi-n-propylamine	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
N-Nitrosodiphenylamine	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Pentachlorophenol	ND		20		ug/L		10/30/15 08:55	11/02/15 19:26	1
Phenanthrene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Phenol	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
Pyrene	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1
bis (2-chloroisopropyl) ether	ND		10		ug/L		10/30/15 08:55	11/02/15 19:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*50 - 120*	*10/30/15 08:55*	*11/02/15 19:26*	*1*
2-Fluorophenol (Surr)	*66*		*30 - 120*	*10/30/15 08:55*	*11/02/15 19:26*	*1*
2,4,6-Tribromophenol (Surr)	*84*		*40 - 120*	*10/30/15 08:55*	*11/02/15 19:26*	*1*
Nitrobenzene-d5 (Surr)	*74*		*45 - 120*	*10/30/15 08:55*	*11/02/15 19:26*	*1*
Terphenyl-d14 (Surr)	*80*		*10 - 150*	*10/30/15 08:55*	*11/02/15 19:26*	*1*
Phenol-d6 (Surr)	*67*		*35 - 120*	*10/30/15 08:55*	*11/02/15 19:26*	*1*

Lab Sample ID: LCS 440-290473/2-A
Matrix: Water
Analysis Batch: 291233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290473

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	100	59.0		ug/L		59	25 - 84
1,2-Dichlorobenzene	100	56.3		ug/L		56	24 - 85
1,2-Diphenylhydrazine(as Azobenzene)	101	71.8		ug/L		71	44 - 113
1,3-Dichlorobenzene	100	53.4		ug/L		53	20 - 80
1,4-Dichlorobenzene	100	53.2		ug/L		53	22 - 81
2,4,5-Trichlorophenol	100	72.7		ug/L		73	24 - 121
2,4,6-Trichlorophenol	100	76.1		ug/L		76	20 - 121
2,4-Dichlorophenol	100	62.2		ug/L		62	23 - 113
2,4-Dimethylphenol	100	61.7		ug/L		62	39 - 94
2,4-Dinitrophenol	200	154		ug/L		77	23 - 134
2,4-Dinitrotoluene	100	77.3		ug/L		77	54 - 115
2,6-Dinitrotoluene	100	79.2		ug/L		79	50 - 115

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Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-290473/2-A
Matrix: Water
Analysis Batch: 291233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290473

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	100	75.3		ug/L		75	34 - 102
2-Chlorophenol	100	59.9		ug/L		60	20 - 106
2-Methylnaphthalene	100	62.2		ug/L		62	34 - 98
2-Methylphenol	100	63.9		ug/L		64	36 - 103
2-Nitroaniline	100	80.0		ug/L		80	48 - 111
2-Nitrophenol	100	67.1		ug/L		67	20 - 117
3,3'-Dichlorobenzidine	100	66.0		ug/L		66	22 - 97
3-Nitroaniline	100	82.4		ug/L		82	51 - 116
4,6-Dinitro-2-methylphenol	200	182		ug/L		91	28 - 139
4-Bromophenyl phenyl ether	100	75.8		ug/L		76	42 - 113
4-Chloro-3-methylphenol	100	66.1		ug/L		66	44 - 110
4-Chloroaniline	100	72.2		ug/L		72	42 - 109
4-Chlorophenyl phenyl ether	100	75.0		ug/L		75	38 - 115
3-Methylphenol + 4-Methylphenol	100	65.7		ug/L		66	35 - 106
4-Nitroaniline	100	66.1		ug/L		66	50 - 116
4-Nitrophenol	200	142		ug/L		71	26 - 132
Acenaphthene	100	72.2		ug/L		72	37 - 107
Acenaphthylene	100	72.7		ug/L		73	39 - 107
Aniline	100	73.7		ug/L		74	27 - 115
Anthracene	100	78.1		ug/L		78	42 - 120
Benzidine	100	87.3		ug/L		87	5 - 150
Benzo[a]anthracene	100	83.8		ug/L		84	42 - 115
Benzo[a]pyrene	100	75.2		ug/L		75	41 - 117
Benzo[b]fluoranthene	100	71.8		ug/L		72	36 - 113
Benzo[g,h,i]perylene	100	74.7		ug/L		75	37 - 115
Benzo[k]fluoranthene	100	80.6		ug/L		81	42 - 122
Benzoic acid	100	68.3		ug/L		68	15 - 121
Benzyl alcohol	100	69.0		ug/L		69	39 - 106
Bis(2-chloroethoxy)methane	100	68.1		ug/L		68	47 - 104
Bis(2-chloroethyl)ether	100	65.5		ug/L		66	42 - 99
Bis(2-ethylhexyl) phthalate	100	83.6		ug/L		84	43 - 124
Butyl benzyl phthalate	100	85.0		ug/L		85	44 - 122
Chrysene	100	81.4		ug/L		81	42 - 118
Dibenz(a,h)anthracene	100	74.4		ug/L		74	40 - 114
Dibenzofuran	100	73.3		ug/L		73	37 - 113
Diethyl phthalate	100	75.9		ug/L		76	51 - 120
Dimethyl phthalate	100	76.1		ug/L		76	49 - 113
Di-n-butyl phthalate	100	84.8		ug/L		85	47 - 125
Di-n-octyl phthalate	100	87.0		ug/L		87	42 - 125
Fluoranthene	100	81.4		ug/L		81	44 - 119
Fluorene	100	71.7		ug/L		72	39 - 116
Hexachlorobenzene	100	77.8		ug/L		78	43 - 112
Hexachlorobutadiene	100	54.6		ug/L		55	14 - 77
Hexachlorocyclopentadiene	100	33.2		ug/L		33	10 - 77
Hexachloroethane	100	55.6		ug/L		56	13 - 75
Indeno[1,2,3-cd]pyrene	100	74.2		ug/L		74	35 - 116
Isophorone	100	68.3		ug/L		68	48 - 107
Naphthalene	100	61.8		ug/L		62	33 - 95

US EPA ARCHIVE DOCUMENT

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-290473/2-A
Matrix: Water
Analysis Batch: 291233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290473

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrobenzene	100	65.6		ug/L		66	42 - 99
N-Nitrosodi-n-propylamine	100	69.2		ug/L		69	44 - 111
N-Nitrosodiphenylamine	200	156		ug/L		78	46 - 116
Pentachlorophenol	200	146		ug/L		73	26 - 136
Phenanthrene	100	78.4		ug/L		78	43 - 120
Phenol	100	57.4		ug/L		57	25 - 99
Pyrene	100	82.1		ug/L		82	43 - 119
bis (2-chloroisopropyl) ether	100	68.6		ug/L		69	38 - 104

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*76*		*50 - 120*
2-Fluorophenol (Surr)	*54*		*30 - 120*
2,4,6-Tribromophenol (Surr)	*80*		*40 - 120*
Nitrobenzene-d5 (Surr)	*70*		*45 - 120*
Terphenyl-d14 (Surr)	*82*		*10 - 150*
Phenol-d6 (Surr)	*62*		*35 - 120*

Lab Sample ID: LCSD 440-290473/3-A
Matrix: Water
Analysis Batch: 291233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 290473

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	100	54.7		ug/L		55	25 - 84	8	35
1,2-Dichlorobenzene	100	55.7		ug/L		56	24 - 85	1	35
1,2-Diphenylhydrazine(as Azobenzene)	101	72.1		ug/L		71	44 - 113	0	35
1,3-Dichlorobenzene	100	51.6		ug/L		52	20 - 80	3	35
1,4-Dichlorobenzene	100	51.8		ug/L		52	22 - 81	3	35
2,4,5-Trichlorophenol	100	75.1		ug/L		75	24 - 121	3	35
2,4,6-Trichlorophenol	100	75.0		ug/L		75	20 - 121	1	35
2,4-Dichlorophenol	100	63.3		ug/L		63	23 - 113	2	35
2,4-Dimethylphenol	100	65.2		ug/L		65	39 - 94	5	35
2,4-Dinitrophenol	200	157		ug/L		79	23 - 134	2	35
2,4-Dinitrotoluene	100	78.6		ug/L		79	54 - 115	2	35
2,6-Dinitrotoluene	100	81.8		ug/L		82	50 - 115	3	35
2-Chloronaphthalene	100	75.3		ug/L		75	34 - 102	0	35
2-Chlorophenol	100	60.6		ug/L		61	20 - 106	1	35
2-Methylnaphthalene	100	66.8		ug/L		67	34 - 98	7	35
2-Methylphenol	100	64.6		ug/L		65	36 - 103	1	35
2-Nitroaniline	100	80.4		ug/L		80	48 - 111	1	35
2-Nitrophenol	100	65.4		ug/L		65	20 - 117	2	35
3,3'-Dichlorobenzidine	100	ND	*	ug/L		2	22 - 97	187	35
3-Nitroaniline	100	10.7	J *	ug/L		11	51 - 116	154	35
4,6-Dinitro-2-methylphenol	200	178		ug/L		89	28 - 139	2	35
4-Bromophenyl phenyl ether	100	71.7		ug/L		72	42 - 113	6	35
4-Chloro-3-methylphenol	100	72.7		ug/L		73	44 - 110	9	35
4-Chloroaniline	100	ND	*	ug/L		5	42 - 109	176	35
4-Chlorophenyl phenyl ether	100	77.2		ug/L		77	38 - 115	3	35

US EPA ARCHIVE DOCUMENT

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-290473/3-A
Matrix: Water
Analysis Batch: 291233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 290473

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
3-Methylphenol + 4-Methylphenol	100	70.4		ug/L		70	35 - 106	7	35
4-Nitroaniline	100	28.9	*	ug/L		29	50 - 116	78	35
4-Nitrophenol	200	155		ug/L		77	26 - 132	9	35
Acenaphthene	100	73.7		ug/L		74	37 - 107	2	35
Acenaphthylene	100	73.9		ug/L		74	39 - 107	2	35
Aniline	100	42.3	*	ug/L		42	27 - 115	54	35
Anthracene	100	78.7		ug/L		79	42 - 120	1	35
Benzidine	100	77.4		ug/L		77	5 - 150	12	35
Benzo[a]anthracene	100	82.5		ug/L		83	42 - 115	2	35
Benzo[a]pyrene	100	72.8		ug/L		73	41 - 117	3	35
Benzo[b]fluoranthene	100	68.9		ug/L		69	36 - 113	4	35
Benzo[g,h,i]perylene	100	73.6		ug/L		74	37 - 115	2	35
Benzo[k]fluoranthene	100	79.4		ug/L		79	42 - 122	1	35
Benzoic acid	100	65.1		ug/L		65	15 - 121	5	35
Benzyl alcohol	100	72.3		ug/L		72	39 - 106	5	35
Bis(2-chloroethoxy)methane	100	66.5		ug/L		67	47 - 104	2	35
Bis(2-chloroethyl)ether	100	66.4		ug/L		66	42 - 99	1	35
Bis(2-ethylhexyl) phthalate	100	81.0		ug/L		81	43 - 124	3	35
Butyl benzyl phthalate	100	84.6		ug/L		85	44 - 122	1	35
Chrysene	100	81.1		ug/L		81	42 - 118	0	35
Dibenz(a,h)anthracene	100	72.8		ug/L		73	40 - 114	2	35
Dibenzofuran	100	76.6		ug/L		77	37 - 113	4	35
Diethyl phthalate	100	78.8		ug/L		79	51 - 120	4	35
Dimethyl phthalate	100	78.7		ug/L		79	49 - 113	3	35
Di-n-butyl phthalate	100	84.0		ug/L		84	47 - 125	1	35
Di-n-octyl phthalate	100	84.2		ug/L		84	42 - 125	3	35
Fluoranthene	100	82.8		ug/L		83	44 - 119	2	35
Fluorene	100	74.5		ug/L		74	39 - 116	4	35
Hexachlorobenzene	100	75.5		ug/L		75	43 - 112	3	35
Hexachlorobutadiene	100	48.1		ug/L		48	14 - 77	12	35
Hexachlorocyclopentadiene	100	24.0		ug/L		24	10 - 77	32	35
Hexachloroethane	100	52.8		ug/L		53	13 - 75	5	35
Indeno[1,2,3-cd]pyrene	100	82.8		ug/L		83	35 - 116	11	35
Isophorone	100	73.3		ug/L		73	48 - 107	7	35
Naphthalene	100	61.7		ug/L		62	33 - 95	0	35
Nitrobenzene	100	65.0		ug/L		65	42 - 99	1	35
N-Nitrosodi-n-propylamine	100	79.2		ug/L		79	44 - 111	14	35
N-Nitrosodiphenylamine	200	131		ug/L		65	46 - 116	18	35
Pentachlorophenol	200	150		ug/L		75	26 - 136	3	35
Phenanthrene	100	78.5		ug/L		79	43 - 120	0	35
Phenol	100	55.9		ug/L		56	25 - 99	3	35
Pyrene	100	83.8		ug/L		84	43 - 119	2	35
bis (2-chloroisopropyl) ether	100	70.4		ug/L		70	38 - 104	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*76*		*50 - 120*
2-Fluorophenol (Surr)	*52*		*30 - 120*
2,4,6-Tribromophenol (Surr)	*81*		*40 - 120*

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Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-290473/3-A
Matrix: Water
Analysis Batch: 291233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 290473

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5 (Surr)	69		45 - 120
Terphenyl-d14 (Surr)	81		10 - 150
Phenol-d6 (Surr)	60		35 - 120

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 440-290131/1-A
Matrix: Water
Analysis Batch: 290855

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 290131

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
4,4'-DDE	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
4,4'-DDT	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
Aldrin	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
alpha-BHC	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
alpha-Chlordane	ND		0.20		ug/L		10/29/15 06:30	11/01/15 16:56	1
beta-BHC	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
Chlordane (technical)	ND		1.0		ug/L		10/29/15 06:30	11/01/15 16:56	1
delta-BHC	ND		0.20		ug/L		10/29/15 06:30	11/01/15 16:56	1
Dieldrin	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
Endosulfan I	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
Endosulfan II	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
Endosulfan sulfate	ND		0.20		ug/L		10/29/15 06:30	11/01/15 16:56	1
Endrin	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
Endrin aldehyde	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
Endrin ketone	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
gamma-BHC (Lindane)	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
gamma-Chlordane	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
Heptachlor	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
Heptachlor epoxide	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
Methoxychlor	ND		0.10		ug/L		10/29/15 06:30	11/01/15 16:56	1
Toxaphene	ND		5.0		ug/L		10/29/15 06:30	11/01/15 16:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	60		10 - 150	10/29/15 06:30	11/01/15 16:56	1
DCB Decachlorobiphenyl (Surr)	81		18 - 134	10/29/15 06:30	11/01/15 16:56	1

Lab Sample ID: LCS 440-290131/2-A
Matrix: Water
Analysis Batch: 290855

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290131

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.140		ug/L		70	53 - 126
4,4'-DDE	0.200	0.121		ug/L		61	48 - 115
4,4'-DDT	0.200	0.131		ug/L		65	10 - 150
Aldrin	0.200	0.102		ug/L		51	19 - 115

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Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 440-290131/2-A
Matrix: Water
Analysis Batch: 290855

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290131

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	0.200	0.107		ug/L		54	42 - 115
alpha-Chlordane	0.200	0.120	J	ug/L		60	49 - 115
beta-BHC	0.200	0.126		ug/L		63	48 - 115
delta-BHC	0.200	0.128	J	ug/L		64	48 - 115
Dieldrin	0.200	0.125		ug/L		62	51 - 117
Endosulfan I	0.200	0.124		ug/L		62	47 - 117
Endosulfan II	0.200	0.133		ug/L		67	32 - 128
Endosulfan sulfate	0.200	0.244	*	ug/L		122	50 - 117
Endrin	0.200	0.128		ug/L		64	51 - 120
Endrin aldehyde	0.200	0.137		ug/L		69	49 - 115
Endrin ketone	0.200	0.135		ug/L		67	51 - 121
gamma-BHC (Lindane)	0.200	0.116		ug/L		58	43 - 115
gamma-Chlordane	0.200	0.118		ug/L		59	21 - 148
Heptachlor	0.200	0.114		ug/L		57	44 - 115
Heptachlor epoxide	0.200	0.122		ug/L		61	35 - 131
Methoxychlor	0.200	0.140		ug/L		70	44 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*41*		*10 - 150*
DCB Decachlorobiphenyl (Surr)	*61*		*18 - 134*

Lab Sample ID: LCSD 440-290131/3-A
Matrix: Water
Analysis Batch: 290855

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 290131

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	0.200	0.147		ug/L		73	53 - 126	5	35
4,4'-DDE	0.200	0.124		ug/L		62	48 - 115	2	35
4,4'-DDT	0.200	0.130		ug/L		65	10 - 150	1	35
Aldrin	0.200	0.0955	J	ug/L		48	19 - 115	6	35
alpha-BHC	0.200	0.114		ug/L		57	42 - 115	6	35
alpha-Chlordane	0.200	0.125	J	ug/L		62	49 - 115	3	35
beta-BHC	0.200	0.130		ug/L		65	48 - 115	3	35
delta-BHC	0.200	0.132	J	ug/L		66	48 - 115	3	35
Dieldrin	0.200	0.129		ug/L		65	51 - 117	4	35
Endosulfan I	0.200	0.129		ug/L		64	47 - 117	3	34
Endosulfan II	0.200	0.136		ug/L		68	32 - 128	2	35
Endosulfan sulfate	0.200	0.244	*	ug/L		122	50 - 117	0	35
Endrin	0.200	0.129		ug/L		65	51 - 120	1	35
Endrin aldehyde	0.200	0.138		ug/L		69	49 - 115	0	35
Endrin ketone	0.200	0.137		ug/L		68	51 - 121	1	35
gamma-BHC (Lindane)	0.200	0.121		ug/L		61	43 - 115	5	35
gamma-Chlordane	0.200	0.124		ug/L		62	21 - 148	5	35
Heptachlor	0.200	0.122		ug/L		61	44 - 115	7	35
Heptachlor epoxide	0.200	0.127		ug/L		63	35 - 131	3	35
Methoxychlor	0.200	0.137		ug/L		69	44 - 142	2	35

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Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 440-290131/3-A
Matrix: Water
Analysis Batch: 290855

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 290131

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	42		10 - 150
DCB Decachlorobiphenyl (Surr)	62		18 - 134

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 440-290131/1-A
Matrix: Water
Analysis Batch: 290094

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 290131

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		1.0		ug/L		10/29/15 06:30	10/29/15 14:50	1
Aroclor 1221	ND		1.0		ug/L		10/29/15 06:30	10/29/15 14:50	1
Aroclor 1232	ND		1.0		ug/L		10/29/15 06:30	10/29/15 14:50	1
Aroclor 1242	ND		1.0		ug/L		10/29/15 06:30	10/29/15 14:50	1
Aroclor 1248	ND		1.0		ug/L		10/29/15 06:30	10/29/15 14:50	1
Aroclor 1254	ND		1.0		ug/L		10/29/15 06:30	10/29/15 14:50	1
Aroclor 1260	ND		1.0		ug/L		10/29/15 06:30	10/29/15 14:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	32		29 - 115	10/29/15 06:30	10/29/15 14:50	1

Lab Sample ID: LCS 440-290131/4-A
Matrix: Water
Analysis Batch: 290094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290131

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor 1016	4.00	2.45		ug/L		61	39 - 145
Aroclor 1260	4.00	2.23		ug/L		56	37 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	39		29 - 115

Lab Sample ID: LCSD 440-290131/5-A
Matrix: Water
Analysis Batch: 290094

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 290131

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor 1016	4.00	2.65		ug/L		66	39 - 145	8	30
Aroclor 1260	4.00	2.39		ug/L		60	37 - 137	7	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	40		29 - 115

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GC/MS Semi VOA

Prep Batch: 290473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-125619-1	Subpart CC (A) 1L AMB	Total/NA	Water	3520C	
440-125619-2	Subpart CC (B) 1L AMB	Total/NA	Water	3520C	
440-125619-3	Subpart CC (C) 1L AMB	Total/NA	Water	3520C	
440-125619-4	Subpart CC (D) 1L AMB	Total/NA	Water	3520C	
440-125619-5	Subpart CC (E) 1L AMB	Total/NA	Water	3520C	
440-125619-6	Subpart CC (F) 1L AMB	Total/NA	Water	3520C	
LCS 440-290473/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-290473/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 440-290473/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 291064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-125619-4	Subpart CC (D) 1L AMB	Total/NA	Water	8270C	290473
440-125619-5	Subpart CC (E) 1L AMB	Total/NA	Water	8270C	290473
MB 440-290473/1-A	Method Blank	Total/NA	Water	8270C	290473

Analysis Batch: 291233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-125619-1	Subpart CC (A) 1L AMB	Total/NA	Water	8270C	290473
440-125619-2	Subpart CC (B) 1L AMB	Total/NA	Water	8270C	290473
440-125619-3	Subpart CC (C) 1L AMB	Total/NA	Water	8270C	290473
440-125619-6	Subpart CC (F) 1L AMB	Total/NA	Water	8270C	290473
LCS 440-290473/2-A	Lab Control Sample	Total/NA	Water	8270C	290473
LCSD 440-290473/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	290473

GC Semi VOA

Analysis Batch: 290094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-290131/4-A	Lab Control Sample	Total/NA	Water	8082	290131
LCSD 440-290131/5-A	Lab Control Sample Dup	Total/NA	Water	8082	290131
MB 440-290131/1-A	Method Blank	Total/NA	Water	8082	290131

Prep Batch: 290131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-125619-1	Subpart CC (A) 1L AMB	Total/NA	Water	3510C	
440-125619-2	Subpart CC (B) 1L AMB	Total/NA	Water	3510C	
440-125619-3	Subpart CC (C) 1L AMB	Total/NA	Water	3510C	
440-125619-4	Subpart CC (D) 1L AMB	Total/NA	Water	3510C	
440-125619-5	Subpart CC (E) 1L AMB	Total/NA	Water	3510C	
440-125619-6	Subpart CC (F) 1L AMB	Total/NA	Water	3510C	
LCS 440-290131/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 440-290131/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 440-290131/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 440-290131/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 440-290131/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 290503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-125619-1	Subpart CC (A) 1L AMB	Total/NA	Water	8082	290131

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GC Semi VOA (Continued)

Analysis Batch: 290503 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-125619-2	Subpart CC (B) 1L AMB	Total/NA	Water	8082	290131
440-125619-3	Subpart CC (C) 1L AMB	Total/NA	Water	8082	290131
440-125619-4	Subpart CC (D) 1L AMB	Total/NA	Water	8082	290131
440-125619-5	Subpart CC (E) 1L AMB	Total/NA	Water	8082	290131
440-125619-6	Subpart CC (F) 1L AMB	Total/NA	Water	8082	290131

Analysis Batch: 290855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-125619-1	Subpart CC (A) 1L AMB	Total/NA	Water	8081A	290131
440-125619-2	Subpart CC (B) 1L AMB	Total/NA	Water	8081A	290131
440-125619-3	Subpart CC (C) 1L AMB	Total/NA	Water	8081A	290131
440-125619-4	Subpart CC (D) 1L AMB	Total/NA	Water	8081A	290131
440-125619-5	Subpart CC (E) 1L AMB	Total/NA	Water	8081A	290131
440-125619-6	Subpart CC (F) 1L AMB	Total/NA	Water	8081A	290131
LCS 440-290131/2-A	Lab Control Sample	Total/NA	Water	8081A	290131
LCSD 440-290131/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	290131
MB 440-290131/1-A	Method Blank	Total/NA	Water	8081A	290131

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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Certification Summary

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125619-1

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-16
Arizona	State Program	9	AZ0671	10-13-16
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-16
Hawaii	State Program	9	N/A	01-29-16
Kansas	NELAP Secondary AB	7	E-10420	07-31-16
Nevada	State Program	9	CA015312007A	07-31-16 *
New Mexico	State Program	6	N/A	01-29-16
Northern Mariana Islands	State Program	9	MP0002	01-29-16
Oregon	NELAP	10	4005	01-29-16
USDA	Federal		P330-09-00080	07-08-18

* Certification renewal pending - certification considered valid.

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TestAmerica
ANALYTICAL TESTING CORPORATION

CHAIN OF CUSTODY RECORD

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☐ Orlando, FL ☐ Watertown, WI ☒ Irvine,CA
☐ Cedar Falls, IA ☐ Pontiac, MI

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?

Compliance Monitoring? Yes No
Enforcement Action? Yes No

Client Name/Account #: Evoqua Water Technologies
Address: POB 3308 / 2523 MUTAHAR ST
City/State/Zip: PARKER, AZ 85344
Project Manager: Camille Murray
Telephone Number: 928-669-5758 Fax No.: 928-669-5775
Sampler Name: (Print) Roy Provins
Sampler Signature:

Report To: James.R.Provins@Evoqual.com
Invoice To:
TA Quote #:
Project ID: Subpart CC
Project #:

440-125619 Chain of Custody

Sample ID / Description	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Ice	HNO_3 (Red Label)	HCl (Blue Label)	NaOH (Orange Label)	H_2SO_4 Plastic (Yellow Label)	H_2SO_4 Glass(Yellow Label)	None (Black Label)	Other (Specify)	Matrix: Groundwater	Water	Drinking Water	Sludge	Soil	Other (specify):	Analyze For: 8270	8081 / 8082	RUSH TAT (Pre-Schedule)	Standard TAT	Fax Results	Send QC with report
Subpart CC (A) 1L AMB	10/27/2015	8:00 AM	2	■			■									■					■			■		
Subpart CC (B) 1L AMB	10/27/2015	8:00 AM	2	■			■									■					■			■		
Subpart CC (C) 1L AMB	10/27/2015	8:00 AM	2	■			■									■					■			■		
Subpart CC (D) 1L AMB	10/27/2015	8:00 AM	2	■			■									■					■			■		
Subpart CC (E) 1L AMB	10/27/2015	8:00 AM	2	■			■									■					■			■		
Subpart CC (F) 1L AMB	10/27/2015	8:00 AM	2	■			■									■					■			■		
Subpart CC (A) 1L AMB	10/27/2015	8:00 AM	2	■			■									■						■		■		
Subpart CC (B) 1L AMB	10/27/2015	8:00 AM	2	■			■									■						■		■		
Subpart CC (C) 1L AMB	10/27/2015	8:00 AM	2	■			■									■						■		■		
Subpart CC (D) 1L AMB	10/27/2015	8:00 AM	2	■			■									■						■		■		
Subpart CC (E) 1L AMB	10/27/2015	8:00 AM	2	■			■									■						■		■		
Subpart CC (F) 1L AMB	10/27/2015	8:00 AM	2	■			■									■						■		■		

Special Instructions:

Laboratory Comments:
Temperature Upon Receipt:
VOCs Free of Headspace? Y N

Method of Shipment: UPS

Relinquished by:	Date	Time	Received by:	Date	Time
Roy Provins	10/27/2015	1400		10/28/15	10:00

1.5/0.5 2.0/1.0 3.4/2.4
22-73

S:\Laboratory Results\Chain Of Custody forms\Excel\TestAmerica-coc- Subpart CC.xls

UPS: 1Z A95 20E 01 9586 6057 1Z A95 20E 01 9556 5640
1Z A95 20E 01 98 0039

11/6/2015

Login Sample Receipt Checklist

Client: Evoqua Water Technologies eProcurement

Job Number: 440-125619-1

Login Number: 125619
List Number: 1
Creator: Escalante, Maria I

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Refer to Job Narrative for details.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

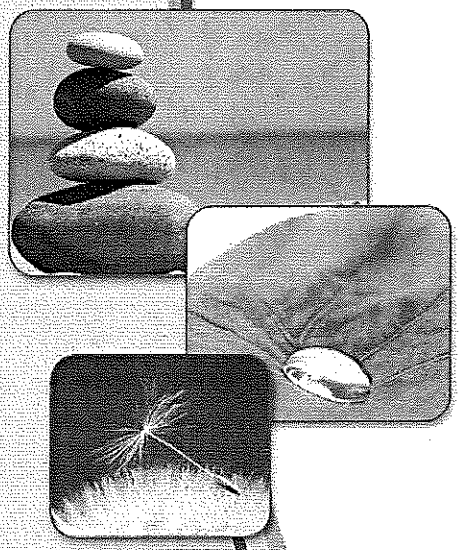
TestAmerica Job ID: 440-125626-1
Client Project/Site: Subpart CC

For:
Evoqua Water Technologies eProcurement
PO BOX 3308 IMA065
Parker, Arizona 85344

Attn: Roy Provins

Authorized for release by:
11/10/2015 3:12:51 PM

Camille Murray, Project Manager I
(949)261-1022
camille.murray@testamericainc.com



LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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US EPA ARCHIVE DOCUMENT

Sample Summary

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-125626-1	Subpart CC VOA #A	Water	10/27/15 09:00	10/28/15 10:00
440-125626-2	Subpart CC VOA #B	Water	10/27/15 09:00	10/28/15 10:00
440-125626-3	Subpart CC VOA #C	Water	10/27/15 09:00	10/28/15 10:00
440-125626-4	Subpart CC VOA #D	Water	10/27/15 09:00	10/28/15 10:00
440-125626-5	Subpart CC VOA #E	Water	10/27/15 09:00	10/28/15 10:00
440-125626-6	Subpart CC VOA #F	Water	10/27/15 09:00	10/28/15 10:00

US EPA ARCHIVE DOCUMENT

Job ID: 440-125626-1

Laboratory: TestAmerica Irvine

4

Narrative

Job Narrative
440-125626-1

Comments
No additional comments.

Receipt
The samples were received on 10/28/2015 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7° C.

Receipt Exceptions

A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC). There were a total of 6 trip blanks that came with this project, it was not listed on the COC, they will be labeled and put away.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Client Sample ID: Subpart CC VOA #A
Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125626-1
Matrix: Water

5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			11/04/15 21:29	1
Bromobenzene	ND		5.0		ug/L			11/04/15 21:29	1
Bromochloromethane	ND		5.0		ug/L			11/04/15 21:29	1
Bromodichloromethane	ND		2.0		ug/L			11/04/15 21:29	1
Bromoform	ND		5.0		ug/L			11/04/15 21:29	1
Bromomethane	ND		5.0		ug/L			11/04/15 21:29	1
Carbon disulfide	ND		5.0		ug/L			11/04/15 21:29	1
Carbon tetrachloride	ND		5.0		ug/L			11/04/15 21:29	1
Chlorobenzene	ND		2.0		ug/L			11/04/15 21:29	1
Chloroethane	ND		5.0		ug/L			11/04/15 21:29	1
Chloroform	ND		2.0		ug/L			11/04/15 21:29	1
Chloromethane	ND		5.0		ug/L			11/04/15 21:29	1
2-Chlorotoluene	ND		5.0		ug/L			11/04/15 21:29	1
4-Chlorotoluene	ND		5.0		ug/L			11/04/15 21:29	1
cis-1,2-Dichloroethene	ND		2.0		ug/L			11/04/15 21:29	1
cis-1,3-Dichloropropene	ND		2.0		ug/L			11/04/15 21:29	1
Dibromochloromethane	ND		2.0		ug/L			11/04/15 21:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/04/15 21:29	1
1,2-Dibromoethane (EDB)	ND		2.0		ug/L			11/04/15 21:29	1
Dibromomethane	ND		2.0		ug/L			11/04/15 21:29	1
1,2-Dichlorobenzene	ND		2.0		ug/L			11/04/15 21:29	1
1,3-Dichlorobenzene	ND		2.0		ug/L			11/04/15 21:29	1
1,4-Dichlorobenzene	ND		2.0		ug/L			11/04/15 21:29	1
Dichlorodifluoromethane	ND		5.0		ug/L			11/04/15 21:29	1
1,1-Dichloroethane	ND		2.0		ug/L			11/04/15 21:29	1
1,2-Dichloroethane	ND		2.0		ug/L			11/04/15 21:29	1
1,1-Dichloroethene	ND		5.0		ug/L			11/04/15 21:29	1
1,2-Dichloropropane	ND		2.0		ug/L			11/04/15 21:29	1
1,3-Dichloropropane	ND		2.0		ug/L			11/04/15 21:29	1
2,2-Dichloropropane	ND		2.0		ug/L			11/04/15 21:29	1
1,1-Dichloropropene	ND		2.0		ug/L			11/04/15 21:29	1
Ethylbenzene	ND		2.0		ug/L			11/04/15 21:29	1
Hexachlorobutadiene	ND		5.0		ug/L			11/04/15 21:29	1
Isopropylbenzene	ND		2.0		ug/L			11/04/15 21:29	1
Methylene Chloride	ND		5.0		ug/L			11/04/15 21:29	1
m,p-Xylene	ND		2.0		ug/L			11/04/15 21:29	1
Naphthalene	ND		5.0		ug/L			11/04/15 21:29	1
n-Butylbenzene	ND		5.0		ug/L			11/04/15 21:29	1
N-Propylbenzene	ND		2.0		ug/L			11/04/15 21:29	1
o-Xylene	ND		2.0		ug/L			11/04/15 21:29	1
p-Isopropyltoluene	ND		2.0		ug/L			11/04/15 21:29	1
sec-Butylbenzene	ND		5.0		ug/L			11/04/15 21:29	1
Styrene	ND		2.0		ug/L			11/04/15 21:29	1
tert-Butylbenzene	ND		5.0		ug/L			11/04/15 21:29	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			11/04/15 21:29	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			11/04/15 21:29	1
Tetrachloroethene	ND		2.0		ug/L			11/04/15 21:29	1
Toluene	ND		2.0		ug/L			11/04/15 21:29	1
trans-1,2-Dichloroethene	ND		2.0		ug/L			11/04/15 21:29	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Client Sample ID: Subpart CC VOA #A

Lab Sample ID: 440-125626-1
Matrix: Water

Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		2.0		ug/L			11/04/15 21:29	1
1,2,3-Trichlorobenzene	ND		5.0		ug/L			11/04/15 21:29	1
1,2,4-Trichlorobenzene	ND		5.0		ug/L			11/04/15 21:29	1
1,1,1-Trichloroethane	ND		2.0		ug/L			11/04/15 21:29	1
1,1,2-Trichloroethane	ND		2.0		ug/L			11/04/15 21:29	1
Trichloroethene	ND		2.0		ug/L			11/04/15 21:29	1
Trichlorofluoromethane	ND		5.0		ug/L			11/04/15 21:29	1
1,2,3-Trichloropropane	ND		10		ug/L			11/04/15 21:29	1
1,2,4-Trimethylbenzene	ND		2.0		ug/L			11/04/15 21:29	1
1,3,5-Trimethylbenzene	ND		2.0		ug/L			11/04/15 21:29	1
Vinyl acetate	ND		5.0		ug/L			11/04/15 21:29	1
Vinyl chloride	ND		5.0		ug/L			11/04/15 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/04/15 21:29*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*11/04/15 21:29*	*1*
Toluene-d8 (Surr)	*109*		*80 - 128*		*11/04/15 21:29*	*1*

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		10		mg/L			11/09/15 12:52	1
Isopropyl alcohol	ND		10		mg/L			11/09/15 12:52	1
Methanol	ND		10		mg/L			11/09/15 12:52	1
1-Propanol	10		10		mg/L			11/09/15 12:52	1

Client Sample ID: Subpart CC VOA #B

Lab Sample ID: 440-125626-2
Matrix: Water

Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			11/04/15 22:55	1
Bromobenzene	ND		5.0		ug/L			11/04/15 22:55	1
Bromochloromethane	ND		5.0		ug/L			11/04/15 22:55	1
Bromodichloromethane	ND		2.0		ug/L			11/04/15 22:55	1
Bromoform	ND		5.0		ug/L			11/04/15 22:55	1
Bromomethane	ND		5.0		ug/L			11/04/15 22:55	1
Carbon disulfide	ND		5.0		ug/L			11/04/15 22:55	1
Carbon tetrachloride	ND		5.0		ug/L			11/04/15 22:55	1
Chlorobenzene	ND		2.0		ug/L			11/04/15 22:55	1
Chloroethane	ND		5.0		ug/L			11/04/15 22:55	1
Chloroform	ND		2.0		ug/L			11/04/15 22:55	1
Chloromethane	ND		5.0		ug/L			11/04/15 22:55	1
2-Chlorotoluene	ND		5.0		ug/L			11/04/15 22:55	1
4-Chlorotoluene	ND		5.0		ug/L			11/04/15 22:55	1
cis-1,2-Dichloroethene	ND		2.0		ug/L			11/04/15 22:55	1
cis-1,3-Dichloropropene	ND		2.0		ug/L			11/04/15 22:55	1
Dibromochloromethane	ND		2.0		ug/L			11/04/15 22:55	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/04/15 22:55	1
1,2-Dibromoethane (EDB)	ND		2.0		ug/L			11/04/15 22:55	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Client Sample ID: Subpart CC VOA #B
Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125626-2
Matrix: Water

5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		2.0		ug/L			11/04/15 22:55	1
1,2-Dichlorobenzene	ND		2.0		ug/L			11/04/15 22:55	1
1,3-Dichlorobenzene	ND		2.0		ug/L			11/04/15 22:55	1
1,4-Dichlorobenzene	ND		2.0		ug/L			11/04/15 22:55	1
Dichlorodifluoromethane	ND		5.0		ug/L			11/04/15 22:55	1
1,1-Dichloroethane	ND		2.0		ug/L			11/04/15 22:55	1
1,2-Dichloroethane	ND		2.0		ug/L			11/04/15 22:55	1
1,1-Dichloroethene	ND		5.0		ug/L			11/04/15 22:55	1
1,2-Dichloropropane	ND		2.0		ug/L			11/04/15 22:55	1
1,3-Dichloropropane	ND		2.0		ug/L			11/04/15 22:55	1
2,2-Dichloropropane	ND		2.0		ug/L			11/04/15 22:55	1
1,1-Dichloropropene	ND		2.0		ug/L			11/04/15 22:55	1
Ethylbenzene	ND		2.0		ug/L			11/04/15 22:55	1
Hexachlorobutadiene	ND		5.0		ug/L			11/04/15 22:55	1
Isopropylbenzene	ND		2.0		ug/L			11/04/15 22:55	1
Methylene Chloride	ND		5.0		ug/L			11/04/15 22:55	1
m,p-Xylene	ND		2.0		ug/L			11/04/15 22:55	1
Naphthalene	ND		5.0		ug/L			11/04/15 22:55	1
n-Butylbenzene	ND		5.0		ug/L			11/04/15 22:55	1
N-Propylbenzene	ND		2.0		ug/L			11/04/15 22:55	1
o-Xylene	ND		2.0		ug/L			11/04/15 22:55	1
p-Isopropyltoluene	ND		2.0		ug/L			11/04/15 22:55	1
sec-Butylbenzene	ND		5.0		ug/L			11/04/15 22:55	1
Styrene	ND		2.0		ug/L			11/04/15 22:55	1
tert-Butylbenzene	ND		5.0		ug/L			11/04/15 22:55	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			11/04/15 22:55	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			11/04/15 22:55	1
Tetrachloroethene	ND		2.0		ug/L			11/04/15 22:55	1
Toluene	ND		2.0		ug/L			11/04/15 22:55	1
trans-1,2-Dichloroethene	ND		2.0		ug/L			11/04/15 22:55	1
trans-1,3-Dichloropropene	ND		2.0		ug/L			11/04/15 22:55	1
1,2,3-Trichlorobenzene	ND		5.0		ug/L			11/04/15 22:55	1
1,2,4-Trichlorobenzene	ND		5.0		ug/L			11/04/15 22:55	1
1,1,1-Trichloroethane	ND		2.0		ug/L			11/04/15 22:55	1
1,1,2-Trichloroethane	ND		2.0		ug/L			11/04/15 22:55	1
Trichloroethene	ND		2.0		ug/L			11/04/15 22:55	1
Trichlorofluoromethane	ND		5.0		ug/L			11/04/15 22:55	1
1,2,3-Trichloropropane	ND		10		ug/L			11/04/15 22:55	1
1,2,4-Trimethylbenzene	ND		2.0		ug/L			11/04/15 22:55	1
1,3,5-Trimethylbenzene	ND		2.0		ug/L			11/04/15 22:55	1
Vinyl acetate	ND		5.0		ug/L			11/04/15 22:55	1
Vinyl chloride	ND		5.0		ug/L			11/04/15 22:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*11/04/15 22:55*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*11/04/15 22:55*	*1*
Toluene-d8 (Surr)	*108*		*80 - 128*		*11/04/15 22:55*	*1*

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Client Sample ID: Subpart CC VOA #B

Lab Sample ID: 440-125626-2
Matrix: Water

Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		10		mg/L			11/09/15 13:00	1
Isopropyl alcohol	ND		10		mg/L			11/09/15 13:00	1
Methanol	ND		10		mg/L			11/09/15 13:00	1
1-Propanol	ND		10		mg/L			11/09/15 13:00	1

Client Sample ID: Subpart CC VOA #C

Lab Sample ID: 440-125626-3
Matrix: Water

Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			11/04/15 23:23	1
Bromobenzene	ND		5.0		ug/L			11/04/15 23:23	1
Bromochloromethane	ND		5.0		ug/L			11/04/15 23:23	1
Bromodichloromethane	ND		2.0		ug/L			11/04/15 23:23	1
Bromoform	ND		5.0		ug/L			11/04/15 23:23	1
Bromomethane	ND		5.0		ug/L			11/04/15 23:23	1
Carbon disulfide	ND		5.0		ug/L			11/04/15 23:23	1
Carbon tetrachloride	ND		5.0		ug/L			11/04/15 23:23	1
Chlorobenzene	ND		2.0		ug/L			11/04/15 23:23	1
Chloroethane	ND		5.0		ug/L			11/04/15 23:23	1
Chloroform	ND		2.0		ug/L			11/04/15 23:23	1
Chloromethane	ND		5.0		ug/L			11/04/15 23:23	1
2-Chlorotoluene	ND		5.0		ug/L			11/04/15 23:23	1
4-Chlorotoluene	ND		5.0		ug/L			11/04/15 23:23	1
cis-1,2-Dichloroethene	ND		2.0		ug/L			11/04/15 23:23	1
cis-1,3-Dichloropropene	ND		2.0		ug/L			11/04/15 23:23	1
Dibromochloromethane	ND		2.0		ug/L			11/04/15 23:23	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/04/15 23:23	1
1,2-Dibromoethane (EDB)	ND		2.0		ug/L			11/04/15 23:23	1
Dibromomethane	ND		2.0		ug/L			11/04/15 23:23	1
1,2-Dichlorobenzene	ND		2.0		ug/L			11/04/15 23:23	1
1,3-Dichlorobenzene	ND		2.0		ug/L			11/04/15 23:23	1
1,4-Dichlorobenzene	ND		2.0		ug/L			11/04/15 23:23	1
Dichlorodifluoromethane	ND		5.0		ug/L			11/04/15 23:23	1
1,1-Dichloroethane	ND		2.0		ug/L			11/04/15 23:23	1
1,2-Dichloroethane	ND		2.0		ug/L			11/04/15 23:23	1
1,1-Dichloroethene	ND		5.0		ug/L			11/04/15 23:23	1
1,2-Dichloropropane	ND		2.0		ug/L			11/04/15 23:23	1
1,3-Dichloropropane	ND		2.0		ug/L			11/04/15 23:23	1
2,2-Dichloropropane	ND		2.0		ug/L			11/04/15 23:23	1
1,1-Dichloropropene	ND		2.0		ug/L			11/04/15 23:23	1
Ethylbenzene	ND		2.0		ug/L			11/04/15 23:23	1
Hexachlorobutadiene	ND		5.0		ug/L			11/04/15 23:23	1
Isopropylbenzene	ND		2.0		ug/L			11/04/15 23:23	1
Methylene Chloride	ND		5.0		ug/L			11/04/15 23:23	1
m,p-Xylene	ND		2.0		ug/L			11/04/15 23:23	1
Naphthalene	ND		5.0		ug/L			11/04/15 23:23	1
n-Butylbenzene	ND		5.0		ug/L			11/04/15 23:23	1
N-Propylbenzene	ND		2.0		ug/L			11/04/15 23:23	1

US EPA ARCHIVE DOCUMENT

Client Sample ID: Subpart CC VOA #C

Lab Sample ID: 440-125626-3
Date Collected: 10/27/15 09:00
Matrix: Water
Date Received: 10/28/15 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		2.0		ug/L			11/04/15 23:23	1
p-Isopropyltoluene	ND		2.0		ug/L			11/04/15 23:23	1
sec-Butylbenzene	ND		5.0		ug/L			11/04/15 23:23	1
Styrene	ND		2.0		ug/L			11/04/15 23:23	1
tert-Butylbenzene	ND		5.0		ug/L			11/04/15 23:23	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			11/04/15 23:23	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			11/04/15 23:23	1
Tetrachloroethene	ND		2.0		ug/L			11/04/15 23:23	1
Toluene	ND		2.0		ug/L			11/04/15 23:23	1
trans-1,2-Dichloroethene	ND		2.0		ug/L			11/04/15 23:23	1
trans-1,3-Dichloropropene	ND		2.0		ug/L			11/04/15 23:23	1
1,2,3-Trichlorobenzene	ND		5.0		ug/L			11/04/15 23:23	1
1,2,4-Trichlorobenzene	ND		5.0		ug/L			11/04/15 23:23	1
1,1,1-Trichloroethane	ND		2.0		ug/L			11/04/15 23:23	1
1,1,2-Trichloroethane	ND		2.0		ug/L			11/04/15 23:23	1
Trichloroethene	ND		2.0		ug/L			11/04/15 23:23	1
Trichlorofluoromethane	ND		5.0		ug/L			11/04/15 23:23	1
1,2,3-Trichloropropane	ND		10		ug/L			11/04/15 23:23	1
1,2,4-Trimethylbenzene	ND		2.0		ug/L			11/04/15 23:23	1
1,3,5-Trimethylbenzene	ND		2.0		ug/L			11/04/15 23:23	1
Vinyl acetate	ND		5.0		ug/L			11/04/15 23:23	1
Vinyl chloride	ND		5.0		ug/L			11/04/15 23:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/04/15 23:23*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*11/04/15 23:23*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*11/04/15 23:23*	*1*

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		10		mg/L			11/09/15 13:08	1
Isopropyl alcohol	ND		10		mg/L			11/09/15 13:08	1
Methanol	ND		10		mg/L			11/09/15 13:08	1
1-Propanol	ND		10		mg/L			11/09/15 13:08	1

Client Sample ID: Subpart CC VOA #D

Lab Sample ID: 440-125626-4
Date Collected: 10/27/15 09:00
Matrix: Water
Date Received: 10/28/15 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			11/04/15 23:51	1
Bromobenzene	ND		5.0		ug/L			11/04/15 23:51	1
Bromochloromethane	ND		5.0		ug/L			11/04/15 23:51	1
Bromodichloromethane	ND		2.0		ug/L			11/04/15 23:51	1
Bromoform	ND		5.0		ug/L			11/04/15 23:51	1
Bromomethane	ND		5.0		ug/L			11/04/15 23:51	1
Carbon disulfide	ND		5.0		ug/L			11/04/15 23:51	1
Carbon tetrachloride	ND		5.0		ug/L			11/04/15 23:51	1
Chlorobenzene	ND		2.0		ug/L			11/04/15 23:51	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Client Sample ID: Subpart CC VOA #D
Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125626-4
Matrix: Water

5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		5.0		ug/L			11/04/15 23:51	1
Chloroform	ND		2.0		ug/L			11/04/15 23:51	1
Chloromethane	ND		5.0		ug/L			11/04/15 23:51	1
2-Chlorotoluene	ND		5.0		ug/L			11/04/15 23:51	1
4-Chlorotoluene	ND		5.0		ug/L			11/04/15 23:51	1
cis-1,2-Dichloroethene	ND		2.0		ug/L			11/04/15 23:51	1
cis-1,3-Dichloropropene	ND		2.0		ug/L			11/04/15 23:51	1
Dibromochloromethane	ND		2.0		ug/L			11/04/15 23:51	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/04/15 23:51	1
1,2-Dibromoethane (EDB)	ND		2.0		ug/L			11/04/15 23:51	1
Dibromomethane	ND		2.0		ug/L			11/04/15 23:51	1
1,2-Dichlorobenzene	ND		2.0		ug/L			11/04/15 23:51	1
1,3-Dichlorobenzene	ND		2.0		ug/L			11/04/15 23:51	1
1,4-Dichlorobenzene	ND		2.0		ug/L			11/04/15 23:51	1
Dichlorodifluoromethane	ND		5.0		ug/L			11/04/15 23:51	1
1,1-Dichloroethane	ND		2.0		ug/L			11/04/15 23:51	1
1,2-Dichloroethane	ND		2.0		ug/L			11/04/15 23:51	1
1,1-Dichloroethene	ND		5.0		ug/L			11/04/15 23:51	1
1,2-Dichloropropane	ND		2.0		ug/L			11/04/15 23:51	1
1,3-Dichloropropane	ND		2.0		ug/L			11/04/15 23:51	1
2,2-Dichloropropane	ND		2.0		ug/L			11/04/15 23:51	1
1,1-Dichloropropene	ND		2.0		ug/L			11/04/15 23:51	1
Ethylbenzene	ND		2.0		ug/L			11/04/15 23:51	1
Hexachlorobutadiene	ND		5.0		ug/L			11/04/15 23:51	1
Isopropylbenzene	ND		2.0		ug/L			11/04/15 23:51	1
Methylene Chloride	ND		5.0		ug/L			11/04/15 23:51	1
m,p-Xylene	ND		2.0		ug/L			11/04/15 23:51	1
Naphthalene	ND		5.0		ug/L			11/04/15 23:51	1
n-Butylbenzene	ND		5.0		ug/L			11/04/15 23:51	1
N-Propylbenzene	ND		2.0		ug/L			11/04/15 23:51	1
o-Xylene	ND		2.0		ug/L			11/04/15 23:51	1
p-Isopropyltoluene	ND		2.0		ug/L			11/04/15 23:51	1
sec-Butylbenzene	ND		5.0		ug/L			11/04/15 23:51	1
Styrene	ND		2.0		ug/L			11/04/15 23:51	1
tert-Butylbenzene	ND		5.0		ug/L			11/04/15 23:51	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			11/04/15 23:51	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			11/04/15 23:51	1
Tetrachloroethene	ND		2.0		ug/L			11/04/15 23:51	1
Toluene	ND		2.0		ug/L			11/04/15 23:51	1
trans-1,2-Dichloroethene	ND		2.0		ug/L			11/04/15 23:51	1
trans-1,3-Dichloropropene	ND		2.0		ug/L			11/04/15 23:51	1
1,2,3-Trichlorobenzene	ND		5.0		ug/L			11/04/15 23:51	1
1,2,4-Trichlorobenzene	ND		5.0		ug/L			11/04/15 23:51	1
1,1,1-Trichloroethane	ND		2.0		ug/L			11/04/15 23:51	1
1,1,2-Trichloroethane	ND		2.0		ug/L			11/04/15 23:51	1
Trichloroethene	ND		2.0		ug/L			11/04/15 23:51	1
Trichlorofluoromethane	ND		5.0		ug/L			11/04/15 23:51	1
1,2,3-Trichloropropane	ND		10		ug/L			11/04/15 23:51	1
1,2,4-Trimethylbenzene	ND		2.0		ug/L			11/04/15 23:51	1

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Client Sample ID: Subpart CC VOA #D

Lab Sample ID: 440-125626-4
Date Collected: 10/27/15 09:00
Matrix: Water
Date Received: 10/28/15 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0		ug/L			11/04/15 23:51	1
Vinyl acetate	ND		5.0		ug/L			11/04/15 23:51	1
Vinyl chloride	ND		5.0		ug/L			11/04/15 23:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/04/15 23:51*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*11/04/15 23:51*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*11/04/15 23:51*	*1*

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		10		mg/L			11/09/15 13:16	1
Isopropyl alcohol	ND		10		mg/L			11/09/15 13:16	1
Methanol	ND		10		mg/L			11/09/15 13:16	1
1-Propanol	ND		10		mg/L			11/09/15 13:16	1

Client Sample ID: Subpart CC VOA #E

Lab Sample ID: 440-125626-5
Date Collected: 10/27/15 09:00
Matrix: Water
Date Received: 10/28/15 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			11/05/15 00:19	1
Bromobenzene	ND		5.0		ug/L			11/05/15 00:19	1
Bromochloromethane	ND		5.0		ug/L			11/05/15 00:19	1
Bromodichloromethane	ND		2.0		ug/L			11/05/15 00:19	1
Bromoform	ND		5.0		ug/L			11/05/15 00:19	1
Bromomethane	ND		5.0		ug/L			11/05/15 00:19	1
Carbon disulfide	ND		5.0		ug/L			11/05/15 00:19	1
Carbon tetrachloride	ND		5.0		ug/L			11/05/15 00:19	1
Chlorobenzene	ND		2.0		ug/L			11/05/15 00:19	1
Chloroethane	ND		5.0		ug/L			11/05/15 00:19	1
Chloroform	ND		2.0		ug/L			11/05/15 00:19	1
Chloromethane	ND		5.0		ug/L			11/05/15 00:19	1
2-Chlorotoluene	ND		5.0		ug/L			11/05/15 00:19	1
4-Chlorotoluene	ND		5.0		ug/L			11/05/15 00:19	1
cis-1,2-Dichloroethene	ND		2.0		ug/L			11/05/15 00:19	1
cis-1,3-Dichloropropene	ND		2.0		ug/L			11/05/15 00:19	1
Dibromochloromethane	ND		2.0		ug/L			11/05/15 00:19	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/05/15 00:19	1
1,2-Dibromoethane (EDB)	ND		2.0		ug/L			11/05/15 00:19	1
Dibromomethane	ND		2.0		ug/L			11/05/15 00:19	1
1,2-Dichlorobenzene	ND		2.0		ug/L			11/05/15 00:19	1
1,3-Dichlorobenzene	ND		2.0		ug/L			11/05/15 00:19	1
1,4-Dichlorobenzene	ND		2.0		ug/L			11/05/15 00:19	1
Dichlorodifluoromethane	ND		5.0		ug/L			11/05/15 00:19	1
1,1-Dichloroethane	ND		2.0		ug/L			11/05/15 00:19	1
1,2-Dichloroethane	ND		2.0		ug/L			11/05/15 00:19	1
1,1-Dichloroethene	ND		5.0		ug/L			11/05/15 00:19	1
1,2-Dichloropropane	ND		2.0		ug/L			11/05/15 00:19	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Client Sample ID: Subpart CC VOA #E
Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125626-5
Matrix: Water

5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		2.0		ug/L			11/05/15 00:19	1
2,2-Dichloropropane	ND		2.0		ug/L			11/05/15 00:19	1
1,1-Dichloropropene	ND		2.0		ug/L			11/05/15 00:19	1
Ethylbenzene	ND		2.0		ug/L			11/05/15 00:19	1
Hexachlorobutadiene	ND		5.0		ug/L			11/05/15 00:19	1
Isopropylbenzene	ND		2.0		ug/L			11/05/15 00:19	1
Methylene Chloride	ND		5.0		ug/L			11/05/15 00:19	1
m,p-Xylene	ND		2.0		ug/L			11/05/15 00:19	1
Naphthalene	ND		5.0		ug/L			11/05/15 00:19	1
n-Butylbenzene	ND		5.0		ug/L			11/05/15 00:19	1
N-Propylbenzene	ND		2.0		ug/L			11/05/15 00:19	1
o-Xylene	ND		2.0		ug/L			11/05/15 00:19	1
p-Isopropyltoluene	ND		2.0		ug/L			11/05/15 00:19	1
sec-Butylbenzene	ND		5.0		ug/L			11/05/15 00:19	1
Styrene	ND		2.0		ug/L			11/05/15 00:19	1
tert-Butylbenzene	ND		5.0		ug/L			11/05/15 00:19	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			11/05/15 00:19	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			11/05/15 00:19	1
Tetrachloroethene	ND		2.0		ug/L			11/05/15 00:19	1
Toluene	ND		2.0		ug/L			11/05/15 00:19	1
trans-1,2-Dichloroethene	ND		2.0		ug/L			11/05/15 00:19	1
trans-1,3-Dichloropropene	ND		2.0		ug/L			11/05/15 00:19	1
1,2,3-Trichlorobenzene	ND		5.0		ug/L			11/05/15 00:19	1
1,2,4-Trichlorobenzene	ND		5.0		ug/L			11/05/15 00:19	1
1,1,1-Trichloroethane	ND		2.0		ug/L			11/05/15 00:19	1
1,1,2-Trichloroethane	ND		2.0		ug/L			11/05/15 00:19	1
Trichloroethene	ND		2.0		ug/L			11/05/15 00:19	1
Trichlorofluoromethane	ND		5.0		ug/L			11/05/15 00:19	1
1,2,3-Trichloropropane	ND		10		ug/L			11/05/15 00:19	1
1,2,4-Trimethylbenzene	ND		2.0		ug/L			11/05/15 00:19	1
1,3,5-Trimethylbenzene	ND		2.0		ug/L			11/05/15 00:19	1
Vinyl acetate	ND		5.0		ug/L			11/05/15 00:19	1
Vinyl chloride	ND		5.0		ug/L			11/05/15 00:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/05/15 00:19*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*11/05/15 00:19*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*11/05/15 00:19*	*1*

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		10		mg/L			11/09/15 13:25	1
Isopropyl alcohol	ND		10		mg/L			11/09/15 13:25	1
Methanol	ND		10		mg/L			11/09/15 13:25	1
1-Propanol	ND		10		mg/L			11/09/15 13:25	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Client Sample ID: Subpart CC VOA #F
Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125626-6
Matrix: Water

5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			11/05/15 00:48	1
Bromobenzene	ND		5.0		ug/L			11/05/15 00:48	1
Bromochloromethane	ND		5.0		ug/L			11/05/15 00:48	1
Bromodichloromethane	ND		2.0		ug/L			11/05/15 00:48	1
Bromoform	ND		5.0		ug/L			11/05/15 00:48	1
Bromomethane	ND		5.0		ug/L			11/05/15 00:48	1
Carbon disulfide	ND		5.0		ug/L			11/05/15 00:48	1
Carbon tetrachloride	ND		5.0		ug/L			11/05/15 00:48	1
Chlorobenzene	ND		2.0		ug/L			11/05/15 00:48	1
Chloroethane	ND		5.0		ug/L			11/05/15 00:48	1
Chloroform	ND		2.0		ug/L			11/05/15 00:48	1
Chloromethane	ND		5.0		ug/L			11/05/15 00:48	1
2-Chlorotoluene	ND		5.0		ug/L			11/05/15 00:48	1
4-Chlorotoluene	ND		5.0		ug/L			11/05/15 00:48	1
cis-1,2-Dichloroethene	ND		2.0		ug/L			11/05/15 00:48	1
cis-1,3-Dichloropropene	ND		2.0		ug/L			11/05/15 00:48	1
Dibromochloromethane	ND		2.0		ug/L			11/05/15 00:48	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/05/15 00:48	1
1,2-Dibromoethane (EDB)	ND		2.0		ug/L			11/05/15 00:48	1
Dibromomethane	ND		2.0		ug/L			11/05/15 00:48	1
1,2-Dichlorobenzene	ND		2.0		ug/L			11/05/15 00:48	1
1,3-Dichlorobenzene	ND		2.0		ug/L			11/05/15 00:48	1
1,4-Dichlorobenzene	ND		2.0		ug/L			11/05/15 00:48	1
Dichlorodifluoromethane	ND		5.0		ug/L			11/05/15 00:48	1
1,1-Dichloroethane	ND		2.0		ug/L			11/05/15 00:48	1
1,2-Dichloroethane	ND		2.0		ug/L			11/05/15 00:48	1
1,1-Dichloroethene	ND		5.0		ug/L			11/05/15 00:48	1
1,2-Dichloropropane	ND		2.0		ug/L			11/05/15 00:48	1
1,3-Dichloropropane	ND		2.0		ug/L			11/05/15 00:48	1
2,2-Dichloropropane	ND		2.0		ug/L			11/05/15 00:48	1
1,1-Dichloropropene	ND		2.0		ug/L			11/05/15 00:48	1
Ethylbenzene	ND		2.0		ug/L			11/05/15 00:48	1
Hexachlorobutadiene	ND		5.0		ug/L			11/05/15 00:48	1
Isopropylbenzene	ND		2.0		ug/L			11/05/15 00:48	1
Methylene Chloride	ND		5.0		ug/L			11/05/15 00:48	1
m,p-Xylene	ND		2.0		ug/L			11/05/15 00:48	1
Naphthalene	ND		5.0		ug/L			11/05/15 00:48	1
n-Butylbenzene	ND		5.0		ug/L			11/05/15 00:48	1
N-Propylbenzene	ND		2.0		ug/L			11/05/15 00:48	1
o-Xylene	ND		2.0		ug/L			11/05/15 00:48	1
p-Isopropyltoluene	ND		2.0		ug/L			11/05/15 00:48	1
sec-Butylbenzene	ND		5.0		ug/L			11/05/15 00:48	1
Styrene	ND		2.0		ug/L			11/05/15 00:48	1
tert-Butylbenzene	ND		5.0		ug/L			11/05/15 00:48	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			11/05/15 00:48	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			11/05/15 00:48	1
Tetrachloroethene	ND		2.0		ug/L			11/05/15 00:48	1
Toluene	ND		2.0		ug/L			11/05/15 00:48	1
trans-1,2-Dichloroethene	ND		2.0		ug/L			11/05/15 00:48	1

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Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Client Sample ID: Subpart CC VOA #F
Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125626-6
Matrix: Water

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Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		2.0		ug/L			11/05/15 00:48	1
1,2,3-Trichlorobenzene	ND		5.0		ug/L			11/05/15 00:48	1
1,2,4-Trichlorobenzene	ND		5.0		ug/L			11/05/15 00:48	1
1,1,1-Trichloroethane	ND		2.0		ug/L			11/05/15 00:48	1
1,1,2-Trichloroethane	ND		2.0		ug/L			11/05/15 00:48	1
Trichloroethene	ND		2.0		ug/L			11/05/15 00:48	1
Trichlorofluoromethane	ND		5.0		ug/L			11/05/15 00:48	1
1,2,3-Trichloropropane	ND		10		ug/L			11/05/15 00:48	1
1,2,4-Trimethylbenzene	ND		2.0		ug/L			11/05/15 00:48	1
1,3,5-Trimethylbenzene	ND		2.0		ug/L			11/05/15 00:48	1
Vinyl acetate	ND		5.0		ug/L			11/05/15 00:48	1
Vinyl chloride	ND		5.0		ug/L			11/05/15 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/05/15 00:48*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*11/05/15 00:48*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*11/05/15 00:48*	*1*

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		10		mg/L			11/09/15 13:33	1
Isopropyl alcohol	ND		10		mg/L			11/09/15 13:33	1
Methanol	ND		10		mg/L			11/09/15 13:33	1
1-Propanol	ND		10		mg/L			11/09/15 13:33	1

US EPA ARCHIVE DOCUMENT

Method Summary

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8015B	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	TAL CF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

US EPA ARCHIVE DOCUMENT

Client Sample ID: Subpart CC VOA #A

Lab Sample ID: 440-125626-1
Matrix: Water

Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	291618	11/04/15 21:29	WK	TAL IRV
Total/NA	Analysis	8015B		1	1 mL		107866	11/09/15 12:52	JCM	TAL CF

Client Sample ID: Subpart CC VOA #B

Lab Sample ID: 440-125626-2
Matrix: Water

Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	291618	11/04/15 22:55	WK	TAL IRV
Total/NA	Analysis	8015B		1	1 mL		107866	11/09/15 13:00	JCM	TAL CF

Client Sample ID: Subpart CC VOA #C

Lab Sample ID: 440-125626-3
Matrix: Water

Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	291618	11/04/15 23:23	WK	TAL IRV
Total/NA	Analysis	8015B		1	1 mL		107866	11/09/15 13:08	JCM	TAL CF

Client Sample ID: Subpart CC VOA #D

Lab Sample ID: 440-125626-4
Matrix: Water

Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	291618	11/04/15 23:51	WK	TAL IRV
Total/NA	Analysis	8015B		1	1 mL		107866	11/09/15 13:16	JCM	TAL CF

Client Sample ID: Subpart CC VOA #E

Lab Sample ID: 440-125626-5
Matrix: Water

Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	291618	11/05/15 00:19	WK	TAL IRV
Total/NA	Analysis	8015B		1	1 mL		107866	11/09/15 13:25	JCM	TAL CF

Client Sample ID: Subpart CC VOA #F

Lab Sample ID: 440-125626-6
Matrix: Water

Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	291618	11/05/15 00:48	WK	TAL IRV

US EPA ARCHIVE DOCUMENT

Lab Chronicle

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Client Sample ID: Subpart CC VOA #F

Date Collected: 10/27/15 09:00
Date Received: 10/28/15 10:00

Lab Sample ID: 440-125626-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015B		1	1 mL		107866	11/09/15 13:33	JCM	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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US EPA ARCHIVE DOCUMENT

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-291618/3
Matrix: Water
Analysis Batch: 291618

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			11/04/15 20:21	1
Bromobenzene	ND		5.0		ug/L			11/04/15 20:21	1
Bromochloromethane	ND		5.0		ug/L			11/04/15 20:21	1
Bromodichloromethane	ND		2.0		ug/L			11/04/15 20:21	1
Bromoform	ND		5.0		ug/L			11/04/15 20:21	1
Bromomethane	ND		5.0		ug/L			11/04/15 20:21	1
Carbon disulfide	ND		5.0		ug/L			11/04/15 20:21	1
Carbon tetrachloride	ND		5.0		ug/L			11/04/15 20:21	1
Chlorobenzene	ND		2.0		ug/L			11/04/15 20:21	1
Chloroethane	ND		5.0		ug/L			11/04/15 20:21	1
Chloroform	ND		2.0		ug/L			11/04/15 20:21	1
Chloromethane	ND		5.0		ug/L			11/04/15 20:21	1
2-Chlorotoluene	ND		5.0		ug/L			11/04/15 20:21	1
4-Chlorotoluene	ND		5.0		ug/L			11/04/15 20:21	1
cis-1,2-Dichloroethene	ND		2.0		ug/L			11/04/15 20:21	1
cis-1,3-Dichloropropene	ND		2.0		ug/L			11/04/15 20:21	1
Dibromochloromethane	ND		2.0		ug/L			11/04/15 20:21	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			11/04/15 20:21	1
1,2-Dibromoethane (EDB)	ND		2.0		ug/L			11/04/15 20:21	1
Dibromomethane	ND		2.0		ug/L			11/04/15 20:21	1
1,2-Dichlorobenzene	ND		2.0		ug/L			11/04/15 20:21	1
1,3-Dichlorobenzene	ND		2.0		ug/L			11/04/15 20:21	1
1,4-Dichlorobenzene	ND		2.0		ug/L			11/04/15 20:21	1
Dichlorodifluoromethane	ND		5.0		ug/L			11/04/15 20:21	1
1,1-Dichloroethane	ND		2.0		ug/L			11/04/15 20:21	1
1,2-Dichloroethane	ND		2.0		ug/L			11/04/15 20:21	1
1,1-Dichloroethene	ND		5.0		ug/L			11/04/15 20:21	1
1,2-Dichloropropane	ND		2.0		ug/L			11/04/15 20:21	1
1,3-Dichloropropane	ND		2.0		ug/L			11/04/15 20:21	1
2,2-Dichloropropane	ND		2.0		ug/L			11/04/15 20:21	1
1,1-Dichloropropene	ND		2.0		ug/L			11/04/15 20:21	1
Ethylbenzene	ND		2.0		ug/L			11/04/15 20:21	1
Hexachlorobutadiene	ND		5.0		ug/L			11/04/15 20:21	1
Isopropylbenzene	ND		2.0		ug/L			11/04/15 20:21	1
Methylene Chloride	ND		5.0		ug/L			11/04/15 20:21	1
m,p-Xylene	ND		2.0		ug/L			11/04/15 20:21	1
Naphthalene	ND		5.0		ug/L			11/04/15 20:21	1
n-Butylbenzene	ND		5.0		ug/L			11/04/15 20:21	1
N-Propylbenzene	ND		2.0		ug/L			11/04/15 20:21	1
o-Xylene	ND		2.0		ug/L			11/04/15 20:21	1
p-Isopropyltoluene	ND		2.0		ug/L			11/04/15 20:21	1
sec-Butylbenzene	ND		5.0		ug/L			11/04/15 20:21	1
Styrene	ND		2.0		ug/L			11/04/15 20:21	1
tert-Butylbenzene	ND		5.0		ug/L			11/04/15 20:21	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			11/04/15 20:21	1
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			11/04/15 20:21	1
Tetrachloroethene	ND		2.0		ug/L			11/04/15 20:21	1
Toluene	ND		2.0		ug/L			11/04/15 20:21	1

US EPA ARCHIVE DOCUMENT

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-291618/3
Matrix: Water
Analysis Batch: 291618

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		2.0		ug/L			11/04/15 20:21	1
trans-1,3-Dichloropropene	ND		2.0		ug/L			11/04/15 20:21	1
1,2,3-Trichlorobenzene	ND		5.0		ug/L			11/04/15 20:21	1
1,2,4-Trichlorobenzene	ND		5.0		ug/L			11/04/15 20:21	1
1,1,1-Trichloroethane	ND		2.0		ug/L			11/04/15 20:21	1
1,1,2-Trichloroethane	ND		2.0		ug/L			11/04/15 20:21	1
Trichloroethene	ND		2.0		ug/L			11/04/15 20:21	1
Trichlorofluoromethane	ND		5.0		ug/L			11/04/15 20:21	1
1,2,3-Trichloropropane	ND		10		ug/L			11/04/15 20:21	1
1,2,4-Trimethylbenzene	ND		2.0		ug/L			11/04/15 20:21	1
1,3,5-Trimethylbenzene	ND		2.0		ug/L			11/04/15 20:21	1
Vinyl acetate	ND		5.0		ug/L			11/04/15 20:21	1
Vinyl chloride	ND		5.0		ug/L			11/04/15 20:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*11/04/15 20:21*	*1*
Dibromofluoromethane (Surr)	*102*		*76 - 132*		*11/04/15 20:21*	*1*
Toluene-d8 (Surr)	*109*		*80 - 128*		*11/04/15 20:21*	*1*

Lab Sample ID: LCS 440-291618/4
Matrix: Water
Analysis Batch: 291618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	25.0		ug/L		100	68 - 130
Bromobenzene	25.0	25.7		ug/L		103	70 - 130
Bromochloromethane	25.0	25.7		ug/L		103	70 - 130
Bromodichloromethane	25.0	25.6		ug/L		102	70 - 132
Bromoform	25.0	25.7		ug/L		103	60 - 148
Bromomethane	25.0	27.1		ug/L		108	64 - 139
Carbon disulfide	25.0	25.4		ug/L		102	52 - 136
Carbon tetrachloride	25.0	28.7		ug/L		115	60 - 150
Chlorobenzene	25.0	25.6		ug/L		102	70 - 130
Chloroethane	25.0	26.3		ug/L		105	64 - 135
Chloroform	25.0	24.8		ug/L		99	70 - 130
Chloromethane	25.0	26.4		ug/L		106	47 - 140
2-Chlorotoluene	25.0	25.6		ug/L		102	70 - 130
4-Chlorotoluene	25.0	25.7		ug/L		103	70 - 130
cis-1,2-Dichloroethene	25.0	25.7		ug/L		103	70 - 133
cis-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 133
Dibromochloromethane	25.0	26.1		ug/L		104	69 - 145
1,2-Dibromo-3-Chloropropane	25.0	23.2		ug/L		93	52 - 140
1,2-Dibromoethane (EDB)	25.0	26.8		ug/L		107	70 - 130
Dibromomethane	25.0	24.8		ug/L		99	70 - 130
1,2-Dichlorobenzene	25.0	26.0		ug/L		104	70 - 130
1,3-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130
1,4-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130
Dichlorodifluoromethane	25.0	25.4		ug/L		101	29 - 150

US EPA ARCHIVE DOCUMENT

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-291618/4
Matrix: Water
Analysis Batch: 291618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	24.8		ug/L		99	64 - 130
1,2-Dichloroethane	25.0	26.1		ug/L		104	57 - 138
1,1-Dichloroethene	25.0	25.9		ug/L		103	70 - 130
1,2-Dichloropropane	25.0	24.8		ug/L		99	67 - 130
1,3-Dichloropropane	25.0	24.8		ug/L		99	70 - 130
2,2-Dichloropropane	25.0	29.0		ug/L		116	68 - 141
1,1-Dichloropropene	25.0	25.5		ug/L		102	70 - 130
Ethylbenzene	25.0	25.4		ug/L		102	70 - 130
Hexachlorobutadiene	25.0	26.0		ug/L		104	10 - 150
Isopropylbenzene	25.0	26.1		ug/L		104	70 - 136
Methylene Chloride	25.0	23.9		ug/L		96	52 - 130
m,p-Xylene	25.0	25.9		ug/L		104	70 - 130
Naphthalene	25.0	24.7		ug/L		99	60 - 140
n-Butylbenzene	25.0	25.0		ug/L		100	65 - 150
N-Propylbenzene	25.0	26.1		ug/L		104	67 - 139
o-Xylene	25.0	25.2		ug/L		101	70 - 130
p-Isopropyltoluene	25.0	25.2		ug/L		101	70 - 132
sec-Butylbenzene	25.0	25.1		ug/L		100	70 - 138
Styrene	25.0	26.9		ug/L		108	70 - 134
tert-Butylbenzene	25.0	25.1		ug/L		100	70 - 130
1,1,1,2-Tetrachloroethane	25.0	26.9		ug/L		108	60 - 141
1,1,2,2-Tetrachloroethane	25.0	24.5		ug/L		98	63 - 130
Tetrachloroethene	25.0	26.7		ug/L		107	70 - 130
Toluene	25.0	24.8		ug/L		99	70 - 130
trans-1,2-Dichloroethene	25.0	27.1		ug/L		109	70 - 130
trans-1,3-Dichloropropene	25.0	25.7		ug/L		103	70 - 132
1,2,3-Trichlorobenzene	25.0	24.7		ug/L		99	60 - 140
1,2,4-Trichlorobenzene	25.0	25.5		ug/L		102	60 - 140
1,1,1-Trichloroethane	25.0	26.8		ug/L		107	70 - 130
1,1,2-Trichloroethane	25.0	25.7		ug/L		103	70 - 130
Trichloroethene	25.0	26.4		ug/L		106	70 - 130
Trichlorofluoromethane	25.0	27.1		ug/L		108	60 - 150
1,2,3-Trichloropropane	25.0	21.7		ug/L		87	63 - 130
1,2,4-Trimethylbenzene	25.0	25.4		ug/L		102	70 - 135
1,3,5-Trimethylbenzene	25.0	25.2		ug/L		101	70 - 136
Vinyl acetate	25.0	19.3		ug/L		77	48 - 140
Vinyl chloride	25.0	26.2		ug/L		105	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*
Toluene-d8 (Surr)	*105*		*80 - 128*

US EPA ARCHIVE DOCUMENT

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-125626-1 MS
Matrix: Water
Analysis Batch: 291618

Client Sample ID: Subpart CC VOA #A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	24.6		ug/L		98	66 - 130
Bromobenzene	ND		25.0	25.7		ug/L		103	70 - 130
Bromochloromethane	ND		25.0	26.0		ug/L		104	70 - 130
Bromodichloromethane	ND		25.0	25.4		ug/L		102	70 - 138
Bromoform	ND		25.0	27.2		ug/L		103	59 - 150
Bromomethane	ND		25.0	27.2		ug/L		109	62 - 131
Carbon disulfide	ND		25.0	25.5		ug/L		102	49 - 140
Carbon tetrachloride	ND		25.0	28.0		ug/L		112	60 - 150
Chlorobenzene	ND		25.0	24.3		ug/L		97	70 - 130
Chloroethane	ND		25.0	26.1		ug/L		105	68 - 130
Chloroform	ND		25.0	24.4		ug/L		98	70 - 130
Chloromethane	ND		25.0	26.7		ug/L		107	39 - 144
2-Chlorotoluene	ND		25.0	25.6		ug/L		102	70 - 130
4-Chlorotoluene	ND		25.0	26.0		ug/L		104	70 - 130
cis-1,2-Dichloroethene	ND		25.0	25.5		ug/L		102	70 - 130
cis-1,3-Dichloropropene	ND		25.0	25.0		ug/L		100	70 - 133
Dibromochloromethane	ND		25.0	26.0		ug/L		104	70 - 148
1,2-Dibromo-3-Chloropropane	ND		25.0	24.0		ug/L		96	48 - 140
1,2-Dibromoethane (EDB)	ND		25.0	25.4		ug/L		102	70 - 131
Dibromomethane	ND		25.0	25.0		ug/L		100	70 - 130
1,2-Dichlorobenzene	ND		25.0	25.9		ug/L		104	70 - 130
1,3-Dichlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.4		ug/L		102	70 - 130
Dichlorodifluoromethane	ND		25.0	24.7		ug/L		99	25 - 142
1,1-Dichloroethane	ND		25.0	24.4		ug/L		98	65 - 130
1,2-Dichloroethane	ND		25.0	25.9		ug/L		103	56 - 146
1,1-Dichloroethene	ND		25.0	25.5		ug/L		102	70 - 130
1,2-Dichloropropane	ND		25.0	24.7		ug/L		99	69 - 130
1,3-Dichloropropane	ND		25.0	24.2		ug/L		97	70 - 130
2,2-Dichloropropane	ND		25.0	28.5		ug/L		114	69 - 138
1,1-Dichloropropene	ND		25.0	25.2		ug/L		101	64 - 130
Ethylbenzene	ND		25.0	23.6		ug/L		94	70 - 130
Hexachlorobutadiene	ND		25.0	25.5		ug/L		102	10 - 150
Isopropylbenzene	ND		25.0	25.1		ug/L		101	70 - 132
Methylene Chloride	ND		25.0	24.0		ug/L		96	52 - 130
m,p-Xylene	ND		25.0	24.6		ug/L		98	70 - 133
Naphthalene	ND		25.0	25.0		ug/L		100	60 - 140
n-Butylbenzene	ND		25.0	25.1		ug/L		101	61 - 149
N-Propylbenzene	ND		25.0	25.9		ug/L		104	66 - 135
o-Xylene	ND		25.0	23.4		ug/L		93	70 - 133
p-Isopropyltoluene	ND		25.0	25.2		ug/L		101	70 - 130
sec-Butylbenzene	ND		25.0	24.9		ug/L		100	67 - 134
Styrene	ND		25.0	24.7		ug/L		99	29 - 150
tert-Butylbenzene	ND		25.0	25.4		ug/L		102	70 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	25.9		ug/L		104	60 - 149
1,1,2,2-Tetrachloroethane	ND		25.0	24.0		ug/L		96	63 - 130
Tetrachloroethene	ND		25.0	25.2		ug/L		101	70 - 137
Toluene	ND		25.0	23.9		ug/L		95	70 - 130

US EPA ARCHIVE DOCUMENT

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-125626-1 MS
Matrix: Water
Analysis Batch: 291618

Client Sample ID: Subpart CC VOA #A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	ND		25.0	26.9		ug/L		108	70 - 130
trans-1,3-Dichloropropene	ND		25.0	24.7		ug/L		99	70 - 138
1,2,3-Trichlorobenzene	ND		25.0	25.3		ug/L		101	60 - 140
1,2,4-Trichlorobenzene	ND		25.0	26.5		ug/L		106	60 - 140
1,1,1-Trichloroethane	ND		25.0	26.4		ug/L		105	70 - 130
1,1,2-Trichloroethane	ND		25.0	24.8		ug/L		99	70 - 130
Trichloroethene	ND		25.0	26.7		ug/L		107	70 - 130
Trichlorofluoromethane	ND		25.0	27.2		ug/L		109	60 - 150
1,2,3-Trichloropropane	ND		25.0	21.5		ug/L		86	60 - 130
1,2,4-Trimethylbenzene	ND		25.0	25.4		ug/L		101	70 - 130
1,3,5-Trimethylbenzene	ND		25.0	25.3		ug/L		101	70 - 130
Vinyl acetate	ND		25.0	19.0		ug/L		76	23 - 150
Vinyl chloride	ND		25.0	26.5		ug/L		106	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*76 - 132*
Toluene-d8 (Surr)	*101*		*80 - 128*

Lab Sample ID: 440-125626-1 MSD
Matrix: Water
Analysis Batch: 291618

Client Sample ID: Subpart CC VOA #A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		25.0	25.2		ug/L		101	66 - 130	2	20
Bromobenzene	ND		25.0	27.4		ug/L		109	70 - 130	6	20
Bromochloromethane	ND		25.0	27.0		ug/L		108	70 - 130	4	25
Bromodichloromethane	ND		25.0	27.2		ug/L		109	70 - 138	7	20
Bromoform	ND		25.0	30.9		ug/L		118	59 - 150	13	25
Bromomethane	ND		25.0	28.2		ug/L		113	62 - 131	3	25
Carbon disulfide	ND		25.0	26.4		ug/L		105	49 - 140	3	20
Carbon tetrachloride	ND		25.0	29.7		ug/L		119	60 - 150	6	25
Chlorobenzene	ND		25.0	25.5		ug/L		102	70 - 130	5	20
Chloroethane	ND		25.0	27.1		ug/L		108	68 - 130	4	25
Chloroform	ND		25.0	25.6		ug/L		102	70 - 130	4	20
Chloromethane	ND		25.0	27.3		ug/L		109	39 - 144	2	25
2-Chlorotoluene	ND		25.0	27.1		ug/L		108	70 - 130	6	20
4-Chlorotoluene	ND		25.0	26.4		ug/L		106	70 - 130	2	20
cis-1,2-Dichloroethene	ND		25.0	26.1		ug/L		105	70 - 130	2	20
cis-1,3-Dichloropropene	ND		25.0	27.6		ug/L		110	70 - 133	10	20
Dibromochloromethane	ND		25.0	28.6		ug/L		114	70 - 148	10	25
1,2-Dibromo-3-Chloropropane	ND		25.0	26.3		ug/L		105	48 - 140	9	30
1,2-Dibromoethane (EDB)	ND		25.0	27.9		ug/L		112	70 - 131	9	25
Dibromomethane	ND		25.0	26.0		ug/L		104	70 - 130	4	25
1,2-Dichlorobenzene	ND		25.0	26.3		ug/L		105	70 - 130	1	20
1,3-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130	2	20
1,4-Dichlorobenzene	ND		25.0	25.6		ug/L		103	70 - 130	1	20
Dichlorodifluoromethane	ND		25.0	26.3		ug/L		105	25 - 142	6	30

US EPA ARCHIVE DOCUMENT

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-125626-1 MSD
Matrix: Water
Analysis Batch: 291618

Client Sample ID: Subpart CC VOA #A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane	ND		25.0	25.9		ug/L		104	65 - 130	6	20
1,2-Dichloroethane	ND		25.0	27.2		ug/L		109	56 - 146	5	20
1,1-Dichloroethene	ND		25.0	26.5		ug/L		106	70 - 130	4	20
1,2-Dichloropropane	ND		25.0	26.0		ug/L		104	69 - 130	5	20
1,3-Dichloropropane	ND		25.0	26.2		ug/L		105	70 - 130	8	25
2,2-Dichloropropane	ND		25.0	29.7		ug/L		119	69 - 138	4	25
1,1-Dichloropropene	ND		25.0	26.3		ug/L		105	64 - 130	4	20
Ethylbenzene	ND		25.0	25.5		ug/L		102	70 - 130	8	20
Hexachlorobutadiene	ND		25.0	25.0		ug/L		100	10 - 150	2	20
Isopropylbenzene	ND		25.0	27.1		ug/L		108	70 - 132	7	20
Methylene Chloride	ND		25.0	24.9		ug/L		100	52 - 130	4	20
m,p-Xylene	ND		25.0	25.7		ug/L		103	70 - 133	4	25
Naphthalene	ND		25.0	22.7		ug/L		91	60 - 140	10	30
n-Butylbenzene	ND		25.0	25.1		ug/L		100	61 - 149	0	20
N-Propylbenzene	ND		25.0	27.4		ug/L		110	66 - 135	6	20
o-Xylene	ND		25.0	25.0		ug/L		100	70 - 133	7	20
p-Isopropyltoluene	ND		25.0	26.6		ug/L		106	70 - 130	5	20
sec-Butylbenzene	ND		25.0	26.3		ug/L		105	67 - 134	5	20
Styrene	ND		25.0	24.2		ug/L		97	29 - 150	2	35
tert-Butylbenzene	ND		25.0	27.2		ug/L		109	70 - 130	7	20
1,1,1,2-Tetrachloroethane	ND		25.0	27.9		ug/L		111	60 - 149	7	20
1,1,2,2-Tetrachloroethane	ND		25.0	27.4		ug/L		110	63 - 130	13	30
Tetrachloroethene	ND		25.0	27.5		ug/L		110	70 - 137	9	20
Toluene	ND		25.0	25.5		ug/L		102	70 - 130	7	20
trans-1,2-Dichloroethene	ND		25.0	28.1		ug/L		113	70 - 130	4	20
trans-1,3-Dichloropropene	ND		25.0	27.2		ug/L		109	70 - 138	10	25
1,2,3-Trichlorobenzene	ND		25.0	22.4		ug/L		90	60 - 140	12	20
1,2,4-Trichlorobenzene	ND		25.0	23.8		ug/L		95	60 - 140	11	20
1,1,1-Trichloroethane	ND		25.0	28.0		ug/L		112	70 - 130	6	20
1,1,2-Trichloroethane	ND		25.0	27.0		ug/L		108	70 - 130	9	25
Trichloroethene	ND		25.0	27.4		ug/L		110	70 - 130	3	20
Trichlorofluoromethane	ND		25.0	28.9		ug/L		115	60 - 150	6	25
1,2,3-Trichloropropane	ND		25.0	25.1		ug/L		101	60 - 130	15	30
1,2,4-Trimethylbenzene	ND		25.0	25.5		ug/L		102	70 - 130	0	25
1,3,5-Trimethylbenzene	ND		25.0	26.7		ug/L		107	70 - 130	5	20
Vinyl acetate	ND		25.0	20.3		ug/L		81	23 - 150	6	30
Vinyl chloride	ND		25.0	27.3		ug/L		109	50 - 137	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*76 - 132*
Toluene-d8 (Surr)	*107*		*80 - 128*

US EPA ARCHIVE DOCUMENT

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 310-107866/20
Matrix: Water
Analysis Batch: 107866

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		10		mg/L			11/09/15 12:44	1
Isopropyl alcohol	ND		10		mg/L			11/09/15 12:44	1
Methanol	ND		10		mg/L			11/09/15 12:44	1
1-Propanol	ND		10		mg/L			11/09/15 12:44	1

Lab Sample ID: MB 310-107866/4
Matrix: Water
Analysis Batch: 107866

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		10		mg/L			11/09/15 10:35	1
Isopropyl alcohol	ND		10		mg/L			11/09/15 10:35	1
Methanol	ND		10		mg/L			11/09/15 10:35	1
1-Propanol	ND		10		mg/L			11/09/15 10:35	1

Lab Sample ID: LCS 310-107866/16
Matrix: Water
Analysis Batch: 107866

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	60.0	70.8		mg/L		118	80 - 120
Isopropyl alcohol	60.0	68.2		mg/L		114	80 - 120
Methanol	64.0	71.2		mg/L		111	80 - 120
1-Propanol	70.0	78.9		mg/L		113	80 - 120

Lab Sample ID: 440-125626-1 MS
Matrix: Water
Analysis Batch: 107866

Client Sample ID: Subpart CC VOA #A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	ND		60.0	66.6		mg/L		111	80 - 120
Isopropyl alcohol	ND		60.0	64.0		mg/L		107	80 - 120
Methanol	ND		64.0	67.5		mg/L		105	80 - 120
1-Propanol	10		70.0	76.6		mg/L		95	80 - 120

Lab Sample ID: 440-125626-1 MSD
Matrix: Water
Analysis Batch: 107866

Client Sample ID: Subpart CC VOA #A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	ND		60.0	68.6		mg/L		114	80 - 120	3	20
Isopropyl alcohol	ND		60.0	65.6		mg/L		109	80 - 120	2	20
Methanol	ND		64.0	69.1		mg/L		108	80 - 120	2	20
1-Propanol	10		70.0	80.6		mg/L		101	80 - 120	5	20

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GC/MS VOA

Analysis Batch: 291618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-125626-1	Subpart CC VOA #A	Total/NA	Water	8260B	
440-125626-1 MS	Subpart CC VOA #A	Total/NA	Water	8260B	
440-125626-1 MSD	Subpart CC VOA #A	Total/NA	Water	8260B	
440-125626-2	Subpart CC VOA #B	Total/NA	Water	8260B	
440-125626-3	Subpart CC VOA #C	Total/NA	Water	8260B	
440-125626-4	Subpart CC VOA #D	Total/NA	Water	8260B	
440-125626-5	Subpart CC VOA #E	Total/NA	Water	8260B	
440-125626-6	Subpart CC VOA #F	Total/NA	Water	8260B	
LCS 440-291618/4	Lab Control Sample	Total/NA	Water	8260B	
MB 440-291618/3	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 107866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-125626-1	Subpart CC VOA #A	Total/NA	Water	8015B	
440-125626-1 MS	Subpart CC VOA #A	Total/NA	Water	8015B	
440-125626-1 MSD	Subpart CC VOA #A	Total/NA	Water	8015B	
440-125626-2	Subpart CC VOA #B	Total/NA	Water	8015B	
440-125626-3	Subpart CC VOA #C	Total/NA	Water	8015B	
440-125626-4	Subpart CC VOA #D	Total/NA	Water	8015B	
440-125626-5	Subpart CC VOA #E	Total/NA	Water	8015B	
440-125626-6	Subpart CC VOA #F	Total/NA	Water	8015B	
LCS 310-107866/16	Lab Control Sample	Total/NA	Water	8015B	
MB 310-107866/20	Method Blank	Total/NA	Water	8015B	
MB 310-107866/4	Method Blank	Total/NA	Water	8015B	

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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Certification Summary

Client: Evoqua Water Technologies eProcurement
Project/Site: Subpart CC

TestAmerica Job ID: 440-125626-1

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-16
Arizona	State Program	9	AZ0671	10-13-16
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-16
Hawaii	State Program	9	N/A	01-29-16
Kansas	NELAP Secondary AB	7	E-10420	07-31-16
Nevada	State Program	9	CA015312007A	07-31-16 *
New Mexico	State Program	6	N/A	01-29-16
Northern Mariana Islands	State Program	9	MP0002	01-29-16
Oregon	NELAP	10	4005	01-29-16
USDA	Federal		P330-09-00080	07-08-18

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-15
Iowa	State Program	7	007	12-01-15
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-15
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16
Wisconsin	State Program	5	999917270	08-31-16

* Certification renewal pending - certification considered valid.

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TestAmerica
ANALYTICAL TESTING CORPORATION

CHAIN OF CUSTODY RECORD

Nashville, TN ☐ Sacramento, CA ☒ Indianapolis, IN
Orlando, FL ☐ Watertown, WI ☒ Irvine, CA
Cedar Falls, IA ☐ Pontiac, MI

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?

Compliance Monitoring? Yes No
Enforcement Action? Yes No

Client Name/Account #: Evoqua Water Technologies
Address: POB 3308 / 2523 MUTAHAR ST
City/State/Zip: PARKER, AZ 85344
Project Manager: Camille Murray
Telephone Number: 928-669-5758 Fax No.: 928-669-5775
Sampler Name: (Print) Roy Provins
Sampler Signature:

Report To: James.R.Provins@Evoqua.com
Invoice To:
TA Quote #:
Project ID: Subpart CC
Project #:

440-125626 Chain of Custody

Sample ID / Description	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Ice	HNO_3 (Red Label)	HCl (Blue Label)	NaOH (Orange Label)	H_2SO_4 Plastic (Yellow Label)	H_2SO_4 Glass(Yellow Label)	None (Black Label)	Other (Specify)	Matrix: Groundwater	Water	Drinking Water	Sludge	Soil	Other (specify):	Analyze For: 8260	8015 Alcohol Scan	RUSH TAT (Pre-Schedule)	Standard TAT	Fax Results	Send QC with report
Subpart CC VOA #A	10/27/2015	9:00 AM	3	■			■									■					■			■		
Subpart CC VOA #B	10/27/2015	9:00 AM	3	■			■									■					■			■		
Subpart CC VOA #C	10/27/2015	9:00 AM	3	■			■									■					■			■		
Subpart CC VOA # D	10/27/2015	9:00 AM	3	■			■									■					■			■		
Subpart CC VOA # E	10/27/2015	9:00 AM	3	■			■									■					■			■		
Subpart CC VOA # F	10/27/2015	9:00 AM	3	■			■									■					■			■		
Subpart CC VOA #A-	10/27/2015	9:00 AM	3	■			■									■						■		■		
Subpart CC VOA # B	10/27/2015	9:00 AM	3	■			■									■						■		■		
Subpart CC VOA # C	10/27/2015	9:00 AM	3	■			■									■						■		■		
Subpart CC VOA # D	10/27/2015	9:00 AM	3	■			■									■						■		■		
Subpart CC VOA # E	10/27/2015	9:00 AM	3	■			■									■						■		■		
Subpart CC VOA # F	10/27/2015	9:00 AM	3	■			■									■						■		■		

Special Instructions:

Method of Shipment: UPS

Relinquished by:	Date	Time	Received by:	Date	Time
Roy Provins	10/27/2015	1400			
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time
				10/28/15	10:00

Laboratory Comments:
Temperature Upon Receipt:
VOCs Free of Headspace? Y N

2.7/1.9 BR-73 Z 495 20E 0195855265

Login Sample Receipt Checklist

Client: Evoqua Water Technologies eProcurement

Job Number: 440-125626-1

Login Number: 125626
List Number: 1
Creator: Escalante, Maria I

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Login Sample Receipt Checklist

Client: Evoqua Water Technologies eProcurement

Job Number: 440-125626-1

Login Number: 125626
List Number: 2
Creator: Worthy, Ashley L

List Source: TestAmerica Cedar Falls
List Creation: 10/29/15 10:41 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Appendix K
Discharge Permit Fact Sheet

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PROPOSED PERMIT
FACT SHEET

Facility/ Permittee:	Colorado River Sewage System Joint Venture
Mailing Address:	12501 West Agency Rd. Parker, AZ 85344
Type of Facility:	Publicly Owned Treatment Works
Facility Location:	12501 West Agency Rd. Parker, AZ 85344
Contact Person(s):	Andy Jones General Manager 12501 West Agency Rd. Parker, AZ 85344 (928) 669-9821
NPDES Permit No.:	AZ0021415

I. STATUS OF PERMIT

On June 21, 2006, Colorado River Sewage System Joint Venture (CRSSJV) applied to the U.S. Environmental Protection Agency, Region 9 (US EPA) for renewal for its National Pollutant Discharge Elimination System (NPDES) permit for the discharge of the treated effluent from the existing CRSSJV wastewater treatment plant. The CRSSJV treatment facility is a publicly-owned treatment works (POTW) located in the Colorado River Indian Reservation. Pursuant to the EPA regulations set forth in Title 40, Code of Federal Regulations (CFR) Part 122.21, the effluent discharge was regulated under NPDES Permit No. AZ0021415, which became effective on October 30, 2001, and expired on October 30, 2006. All the terms and conditions of the 2001 permit are administratively extended until the reissuance of a new permit. This fact sheet is based on the facts presented by the applicant in both the application and any previous discharge data submitted, along with the appropriate laws and regulations. Pursuant to Section 402 of the Clean Water Act (CWA), the USEPA is proposing issuance of the NPDES permit renewal to CRSSJV (permittee) for the discharge of treated domestic wastewater to the Agency Road Irrigation Return Canal that flows to the Colorado River, a water of the U.S.

This permittee has been classified as a Major discharger.

II. GENERAL DESCRIPTION OF FACILITY

CRSSJV owns and operates the POTW servicing the Town of Parker, Arizona and the Colorado River Indian Tribes, with a total population of approximately 5,000. The POTW started operations in 1974 and has a design flow of 1.2 millions gallons per day (MGD). The treatment system consists of bar screens, contact stabilization tanks with secondary clarifiers, aerobic digestors, and ultraviolet disinfection with backup chlorination/dechlorination. Sludge is hauled off to a landfill.

CRSSJV does not have an approved pretreatment program but does maintain city codes and local limits to control the flow of industrial pollutants into the POTW. In the 2006 application, CRSSJV reported two significant industrial dischargers to the POTW – Siemens Water Technologies Inc. (formerly known as Westates Carbon-Arizona Inc.) and Custom Metal Finishing. Drum's Plating was previously listed in the 2001 permit fact sheet but is not found in the current application. According to the permittee, Drum's Plating ceased operations in 2005. Siemens Water Technologies' average daily volume of process wastewater is 140,000 gallons per day (GPD), which represents approximately 19 percent of the POTW's annual total flow of 750,000 GPD for the year of 2006. Custom Metal Finishing does not discharge any process wastewater.

III. DESCRIPTION OF RECEIVING WATER

The final treated effluent from the sewage treatment plant is discharged from Discharge Outfall No. 001 into the Agency Road Irrigation Return Canal, which flows about 10 miles before reaching the Colorado River. Any sampling and monitoring under the proposed permit shall be performed at Outfall No. 001.

Discharge Point No.	Latitude	Longitude	Description
001	34° 08' 36" N	114° 18' 31" W	Primary discharge point is the Agency Road Irrigation Return Canal which flows approximately 10 miles before reaching the Colorado River.

Agency Road Irrigation Return Canal is not specifically listed in Appendix B [*List of Surface Waters and Tributaries*] of the 2008 Arizona Water Quality Standards; however, section R18-11-105 [*Tributaries; Designated Uses*] of the Arizona WQS states:

> *"For a surface water that is not listed in Appendix B but is a tributary to a listed surface water, is perennial or intermittent and is below 5000 feet, the aquatic and wildlife (warm water fishery) and fish consumption standards apply as well as the water quality standards that have been established for the nearest downstream surface water listed in Appendix B that is not an ephemeral water or an effluent dependent water."*

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And, section R18-11-104 [*Designated Uses*] states:

"If a surface water has more than one designated use listed in Appendix B, the most stringent water quality criterion applies."

The designated uses of the Colorado River from Topock Marsh to Morelos Dam are as follows:

A&Ww	Aquatic & Wildlife, warm water
FBC	Full Body Contact
DWS	Domestic Water Supply
FC	Fish Consumption
AgI	Agricultural Irrigation
AgL	Agricultural Livestock Watering

IV. DESCRIPTION OF DISCHARGE

A. Application Discharge Data

As part of the application for permit renewal, the permittee provided data from an analysis of the facility's treated wastewater discharge, shown in Table 1. This data, expressed only as maximum and average *daily* discharges, meets the existing permit maximum daily effluent limits shown in Table 2. However, as TDS was reported as the effluent gross value, it cannot be compared to the permit limit which is expressed as the incremental increase between the influent and effluent. Also, some of the parameters that were reported in the application are not limited in the existing permit (TKN, Nitrate+Nitrite as N, TP, Arsenic and Zinc).

Table 1. Application Discharge Data[(1)]

Parameter	Units	Maximum Daily Discharge	Average Daily Discharge
pH	Standard Units	7.03-7.3 (min-max)	--
Flow	MGD	0.758	0.75
Biochemical Oxygen Demand (5-day)	mg/L	5	4.25
E. Coli	cfu/100mL	6	1.74
Total Suspended Solids (TSS)	mg/L	4	3.13
Total Residual Chlorine	µg/L	ND	ND
Total Kjeldahl Nitrogen (TKN)	mg/L as N	5.11	4.78
Nitrate and Nitrite N	mg/L as N	15	10.12
Oil and Grease	mg/L	1.1	0.83
Total Phosphorus (TP)	mg/L as P	2.85	2.52
Total Dissolved Solids (TDS) [(2)]	mg/L	1432	1351
Arsenic	mg/L	0.004	0.004
Lead	mg/L	0.04	0.04

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Parameter	Units	Maximum Daily Discharge	Average Daily Discharge
Selenium	mg/L	0.002	--
Zinc	mg/L	0.05	--

(1) All other data submitted on volatile organic compounds, acid-extractable compounds and base-neutral compounds were reported as below the detection limits used for each analysis.
(2) TDS reported as effluent gross value (not incremental increase as required in permit and DMRs).

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B. Recent Discharge Monitoring Report (DMR) Data (2004-2008)

Table 2 provides a summary of effluent limitations and monitoring data based on the facility's most recent 5 years of DMRs (2004 to 2008). The data shows elevated concentrations of total dissolved solids, oil and grease, lead and selenium. In addition, the highest maximum daily flow (1.38 MGD) exceeds the design capacity of the treatment system (1.2 MGD).

Table 2. Discharge Monitoring Report data for years 2004-2008.

Parameter	Units	Existing Permit Effluent Limitations			Discharge Monitoring Data			Monitoring Requirements	
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly	Highest Average Weekly	Highest Maximum Daily	Monitoring Frequency	Sample Type
Flow Rate	MGD	Monitoring Only	Monitoring Only	Monitoring Only	0.87	--	1.38	Continuous	Continuous
Biochemical Oxygen Demand (5-day)	mg/L	30	45	Monitoring Only	8.0	8.0	10	2/Month	Composite
	kg/day	136	204	408	25	--	31		
	Percent Removal	Both the influent and the effluent shall be monitored. The arithmetic mean of the BOD values, by concentration, for effluent samples collected over a calendar month shall not exceed 15 percent of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period (85 percent BOD removal).			96-97 (min-max)				
Total Suspended Solids	mg/L	30	45	Monitoring Only	16	16	20	2/Month	Composite
	kg/day	136	204	408	50	--	61		

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	Percent Removal	Both the influent and the effluent shall be monitored. The arithmetic mean of the TSS values, by concentration, for effluent samples collected over a calendar month shall not exceed 15 percent of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period (85 percent TSS removal).			90-99 (min-max)				
pH	Standard Units	Not < 6.5 SU, Not > 9.0 SU; discharge shall not change pH in receiving water by more than 0.5 SU			6.8 (minimum)	--	7.4	1/Week	Discrete
E. coli	cfu/ 100 mL	130	--	580	30.6	--	440	1/Week	Discrete
Total Dissolved Solids[(1)]	mg/L	Incremental increase not to exceed 400mg/L.			582	--	737	2/Month	Discrete
Total Residual Chlorine[(2)]	µg/L	5	--	11	ND	--	ND	1/Day	Discrete
Oil and Grease	kg/day	45.4	68.1	--	83.5	83.5	--	1/Month	Discrete
	mg/L	10	15	--	22	22	--		
Beryllium	kg/day	0.95	--	18	ND	--	ND	1/Month	Composite
	µg/L	0.21	--	4	ND	--	ND		
Cadmium	kg/day	14	--	318	ND	--	ND	1/Month	Composite
	µg/L	3.0	--	70	ND	--	ND		
Lead	kg/day	68	--	1753	9.0	--	9.0	1/Month	Composite
	µg/L	15	--	386	40	--	40		
Mercury	kg/day	0.045	--	11	ND	--	ND	1/Month	Composite

	µg/L	0.01	--	2.4	ND	--	ND		
Selenium	kg/day	9.1	--	91	0.0069	--	0.0069	1/Month	Composite
	µg/L	2.0	--	20	3.0	--	3.0		
Cyanide	kg/day	44	--	186	ND	--	ND	1/Month	Composite
	µg/L	9.7	--	41	ND	--	ND		
Bis(2-ethylhexyl)phthalate	kg/day	27	--	454	ND	--	ND	2/Year	Composite
	µg/L	6	--	100	ND	--	ND		

(1) TDS reported as incremental increase values as required by permit limit. TDS effluent gross values also provided in monthly DMRs, but cannot be compared to permit limits.
(2) Total Residual Chlorine monitoring only required if UV system not operational. Over the permit term, monitoring was only required 4 times and resulted in non-detects.

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Numeric receiving water limitations for **temperature** (no more than 3 degrees Celsius), **dissolved oxygen** (DO) (not lower than 6 mg/L or 90% saturation), and **turbidity** (not higher than 50 NTU) were included in the previous permit, but no receiving water data was reported.

C. Siemens Water Technologies Inc.'s Discharge Data

Siemens Water Technologies is a carbon reactivation facility that discharges process wastewater (140,000 GPD) and non-process wastewater (1,000 GPD) to the permittee's treatment system. The facility's process wastewater flow represents about 19 percent of the POTW's flow, thus discharge data from this industrial user is important for the purposes of developing this NPDES permit. Although the POTW is not required to implement a formal pretreatment program, Siemens Water Technologies is subject to the general pretreatment regulations found in 40 CFR Part 403, and also categorical pretreatment standards, specifically the centralized waste treatment point source category in 40 CFR Part 437.

Pursuant to the reporting requirements in 40 CFR § 403.12(e), Siemens Water Technologies provided effluent discharge data for December 2008, which included an analysis of a variety of metals, organics, and oil and grease. Specific effluent limitations for metals and organics applicable to this industrial user are found in Subpart D - *Multiple Wastestreams* of 40 CFR Part 437. All metals analyzed, including cadmium, lead, and mercury, which are parameters limited by the POTW's current permit, were below detection limits for the analysis. Results of the organics, including bis(2-ethylhexyl)phthalate, were also below the detection limits for the analysis. Of the four oil and grease samples, the highest result was 8.5 mg/L, which is below the effluent limits required by Subpart B - *Oils Treatment and Recovery* (40 CFR § 437.21).

Past reports (March 2004, June 2004, June 2005, and June 2006) indicate that measurable concentrations of arsenic were present in the effluent, typically around 0.012 mg/l, but as high as 0.02 mg/l. These concentrations of arsenic are below the effluent limits required by Subpart D – Multiple Wastestreams (40 CFR § 437.46(b)). Concentrations of vanadium (0.031 mg/l) and chromium (0.005 mg/l) were also detected in June 2006 and 2005, respectively, and both of these are below the limits required by this Subpart.

It should be noted that Siemens was cited for RCRA violations in 2006 for failure to close containers of hazardous waste, failure to provide adequate secondary containment, and failure to adequately record observations and repairs during facility inspections. The facility has since complied with all of the requirements of the Penalty Order. Due to the facility's history of violations and the potential for the facility to be increasing the concentrations of metals, such as arsenic, at the POTW, the proposed permit includes new pretreatment monitoring and reporting requirements.

V. SIGNIFICANT CHANGES TO PREVIOUS PERMIT

The previous permit contained daily maximum mass-based limits for BOD and TSS. These limits are redundant as the average monthly and weekly effluent limits are more stringent, and therefore more protective of water quality standards. Thus, the daily maximum limits for BOD and TSS have been eliminated from the proposed permit.

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Effluent limits for total chlorine residual, beryllium, cadmium, mercury, cyanide and bis (2-ethylhexyl) phthalate that were included in the previous permit have been eliminated in the proposed permit as *no* reasonable potential to exceed water quality standards for these pollutants was found based on 5 years of effluent data. Monitoring as part of the priority pollutants scans is still required.

New limits for arsenic, boron, fluoride, and nitrate/nitrite as N are being proposed as reasonable potential to exceed water quality standards for these pollutants *was* found based on application and priority pollutant scan data. Monitoring for these pollutants will be required monthly. Also, based on WET test data, new limits for chronic whole effluent toxicity have also been proposed with continued semi-annual monitoring.

The WQBELs for lead and selenium have been re-calculated according to the statistical permit limit derivation procedures in Section 5.4 of EPA's TSD in order to provide the most protective WQBELs with regard for the variation in the effluent data. This resulted in WQBELs that are more stringent than the WQBELs required in the previous permit.

Lastly, the proposed permit includes new pretreatment monitoring requirements.

VI. DETERMINATION OF NUMERICAL EFFLUENT LIMITATIONS

The Clean Water Act (CWA) requires point source dischargers to control the amount of pollutants that are discharged to waters of the U.S. The control of pollutants is established through effluent limitations and other requirements in NPDES permits. When determining effluent limitations, EPA must consider limitations based on the technology used to treat the pollutant(s) (i.e., technology-based effluent limits) and limitations that are protective of water quality standards (i.e., water quality-based effluent limits).

A. Applicable Technology-based Effluent Limitations

EPA developed technology-based treatment standards for municipal wastewater treatment plants in accordance with Section 301(b)(1)(B) of the Clean Water Act. The minimum levels of effluent quality attainable by secondary treatment for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), and pH, as defined in 40 CFR 133.102, are:

- BOD: 30 mg/L as a 30-day ("monthly") average,
  45 mg/L as a 7-day ("weekly") average, and
  85% removal efficiency;

- TSS: 30 mg/L as a 30-day ("monthly") average,
  45 mg/L as a 7-day ("weekly") average, and
  85% removal efficiency;

- pH: Must range from 6.0 – 9.0 standard units as an instantaneous maximum.

In accordance with 40 CFR 133, technology-based effluent limitations are proposed for BOD, TSS, and pH based on secondary treatment requirements for municipal wastewater

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treatment facilities. These requirements are performance-based and represent the degree of effluent reduction achievable using available wastewater treatment technology.

Currently, Colorado River Indian Tribes (CRIT) does not have EPA-approved surface water quality standards. As the discharge may eventually flow into the Colorado River, the discharge must meet those downstream standards established by the State of Arizona. In conjunction with federal requirements, Section R18-11-109 of the 2008 Arizona WQS provides applicable numeric water quality standards. Federal regulation requires that when establishing effluent limitations, the more stringent of the technology and water-quality based limitations applies. Table 3 provides a summary of proposed technology-based effluent limitations for Discharge Point No. 001.

Table 3. Summary of Proposed Technology-Based Effluent Limitations(1)

Parameter	Units[1]	Proposed Technology-Based Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (5-day)	mg/L	30	45	--	--	--
	kg/day	136	204	--	--	--
	The 30-day average percent removal shall not be less than 85 percent.					
Total Suspended Solids	mg/L	30	45	--	--	--
	kg/day	136	204	--	--	--
	The 30-day average percent removal shall not be less than 85 percent.					
E. Coli	CFU/ 100 mL	126	--	--	--	235
Oil and Grease	mg/L	10	15	--	--	--
	kg/day	45.4	68.1	--	--	--
pH	Standard Units	--	--	--	6.5	9.0
Total Chlorine Residual	µg/L	--	--	--	--	--
Total Dissolved Solids	mg/L	Incremental increase not to exceed 400mg/L.			--	--

(1) Mass-based limits derived given a design flow of 1.2 MGD.

1. **Biochemical Oxygen Demand**. Pursuant to 40 CFR 133.102, effluent limitations are proposed for BOD. Secondary treatment requirements provide that effluent concentrations of BOD shall not exceed 30 mg/L on a 30-day average and not exceed 45 mg/L based on a 7-day average. In addition, the 30-day average percent removal shall not be less than 85 percent. Based on the facility's design flow of 1.2 MGD per day, EPA also proposes a mass-based monthly average effluent limitation of 136 kg/day and a weekly average effluent limitation of 204 kg/day for BOD. A daily maximum mass-based

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limit was included in the previous permit (408 kg/day), but it has been dropped in the proposed permit as it is redundant. The monthly and weekly average limits are more stringent and the DMRs show that the facility is capable of achieving those limits.

2. **Total Suspended Solids**. Pursuant to 40 CFR 133.102 and Arizona WQS Section R18-11-109D, effluent limitations are proposed for TSS. Secondary treatment requirements provide that effluent concentrations of TSS shall not exceed 30 mg/L on a 30-day average and 45 mg/L on 7-day average. In addition, the 30-day average percent removal shall not be less than 85 percent. Arizona WQS requires that the median value of suspended sediments of a minimum of four samples collected at least seven days apart shall be 80 mg/L for Aquatic & Wildlife, warm water. Federal regulation requires that when establishing effluent limitations, the more stringent of the technology and water-quality based limitations applies. Therefore, EPA proposes the average monthly effluent limitation of 30 mg/L and an average weekly effluent limitation of 45 mg/L. Based on the facility's design flow of 1.2 MGD per day, EPA also proposes a mass-based monthly average effluent limitation of 136 kg/day and a weekly average effluent limitation of 204 kg/day for TSS. Narrative water quality standards for suspended solids (Arizona WQS R18-11-108C) are also included in the proposed permit. A daily maximum mass-based limit (408 kg/day), was included in the previous permit, but it has been dropped in the proposed permit as it is redundant. The monthly and weekly average limits are more stringent and the DMRs show that the facility is capable of achieving those limits.

3. ***E. Coli* bacteria**. Section R18-11-109A of the Arizona WQS provides requirements for bacteria for Full Body Contact. Arizona WQS requires that the geometric mean of the E. Coli values for effluent samples collected (a minimum of 4 samples in 30 consecutive days) shall not exceed 126 colony forming units (CFU) per 100 mL of water, and that the single sample maximum shall not exceed 235 cfu/100mL of water. The 2001 permit required a 130 cfu/100mL 30-day geometric mean and a 580 cfu/100mL single sample maximum. The Arizona WQS have since been revised (2008) and the proposed permit has incorporated this change.

4. **pH**. 40 CFR 133.102(c) provides secondary treatment requirements for pH, which state effluent values for pH shall be maintained within the limits of 6.0 and 9.0 standard units. Section R18-11-109B of the Arizona WQS requires that pH be maintained within the limits of 6.5 and 9.0. Federal regulation requires that when establishing effluent limitations, the more stringent of the technology and water-quality based limitations applies. Based on effluent monitoring data, pH values ranged between 6.8 and 7.4 standard units. Therefore, since the facility has been performing at the required level established in the existing permit, EPA proposes to retain the existing pH limitation in the draft permit that the pH level of the effluent shall be not less than 6.5 or greater than 9.0 standard units in the draft permit.

5. **Oil & Grease**. Oil and grease are common components of domestic wastewater. Section R18-11-108B of the Arizona WQS provides narrative standards that state that a surface water shall not contain oil, grease, or other pollutant that floats as debris, foam, or scum; or that causes a film or iridescent appearance on the surface of the water; or that cause a deposit on a shore-line, bank, or aquatic vegetation. The discharge of lubricating oil or gasoline associated with the normal operation of a recreational watercraft is not a

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violation of this narrative standard. However, Arizona WQS do not provide a numeric water quality standard for oil and grease. Therefore, EPA proposes effluent limitations for oil and grease based on EPA's Best Professional Judgment (BPJ) related to the development of technology-based effluent limits since (1) there are no applicable effluent limitation guidelines and performance standards for oil and grease, and (2) similar domestic wastewater treatment facilities have shown that an average weekly limit of 15 mg/l and an average monthly limit of 10 mg/l can be easily achieved. Section 402(a)(1) of the CWA provides for the establishment of BPJ-based effluent limits when effluent limitation guidelines and performance standards are not available for a pollutant of concern. As in the 2001 permit, EPA proposes an average weekly limitation of 15 mg/l and an average monthly limitation of 10 mg/L for oil and grease. These limits are consistent with similar facilities that treat domestic wastewater in EPA Region IX. Also, based on a design flow of 1.2 MGD, EPA proposes a mass-based AWL and AML of 45.4 and 68.1 kg/day. In addition to the technology-based effluent limits, the narrative standard (Arizona WQS R18-11-108), is included in the proposed permit. The DMRs have shown that the facility has exceeded the BPJ-based numeric limits on at least one occasion over the last five years.

6. **Settleable Solids**. The minimum levels of effluent quality attainable by secondary treatment for Settleable Solids, as specified in the EPA Region IX Policy memo dated May 14, 1979, are listed as:

   - Settleable Solids: 1 mL/L as a 30-day ("monthly") average,
     2 mL/L daily maximum,

   The 2001 permit did not contain limitations for settleable solids with the justification that "EPA Region 9 believes that settleable solids data do not generally provide information beyond that provided by the total suspended solids data." In addition, the DMR data for October 2000 through October 2001 included settleable solids monitoring, which resulted in no exceedances of the limits specified in the 1979 EPA Region IX Policy memo. Therefore, a limit for settleable solids is not included in the proposed permit.

7. **Total Chlorine Residual**. Chlorination for disinfection is used only as an emergency back-up system when the UV system is not operational. Thus, monitoring and reporting are only required when the chlorination/dechlorination system is operational. The 2008 Arizona WQS require that total chlorine residual concentrations do not exceed 11 µg/L for the protection of aquatic and wildlife warm water fisheries from chronic exposure and do not exceed 19 µg/L for acute exposure. The previous permit contained limits for total chlorine residual; however based on the reasonable potential analysis (see RP table below), which included 4 data points over 5 years, EPA has determined that the discharge does not have reasonable potential to cause or contribute to an exceedance for total chlorine residual. Therefore, EPA proposes to eliminate the limits imposed in the previous permit. However, monitoring will still be required at times when the chlorination/dechlorination system is being used.

8. **Total Dissolved Solids**. The facility reported both effluent gross values and incremental increase values for TDS. Because of the plant's influent having a high concentration of TDS, an incremental increase limit of 400 mg/L was required in the previous permit, to be calculated as the increase between the TDS levels in the community's water supply

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and the levels in the plant effluent. The DMRs show that the facility was unable to meet the previous permit incremental increase limit and that the effluent gross values for TDS exceed water quality standards. This limit is retained in the proposed permit. Section R18-11-110 of the Arizona WQS provides Salinity Standards for the Colorado River. The flow-weighted average annual salinity in the lower main stem of the Colorado River shall not exceed 747 mg/L below Parker Dam. In addition and specifically for municipal dischargers, Appendix A of the 2005 Review, Water Quality Standards for Salinity, Colorado River System requires that the discharge not exceed an incremental increase of 400 mg/L TDS.

B. Water Quality-Based Effluent Limitations ("WQBELs")

Water quality-based effluent limitations, or WQBELS, are required in NPDES permits when the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an excursion above any water quality standard. (40 CFR 122.44(d)(1))

When determining whether an effluent discharge causes, has the reasonable potential to cause, or contributes to an excursion above narrative or numeric criteria, the permitting authority shall use procedures which account for existing controls on point and non point sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity) and where appropriate, the dilution of the effluent in the receiving water. (40 CFR 122.44 (d) (1) (ii)).

EPA evaluated the reasonable potential to discharge toxic pollutants according to guidance provided in the *Technical Support Document for Water Quality-Based Toxics Control* (TSD) (Office of Water Enforcement and Permits, U.S. EPA, March 1991) and the *U.S. EPA NPDES Permit Writers Manual* (Office of Water, U.S. EPA, December 1996). These factors include:

1. Applicable standards, designated uses and impairments of receiving water
2. Dilution in the receiving water
3. Type of industry
4. History of compliance problems and toxic impacts
5. Existing data on toxic pollutants - Reasonable Potential analysis

1. Applicable standards, designated uses and impairments of receiving water

Currently, Colorado River Indian Tribes (CRIT) does not have EPA-approved surface water quality standards. As the discharge may eventually flow into the Colorado River, the discharge must meet those downstream standards established by the State of Arizona Water Quality Standards found in Title 18, Chapter 11 of the Arizona Administrative Code. **At this time, the proposed 2008 Arizona Water Quality Standards have been partially approved by EPA. For those parts, the proposed permit cites the 2008 standards and**

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for those that have not been approved so far, the proposed permit cites the 2003 standards.

The receiving water is not listed as impaired according to the CWA Section 303(d) List of Water Quality Limited Segments. The designated uses are listed above in Section III. *Description of Receiving Water*.

Applicable water quality standards establish water quality criteria for the protection of aquatic wildlife from acute and chronic exposure to certain metals that are hardness dependent, with a "cap" of 400 mg/l. Based on available hardness data for the discharge, the permit establishes water quality standards for these metals based on a hardness value of 338.8 mg/L. This value, used in the previous permit, is based on STORET data for the Colorado River Indian Tribe main drainage canal, and is consistent with more recent (2004) values found in STORET for the La Paz area.

2. Dilution in the receiving water

Arizona's water quality standards require that water quality standards be achieved without mixing zones unless the Permittee applies and is approved for a mixing zone (R18-11-114). Thus, no dilution was applied in determining water quality-based effluent limits in the proposed permit.

3. Type of Industry

Typical pollutants of concern in untreated and treated domestic wastewater include ammonia, nitrate, oxygen demand, pathogens, temperature, pH, oil and grease, and solids. Chlorine and turbidity may also be of concern due to treatment plant operations.

4. History of compliance problems and toxic impacts

The DMR data shows elevated concentrations of total dissolved solids (TDS), oil and grease, lead and selenium. In addition, the highest maximum daily flow (1.38 MGD), for the month of December 2004, exceeds the design capacity of the treatment system (1.2 MGD). Effluent limits for the above parameters will be included in the proposed permit, excluding flow. Monitoring of flow will still be required. This facility also has a history of oil and grease compliance issues, but in the last five years, only had one exceedance of the BPJ-based permit limits.

The facility continues to have difficulty in complying with the TDS water quality standard, including the incremental increase requirement. As the permittee already has an understanding of the potential source of high TDS in the facility's influent, **EPA recommends the permittee do outreach in the local community regarding water softener systems in order to decrease this source of high TDS**.

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5. Existing data on toxic pollutants

For pollutants with effluent data available, EPA has conducted a reasonable potential analysis based on statistical procedures outlined in EPA's *Technical Support Document for Water Quality-based Toxics Control* herein after referred to as EPA's TSD (EPA 1991). These statistical procedures result in the calculation of the projected maximum effluent concentration based on monitoring data to account for effluent variability and a limited data set. The projected maximum effluent concentrations were estimated assuming a coefficient of variation of 0.6 for n<10, and the 99 percent confidence interval of the 99th percentile based on an assumed lognormal distribution of daily effluent values (sections 3.3.2 and 5.5.2 of EPA's TSD). For n>10, the CV was calculated as the standard deviation/mean for each parameter. EPA calculated the projected maximum effluent concentration for each pollutant using the following equation:

Projected maximum concentration = C_e × *reasonable potential multiplier factor*.

Where, "C_e" is the reported maximum effluent value and the multiplier factor is obtained from Table 3-1 of the TSD.

Table 4. Summary of Reasonable Potential Statistical Analysis[(1)]

Parameter	Maximum Observed Concentration (µg/L) or other	*n*	CV	RP Multiplier	Projected Maximum Effluent Concentration (µg/L) or other	Most Stringent Water Quality Criterion[(2)] (µg/L) or other	Statistical Reasonable Potential?
E. Coli	440 cfu/100mL	59	1.9	3.0	1320 cfu/100mL	126 cfu/100mL	Yes
Total Dissolved Solids	737 mg/L incremental increase	59	0.3	1.3	958 mg/L incremental increase	747 mg/L	Yes
Total Residual Chlorine	ND[(3)]	4	--	--	--	11	No
Beryllium	ND[(3)]	59	--	--	--	4	No
Cadmium	ND	59	--	--	--	1.31	No
Lead	40	59	1.22	2.3	92	9.23	Yes
Mercury	ND	59	--	--	--	0.01	No
Selenium	3	59	0.22	1.2	3.6	2.0	Yes
Cyanide	ND	59	--	--	--	9.7	No
Bis (2-ethylhexyl) phthalate	ND	11	--	--	--	6	No

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Arsenic	4	3	0.6	13.2	22.4	10	Yes
Zinc	50	3	0.6	13.2	280	329.7	No
Barium	30	1	0.6	13.2	396	2,000	No
Boron	660	1	0.6	13.2	8,712	630	Yes
Iron	60	1	0.6	13.2	792	1,000	No
Magnesium	21,300	1	0.6	13.2	281,160	N/A[4]	--
1-(2-Methoxypropoxy)-2-propanol	69	1	0.6	13.2	910.8	N/A	--
Fluoride	2,100	1	0.6	13.2	27,720	4,000	Yes
Nitrate + Nitrite N	15,000	1	0.6	13.2	198,000	10,000	Yes
Phosphorus, total	2,850	1	0.6	13.2	37,620	N/A	--
Sulfate	321,000	1	0.6	13.2	4,237,200	N/A	--
TKN	5,110	1	0.6	13.2	67,452	N/A	--
Whole Effluent Toxicity, chronic	1.0 TU_C	1	0.6	13.2	13.2 TU_C	1.0 TU_C	Yes

[1]Parameters considered for RP analysis were parameters found in the previous permit, application for permit renewal, and the 2006 priority pollutant scan.
[2]Water Quality Standards are based on 2003 AWQS unless specific pollutant is part of proposed 2008 standards that have been so far approved by EPA.
[3]Non-Detects are considered zeroes for the purposes of the RP analysis.
[4]No water quality-based effluent limit or standard available for the RP analysis.

C. Rationale for Effluent Limits - Reasonable Potential Analysis

EPA evaluated the typical pollutants expected to be present in the effluent and selected the most stringent of applicable technology-based standards or water quality-based effluent limitations. Where effluent concentrations of toxic parameters are unknown or are not reasonably expected to be discharged in concentration that have the reasonable potential to cause or contribute to violations of water quality standards, EPA may establish monitoring requirements in the permit. Where monitoring is required, data will be re-evaluated and the permit may be re-opened to incorporate effluent limitations as necessary.

Flow. No limits established for flow, but flow rates must be monitored and reported. Monitoring is required weekly.

Beryllium. The previous permit contained limits for beryllium; however based on the reasonable potential analysis, which included 59 data points over 5 years, EPA has determined that the discharge does not have reasonable potential to cause or contribute to an exceedance for beryllium. In addition, the method detection limit (MDL) is low enough at

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2µg/L (smaller than the most stringent water quality standard at 4µg/L for Domestic Water Supply designated use) to adequately detect exceedances. Therefore, EPA proposes to eliminate the limits imposed in the previous permit. Monitoring for beryllium is still required as part of the twice yearly priority pollutant scans.

Cadmium. The previous permit contained limits for cadmium; however based on the reasonable potential analysis, which included 59 data points over 5 years, EPA has determined that the discharge does not have reasonable potential to cause or contribute to an exceedance for cadmium. One thing to consider, though, is that the method detection limit (MDL) is *not* low enough at 2µg/L (which is larger than the most stringent WQS at 1.31µg/L for Aquatic and wildlife, warmwater, chronic designated use) to adequately detect exceedances. This WQS is based on a hardness of 339mg/L. Therefore, EPA proposes to eliminate the limits imposed in the previous permit, but monitoring is still required as part of the twice yearly priority pollutant scans. The EPA recommends the permittee search for a way to increase the sensitivity of the MDL for this parameter to below the most stringent WQS.

Lead. Based on the reasonable potential analysis, EPA has determined that the discharge has a reasonable potential to cause or contribute to an exceedance for lead. Therefore, the proposed permit contains effluent limits for lead based on chronic and acute WQS for the protection of the Aquatic and wildlife, warmwater designated use with a hardness value of 339mg/L. The WQBEL calculations are shown in the following table, resulting in a maximum daily limit (MDL) of 27.83 µg/L and an average monthly limit (AML) of 10.29 µg/L. A coefficient of variation of 1.2 (based on the standard deviation divided by the mean of the lead effluent data) was used to determine each multiplier. Monitoring is required monthly.

Table 5. WQBEL Calculations for Lead.

	Acute	**Chronic**[1]
Freshwater Aquatic Life Criteria, µg/L	236.82	9.23
No Dilution Credit Authorized	0	0
Background Concentration, µg/L	0	0
WLA (Dissolved), µg/L	236.82	9.23
WLA (Total Recoverable)[2], µg/L	386.26	15.05
WLA Multiplier (99th%)	0.174	0.321
LTA, µg/L	67.21	4.83
LTA_{MDL} Multiplier (99th%)	--	5.76
MDL, µg/L	--	27.83
MDL, kg/day	--	0.13
LTA_{AML} Multiplier (95th%)[3]	--	2.13
AML, µg/L	--	10.29
AML, kg/day	--	0.05

[1]Derivation of permit limit based on Section 5.4.1 of EPA's TSD
[2]Conversion factor for dissolved to total recoverable found in Appendix A of the National Recommended Water Quality Criteria.
[3]LTA multiplier based on sampling frequency of four times per month per section 5.5.3 of EPA's TSD

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Mercury. The previous permit contained limits for mercury; however based on the reasonable potential analysis, which included 59 data points over 5 years, EPA has determined that the discharge does not have reasonable potential to cause or contribute to an exceedance for mercury. One thing to consider, though, is that the method detection limit (MDL) is not low enough at 0.5µg/L (which is larger than the most stringent WQS at 0.01µg/L for Aquatic and wildlife, warmwater, chronic designated use) to adequately detect exceedances. Therefore, EPA proposes to eliminate the limits imposed in the previous permit, but monitoring is still required as part of the twice yearly priority pollutant scans. The EPA recommends the permittee search for a way to increase the sensitivity of the MDL for this parameter to below the most stringent WQS.

Selenium. Based on the reasonable potential analysis, EPA has determined that the discharge has a reasonable potential to cause or contribute to an exceedance for selenium. Therefore, the proposed permit contains effluent limits for selenium based on chronic and acute WQS for the protection of the Aquatic and wildlife, warmwater designated use. The WQBEL calculations are shown in the following table, resulting in a maximum daily limit (MDL) of 2.47 µg/L and an average monthly limit (AML) of 1.86 µg/L. A coefficient of variation of 0.2 (based on the standard deviation divided by the mean of the selenium effluent data) was used to determine each multiplier. Monitoring is required monthly.

Table 6. WQBEL Calculations for Selenium.

	Acute	**Chronic[1]**
Freshwater Aquatic Life Criteria, µg/L	20	2.0
No Dilution Credit Authorized	0	0
Background Concentration, µg/L	0	0
WLA (Dissolved), µg/L	n/a	n/a
WLA (Total Recoverable)[2], µg/L	20	2.0
WLA Multiplier (99th%)	0.643	0.797
LTA, µg/L	12.86	1.59
LTA_{MDL} Multiplier (99th%)	--	1.55
MDL, µg/L	--	2.47
MDL, kg/day	--	0.011
LTA_{AML} Multiplier (95th%)[3]	--	1.17
AML, µg/L	--	1.86
AML, kg/day	--	0.0084

[1]Derivation of permit limit based on Section 5.4.1 of EPA's TSD
[2]Conversion factor for dissolved to total recoverable found in Appendix A of the National Recommended Water Quality Criteria.
[3]LTA multiplier based on sampling frequency of four times per month per section 5.5.3 of EPA's TSD

Cyanide. The previous permit contained limits for cyanide; however based on the reasonable potential analysis, which included 59 data points over 5 years, EPA has determined that the discharge does not have reasonable potential to cause or contribute to an exceedance for cyanide. One thing to consider, though, is that the method detection limit (MDL) is not low enough at 10µg/L (which is larger than the most stringent WQS at 9.7µg/L for Aquatic and wildlife, warmwater, chronic designated use) to adequately detect exceedances. Therefore, EPA proposes to eliminate the limits imposed in the previous permit, but monitoring is still

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required as part of the twice yearly priority pollutant scans. The EPA recommends the permittee search for a way to increase the sensitivity of the MDL for this parameter to below the most stringent WQS.

Bis(2-ethylhexyl)phthalate [a.k.a Di(2-ethylhexyl phthalate]. The previous permit contained limits for bis(2-ethylhexyl)phthalate; however based on the reasonable potential analysis, which included 11 data points over 5 years, EPA has determined that the discharge does not have reasonable potential to cause or contribute to an exceedance for bis(2-ethylhexyl)phthalate. One thing to consider, though, is that the method detection limit (MDL) is not low enough at 10µg/L (which is larger than the most stringent WQS at 6µg/L for Domestic Water Supply designated use) to adequately detect exceedances. Therefore, EPA proposes to eliminate the limits imposed in the previous permit, but monitoring is still required as part of the twice yearly priority pollutant scans. The EPA recommends the permittee search for a way to increase the sensitivity of the MDL for this parameter to below the most stringent WQS.

Arsenic. Based on the reasonable potential analysis, EPA has determined that the discharge has a reasonable potential to cause or contribute to an exceedance for arsenic. Therefore, the proposed permit contains effluent limits for arsenic based on the human health WQS for the Domestic Water Supply designated use. The WQBEL calculations are shown in the following table, resulting in a maximum daily limit (MDL) of 20.10 µg/L and an average monthly limit (AML) of 10 µg/L. A coefficient of variation of 0.6 was used to determine each multiplier. Monitoring is required monthly.

Table 7. WQBEL Calculations for Arsenic.

	Acute	**Chronic**	**Human Health[1]**
Freshwater Aquatic Life Criteria, µg/L	340	150	10
No Dilution Credit Authorized	0	0	0
Background Concentration, µg/L	0	0	0
WLA (Dissolved), µg/L	340	150	n/a
WLA (Total Recoverable)[2], µg/L	340	150	10
WLA Multiplier (99th%)	0.321	0.527	n/a
LTA, µg/L	109.14	79.05	10
LTA_{MDL} Multiplier (99th%)	--	--	2.01
MDL, µg/L	--	--	20.10
MDL, kg/day	--	--	0.091
LTA_{AML} Multiplier (95th%)[3]	--	--	n/a
AML, µg/L	--	--	10
AML, kg/day	--	--	0.045

[1]Derivation of permit limit based on Section 5.4.4 of EPA's TSD
[2]Conversion factor for dissolved to total recoverable found in Appendix A of the National Recommended Water Quality Criteria.
[3]LTA multiplier based on sampling frequency of four times per month per section 5.5.3 of EPA's TSD

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Boron. Based on the reasonable potential analysis, EPA has determined that the discharge has a reasonable potential to cause or contribute to an exceedance for boron. Therefore, the proposed permit contains effluent limits for boron based on the human health WQS for the Domestic Water Supply designated use. The WQBEL calculations are shown in the following table, resulting in a maximum daily limit (MDL) of 1270 µg/L and an average monthly limit (AML) of 630 µg/L. A coefficient of variation of 0.6 was used to determine each multiplier. Monitoring is required monthly.

Table 8. WQBEL Calculations for Boron.

	Human Health[1]
Freshwater Aquatic Life Criteria, µg/L	630
No Dilution Credit Authorized	0
Background Concentration, µg/L	0
WLA (Dissolved), µg/L	n/a
WLA (Total Recoverable), µg/L	630
WLA Multiplier (99th%)	n/a
LTA, µg/L	630
LTA_{MDL} Multiplier (99th%)	2.01
MDL, µg/L	1270
MDL, kg/day	5.77
LTA_{AML} Multiplier (95th%)	n/a
AML, µg/L	630
AML, kg/day	2.86

[1]Derivation of permit limit based on Section 5.4.4 of EPA's TSD

Fluoride. Based on the reasonable potential analysis, EPA has determined that the discharge has a reasonable potential to cause or contribute to an exceedance for fluoride. Therefore, the proposed permit contains effluent limits for fluoride based on the human health WQS for the Domestic Water Supply designated use. The WQBEL calculations are shown in the following table, resulting in a maximum daily limit (MDL) of 8,040 µg/L and an average monthly limit (AML) of 4,000 µg/L. A coefficient of variation of 0.6 was used to determine each multiplier. Monitoring is required monthly.

Table 9. WQBEL Calculations for Fluoride.

	Human Health[1]
Freshwater Aquatic Life Criteria, µg/L	4,000
No Dilution Credit Authorized	0
Background Concentration, µg/L	0
WLA (Dissolved), µg/L	n/a
WLA (Total Recoverable), µg/L	4,000
WLA Multiplier (99th%)	n/a
LTA, µg/L	4,000
LTA_{MDL} Multiplier (99th%)	2.01
MDL, µg/L	8,040
MDL, kg/day	36.52

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LTA_{AML} Multiplier (95th%)	n/a
AML, µg/L	4,000
AML, kg/day	18.17

[1]Derivation of permit limit based on Section 5.4.4 of EPA's TSD

Nitrate + Nitrite as N. Based on the reasonable potential analysis, EPA has determined that the discharge has a reasonable potential to cause or contribute to an exceedance for nitrate + nitrite as N. Therefore, the proposed permit contains effluent limits for nitrate + nitrite as N based on the WQS for the Domestic Water Supply designated use. The WQBEL calculations are shown in the following table, resulting in a maximum daily limit (MDL) of 20,100 µg/L and an average monthly limit (AML) of 10,000 µg/L. A coefficient of variation of 0.6 was used to determine each multiplier. Monitoring is required monthly.

Table 10. WQBEL Calculations for Nitrate + Nitrite as N.

	Human Health[1]
Freshwater Aquatic Life Criteria, µg/L	10,000
No Dilution Credit Authorized	0
Background Concentration, µg/L	0
WLA (Dissolved), µg/L	n/a
WLA (Total Recoverable), µg/L	10,000
WLA Multiplier (99th%)	n/a
LTA, µg/L	10,000
LTA_{MDL} Multiplier (99th%)	2.01
MDL, µg/L	20,100
MDL, kg/day	91.29
LTA_{AML} Multiplier (95th%)	n/a
AML, µg/L	10,000
AML, kg/day	45.42

[1]Derivation of permit limit based on Section 5.4.4 of EPA's TSD

Zinc, barium, and iron. Based on the reasonable potential analysis, EPA has determined that the discharge does not have reasonable potential to cause or contribute to an exceedance for zinc, barium, or iron.

Whole Effluent Toxicity (Chronic). Section R18-11-108 of the Arizona WQS provides narrative toxicity requirements that limit the adverse effects of toxic substances in effluents. The existing permit requires semi-annual chronic whole effluent toxicity testing using cladoceran (*Ceriodaphnia dubia*) and the fathead minnow (*Pimephales promela*). Although the laboratory results from the July 2006 tests indicates a "pass" with results of 1.0 TUC for each species, EPA has determined that the effluent has reasonable potential to exceed water quality criteria and proposes semi-annual chronic toxicity monitoring with numeric chronic whole effluent toxicity limitations. For this discharge, the chronic WET permit limits are 1.6 TU_c (MDL: the highest allowable value for the discharge measured during a calendar day or 24-hour period representing a calendar day), and 1.0 TU_c (Median Monthly Limit or MML: highest allowable value for the median of daily discharges obtained over a calendar month). Monitoring is required semi-annually.

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Special Note: The MDL exceeds the most stringent WQS for a few of the other toxics tested in the 2006 priority pollutant scan, including pesticides (such as chlordane and aldrin) and acid & base/neutrals (such as benzo(a)pyrene). Although these were non-detects, EPA recommends the permittee search for a way to increase the sensitivity of the MDL for these parameters to below the most stringent WQS.

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Table 11. Summary Table of Proposed Effluent Limitations and Monitoring Requirements.

Parameter	**Units**	**Existing Permit Effluent Limits**			**Proposed Permit Effluent Limits**			**Monitoring Frequency**	**Sample Type**
		Average Monthly	**Average Weekly**	**Maximum Daily**	**Average Monthly**	**Average Weekly**	**Maximum Daily**		
Flow	MGD	N/A	N/A	N/A	N/A	N/A	N/A	Continuous	N/A
Biochemical Oxygen Demand (5-day)	mg/L	30	45	Monitoring Only	30	45	Monitoring Only	Two/Month	24-hr Composite
	kg/day	136	204	408	136	204	Monitoring Only		
	% Removal	Both the influent and the effluent shall be monitored. The arithmetic mean of the BOD values, by concentration, for effluent samples collected over a calendar month shall not exceed 15 percent of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period (85 percent BOD removal).							
Total Suspended Solids	mg/L	30	45	Monitoring Only	30	45	Monitoring Only	Two/Month	24-hr Composite
	kg/day	136	204	408	136	204	Monitoring Only		
	% Removal	Both the influent and the effluent shall be monitored. The arithmetic mean of the TSS values, by concentration, for effluent samples collected over a calendar month shall not exceed 15 percent of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period (85 percent TSS removal).							
E. Coli	CFU/ 100 mL	130	--	580	126	--	235	Weekly	Discrete
Oil & Grease	mg/L	10	15	--	10	15	--	Monthly	Discrete
	kg/day	45.4	68.1	--	45.4	68.1	--		
pH	Standard Units	Not < 6.5 SU, Not > 9.0 SU			Not < 6.5 SU, Not > 9.0 SU			Weekly	Discrete
Total Dissolved Solids[1]	mg/L	Incremental increase not to exceed 400mg/L.			Incremental increase not to exceed 400mg/L.			Two/Month	Discrete
Total Residual Chlorine	µg/L	5	--	11	--	--	--	Once/Day	Discrete
Beryllium	kg/day	0.95	--	18	--	--	--	Two/Year as part of Priority Pollutant Scans	
	µg/L	0.21	--	4	--	--	--		
Cadmium	kg/day	14	--	318	--	--	--	Two/Year as part of	

	µg/L	3.0	--	70	--	--	--		
Lead	kg/day	68	--	1753	0.05	--	0.13	Monthly	Composite
	µg/L	15	--	386	10.29	--	27.83		
Mercury	kg/day	0.045	--	11	--	--	--	Two/Year as part of Priority Pollutant Scans	
	µg/L	0.01	--	2.4	--	--	--		
Selenium	kg/day	9.1	--	91	0.0084	--	0.011	Monthly	Composite
	µg/L	2.0	--	20	1.86	--	2.47		
Cyanide	kg/day	44	--	186	--	--	--	Two/Year as part of Priority Pollutant Scans	
	µg/L	9.7	--	41	--	--	--		
Bis(2-ethylhexyl)phthalate	kg/day	27	--	454	--	--	--	Two/Year as part of Priority Pollutant Scans	
	µg/L	6	--	100	--	--	--		
Arsenic	kg/day	--	--	--	0.045	--	0.091	Monthly	Composite
	µg/L	--	--	--	10	--	20.10		
Boron	kg/day	--	--	--	2.86	--	5.77	Monthly	Composite
	µg/L	--	--	--	630	--	1270		
Fluoride	kg/day	--	--	--	18.17	--	36.52	Monthly	Composite
	µg/L	--	--	--	4,000	--	8,040		
Nitrate + Nitrite as N	kg/day	--	--	--	45.42	--	91.29	Monthly	Composite
	µg/L	--	--	--	10,000	--	20,100		
Whole Effluent Toxicity, chronic	TU_C	Monitoring Only			1.0*	--	1.6	Two/Year	Composite

[1]*Both incremental increase and total effluent TDS values shall be reported.*
Monthly **median.*

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D. Anti-Backsliding

Section 402(o) of the CWA prohibits the renewal or reissuance of an NPDES permit that contains effluent limits less stringent than those established in the previous permit, except as provided in the statute. The effluent limitations in the proposed permit are at least as stringent as the effluent limitations in the previous permit, with the exception of the following parameters.

Although the previous permit included WQBELs for total chlorine residual, beryllium, cadmium, mercury, cyanide and bis (2-ethylhexyl) phthalate, the proposed permit only includes WQBELs for those parameters found to cause, have the reasonable potential to cause, or contribute to an excursion above water quality standards, in accordance with 40 CFR 122.44(d) and RPA procedures in EPA's TSD. Five years of monthly effluent data has shown that the above-mentioned parameters do not have the reasonable potential to cause exceedances of water quality standards. For parameters without WQBELs, this permit includes continued monitoring requirements. The removal of WQBELs is not expected to cause a change in the chemical nature of the effluent discharge, impact designated uses, or lower existing receiving water quality.

The previous permit also contained daily maximum mass-based limits for BOD and TSS. These limits are redundant as the average monthly and weekly effluent limits are more stringent, and therefore more protective of water quality standards. Thus, the daily maximum limits for BOD and TSS have been eliminated from the proposed permit.

E. Antidegradation Policy

EPA's antidegradation policy at 40 CFR 131.12 and Section R18-11-107 of the 2008 Arizona Water Quality Standards require that existing water uses and the level of water quality necessary to protect the existing uses be maintained.

As described in this document, the permit establishes effluent limits and monitoring requirements to ensure that all applicable water quality standards are met. The permit does not include a mixing zone, therefore these limits will apply at the end of pipe without consideration of dilution in the receiving water. A priority pollutant scan has been conducted of the effluent, demonstrating that most pollutants will be discharged below detection levels. Furthermore, the waterbody is not listed as an impaired waterbody for total suspended solids, turbidity or oil and grease under section 303(d) of the CWA.

Therefore, due to the low levels of toxic pollutants present in the effluent, high level of treatment being obtained, and water quality based effluent limitations, it is not expected that the discharge will adversely affect receiving water bodies.

VII. NARRATIVE WATER QUALITY-BASED EFFLUENT LIMITS

Section R18-11-108 of the 2008 Arizona WQS contains narrative water quality standards applicable to the receiving water. Therefore, the permit incorporates the following applicable narrative water quality standards:

A. The discharge shall be free from pollutants in amounts or combinations that:
   1. Settle to form bottom deposits that inhibit or prohibit the habitation, growth, or propagation of aquatic life;
   2. Cause objectionable odor in the area in which the surface water is located;
   3. Cause off-taste or odor in drinking water;
   4. Cause off-flavor in aquatic organisms;
   5. Are toxic to humans, animals, plants, or other organisms;
   6. Cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth, or propagation of other aquatic life or that impair recreational uses;
   7. Cause or contribute to a violation of an aquifer water quality standard prescribed in R18-11-405 or R18-11-406; or
   8. Change the color of the surface water from natural background levels of color.

B. The discharge shall be free from oil, grease or other pollutant that floats as debris, foam, or scum; or that causes a film or iridescent appearance on the surface of the water; or that cause a deposit on a shoreline, bank, or aquatic vegetation. The discharge of lubricating oil or gasoline associated with the normal operation of a recreational watercraft is not a violation of this narrative standard.

C. The discharge shall be free from suspended solids in quantities or concentrations that interfere with the treatment processes at the nearest downstream potable water treatment plant or substantially increase the cost of handling solids produced at the nearest downstream potable water treatment plant.

D. The discharge shall be free from refuse, rubbish, demolition or construction debris, trash, garbage, motor vehicles, appliances, tires, or other solid waste into a surface water or onto its banks.

E. The discharge shall not cause degredation so that a wadeable, perennial stream cannot support and maintain a community of organisms having taxa richness, species composition, tolerance, and functional organization comparable to that of a reference stream in Arizona.

F. In addition, the discharge shall not:
   a) raise the natural ambient water **temperature** of the receiving water more than three (3) degrees Celsius;
   b) cause the **turbidity** of the receiving water to exceed 50 nephelometric turbidity units; or
   c) lower the **dissolved oxygen** concentration of the receiving water to less than six (6) mg/L or 90% saturation, whichever is less.

VIII. MONITORING AND REPORTING REQUIREMENTS

The permit requires the permittee to conduct monitoring for all pollutants or parameters where effluent limits have been established, at the minimum frequency specified. Additionally,

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where effluent concentrations of toxic parameters are unknown or where data is insufficient to determine reasonable potential, monitoring may be required for pollutants or parameters where effluent limits have not been established.

A. Influent Monitoring and Reporting

The permittee shall conduct influent monitoring of BOD and TSS to evaluate compliance with the proposed permit conditions. The permittee shall perform all monitoring, sampling and analyses in accordance with the methods described in the most recent edition of 40 CFR 136, unless otherwise specified in the draft permit. All influent monitoring data shall be reported on monthly DMR forms and submitted quarterly to EPA, as specified in the draft permit.

B. Effluent Monitoring and Reporting

The permittee shall conduct effluent monitoring as specified in the proposed permit to evaluate compliance with the proposed permit conditions. The permittee shall perform all monitoring, sampling and analyses in accordance with the methods described in the most recent edition of 40 CFR 136, unless otherwise specified in the proposed permit. All monitoring data shall be reported on monthly DMR forms and submitted quarterly as specified in the proposed permit.

C. Priority Toxic Pollutants Scan

The proposed permit retains the existing requirement that monitoring for Priority Pollutants be conducted **twice-yearly** in July and January using a 24-hour composite sample (use grab samples where appropriate) of the final effluent concurrent with Whole Effluent Toxicity testing. The permittee shall perform all effluent sampling and analyses for the priority pollutants scan in accordance with the methods described in the most recent edition of 40 CFR 136, unless otherwise specified in the proposed permit or by EPA. 40 CFR 131.36 provides a complete list of Priority Toxic Pollutants.

D. Whole Effluent Toxicity Testing

The previous permit contained a requirement for chronic whole effluent toxicity testing for both cladoceran, *Ceriodaphnia dubia* and the fathead minnow, *Pimephales promela.* From results of the facility's July 2006 tests, EPA has determined that there is reasonable potential for the effluent to exceed water quality standards. Therefore, new permit limits (1.0 TU_C monthly median, and 1.6 TU_C daily maximum) have been included in the proposed permit. In addition, the monitoring requirements have been updated to reflect the most recent WET monitoring requirements. These include a screen test, using three species, (the above-mentioned and an algal species), and from then on, testing with only the most sensitive species. Chronic WET testing shall be conducted semi-annually, in January and July, using a 24-hour composite sample (use grab samples where appropriate) of the final effluent

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concurrent with a Priority Pollutants scan. Additional requirements are included in the proposed permit.

IX. SPECIAL CONDITIONS

A. Biosolids

Standard requirements for the monitoring, reporting, recordkeeping, and handling of biosolids in accordance with 40 CFR Part 503 are incorporated into the permit.

B. Pretreatment

The permittee is not required to have a formal pretreatment program; however, one of the industrial users that discharges process wastewater to the POTW has a history of violations and may be contributing to the concentration of metals, such as arsenic, in the POTW's effluent. Therefore, quarterly monitoring of the industrial user's effluent, to determine compliance with categorical pretreatment standards, and annual inspections and reporting are required in the proposed permit.

C. Development of an Initial Investigation TRE Workplan for Whole Effluent Toxicity

In the event effluent toxicity is triggered from WET test results, the permit requires the permittee to develop and implement a Toxics Reduction Evaluation ("TRE") Workplan. For acute toxicity, unacceptable effluent toxicity is found when "Fail" is determined, as indicated by a statistically significant difference between a test sample of 100 percent effluent and a control using a t-test. For chronic toxicity, unacceptable effluent toxicity is found in a single test result greater than 1.6 TU_c, or when any one or more monthly test results in a calculated median value greater than 1.0 TU_c. The draft permit also requires additional toxicity testing if a chronic toxicity monitoring trigger is exceeded. Within 90 days of the permit effective date, the permittee shall prepare and submit a copy of their Initial Investigation TRE Workplan (1-2 pages) for acute and chronic toxicity to EPA for review.

X. OTHER CONSIDERATIONS UNDER FEDERAL LAW

A. Impact to Threatened and Endangered Species

Section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 1536) requires federal agencies to ensure that any action authorized, funded, or carried out by the federal agency does not jeopardize the continued existence of a listed or candidate species, or result in the destruction or adverse modification of its habitat.

EPA sent a letter to the US Fish and Wildlife Service (USFWS) on April 9, 2008 to request updated species information. EPA did not receive a response; however EPA found updated species information on USFWS's website. EPA prepared a biological evaluation of the listed species that may be potentially affected by the discharge. This biological evaluation

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will be sent to the USFWS for review. In addition, a copy of the proposed permit and fact sheet will be sent to the USFWS for review during the public comment period.

From the USFWS Southwest Region's Threatened and Endangered Species Online Database, EPA found there are currently 7 Federally-listed endangered (E) species and 1 Federally-listed threatened (T) species in La Paz and Yuma Counties.

Table 12. ESA Species List for La Paz and Yuma Counties, Arizona

Status	**Species (Common Name/ *Scientific Name*)**
E	Bonytail chub/ *Gila elegans*
E	Razorback sucker/ *Xyrauchen texanus*
E	Southwestern willow flycatcher/ *Empidonax traillii extimus*
E	Yuma clapper rail/ *Rallus longirostris yumanensis*
E	Lesser long-nosed bat/ *Leptonycteris curasoae yerbabuenae*
E	Sonoran pronghorn/ *Antilocapra Americana sonoriensis*
T	Bald eagle/ *Haliaeetus leucocephalus*

EPA's biological evaluation for these eight species found that the discharge "may affect, but is not likely to adversely affect" the bonytail chub, razorback sucker, and Yuma clapper rail and will have "no effect" on the southwestern willow flycatcher, lesser long-nosed bat, sonoran pronghorn, and bald eagle.

B. Impact to National Historic Properties

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effect of their undertakings on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. Pursuant to the NHPA and 36 CFR § 800.3(a)(1), EPA is making a determination that issuing this proposed NPDES permit does not have the potential to affect any historic properties or cultural properties. As a result, Section 106 does not require EPA to undertake additional consulting on this permit issuance.

XI. STANDARD CONDITIONS

A. Reopener Provision

In accordance with 40 CFR 122 and 124, this permit may be modified by EPA to include effluent limits, monitoring, or other conditions to implement new regulations, including EPA-approved water quality standards; or to address new information indicating the presence of effluent toxicity or the reasonable potential for the discharge to cause or contribute to exceedances of water quality standards.

B. **Standard Provisions**

The permit requires the permittee to comply with EPA Region IX Standard Federal NPDES Permit Conditions, dated July 1, 2001.

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XII. ADMINISTRATIVE INFORMATION

A. **Public Notice** (40 CFR 124.10)

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft NPDES permit or other significant action with respect to an NPDES permit or application.

B. **Public Comment Period** (40 CFR 124.10)

Notice of the draft permit will be placed in a daily or weekly newspaper within the area affected by the facility or activity, with a minimum of 30 days provided for interested parties to respond in writing to EPA. After the closing of the public comment period, EPA is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

C. **Public Hearing** (40 CFR 124.12(c))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if EPA determines there is a significant amount of interest expressed during the 30-day public comment period or when it is necessary to clarify the issues involved in the permit decision.

XIII. CONTACT INFORMATION

Comments submittals and additional information relating to this proposal may be directed to:

U.S. Environmental Protection Agency, Region IX
NPDES Permits Office (WTR-5)
75 Hawthorne Street
San Francisco, California 94105
ATTN: Elizabeth Sablad
sablad.elizabeth@epa.gov

XIV. REFERENCES

EPA. 1991. *Technical Support Document for Water Quality-based Toxics Control*. Prepared by EPA, Office of Water Enforcement and Permits, in March 1991. EPA/505/2-90-001.

EPA. 1996. *Regions IX & X Guidance for Implementing Whole Effluent Toxicity Testing Programs*, Interim Final, May 31. 1996.

Denton DL, Miller JM, Stuber RA. 2007. EPA Regions 9 and 10 toxicity training tool (TTT). November 2007. San Francisco, CA.

EPA. 2002a. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* - Fifth Edition. Office of Water, EPA. EPA-821-R-02-012.

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EPA. 2002b. *National Recommended Water Quality Criteria*. Office of Water, EPA. EPA-822-R-02-047.

EPA. 1996. *U.S. EPA NPDES Basic Permit Writers Manual*. EPA. EPA-833-B-96-003.

Department of Environmental Quality. 2003. *Water Quality Standards*. Arizona Administrative Code Title 18, Chapter 11.

Department of Environmental Quality. 2008. *Notices of Proposed Rulemaking - Water Quality Standards*. Arizona Administrative Code Title 18, Chapter 11.

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Appendix L

POTW Discharge Report
June 2015

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Via Electronic Mail

June 23, 2015

Mr. Keith Silva or Successor
WTR-7
U.S. EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105

Re: 40 CFR 403.12(e) – Periodic Reports on Continued Compliance

Mr. Silva:

Per 40 CFR 403.12(e), Evoqua Water Technologies Inc. LLC is submitting the required periodic report.

The following are the report requirements listed in 40 CFR 403.12(e) which refer to paragraphs 403.12(b)(4)-(6).

Flow Measurement ***40 CFR 403.12(b)(4)***

(i) The average daily flow for the period of December 6, 2014 through June 4, 2015 for the regulated process stream was 121,227 gallons per day. The maximum daily flow for the same period for the regulated process stream was 138,215 gallons per day.

(ii) There are no other streams mixed with the regulated stream before the sampling point.

Pollutant Measurement ***40 CFR 403.12(b)(5)***

(i) The pretreatment standards for existing sources (PSES) applicable to the Evoqua facility can be found at 40 CFR 437.46(b) - Multiple Waste Streams (combined waste stream receipts from subparts A, B and C).

(ii) The results of the sampling and analyses identifying the nature and concentration of regulated pollutants in the discharge from the regulated process are located in Attachment 1. The samples are representative of daily operations.

PO Box 3308
Parker, AZ 85344 USA

Tel: +1 (928) 669-5758
Fax: +1 (928) 669-5775

www.evoqua.com

(iii) Four (4) grab samples were collected over a 24-hour period for the analysis of volatile organics and oil and grease. A 24-hour composite sample was obtained for the metals analyses.

(iv) A minimum of one sample was collected.

(v) The samples were collected immediately downstream from the pretreatment facility prior to mixing with any other waste stream.

(vi) Sampling and analysis were performed in accordance with the techniques prescribed in 40 CFR 136.

(vii) Not applicable for this report.

(viii) Not applicable for this report.

Certification ***40 CFR 403.12(b)(6)***

A statement of certification indicating that the Pretreatment Standards are being met on a consistent basis can be found in Attachment 2.

An additional attachment included in this letter is the signatory authorization letter (Attachment 3).

Please feel free to call if you have any questions at (928) 669-5758, x17.

Sincerely,

Monte McCue
Director of Plant Operations

CC: Andy Jones – CRSSJV
CRIT EPO Officer

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Attachment 1

ANALYTICAL RESULTS

40 CFR 403.12(b)(5)(ii)

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Evoqua Water Technologies Inc. LLC
Report on Compliance with Categorical Pretreatment Standards
Summary of Sample Results - June 3-4, 2015

Analyte	CWT Limits 40 CFR 437.46(b)		Method 200.7 / 7470A	Sample Result[1]			
Metals - 200.7 / 7470	Maximum Daily[1]	Monthly Average[1]	Reporting Limit[1]		NA	NA	NA
Antimony (200.7)	0.249	0.206	0.010	ND			
Arsenic (200.7)	0.162	0.104	0.010	0.011			
Cadmium (200.7)	0.474	0.0962	0.0050	ND			
Chromium (200.7)	0.947	0.487	0.0050	ND			
Cobalt (200.7)	0.192	0.124	0.010	ND			
Copper (200.7)	0.405	0.301	0.010	ND			
Lead (200.7)	0.222	0.172	0.0050	ND			
Mercury (7470)	0.00234	0.000739	0.00020	ND			
Nickel (200.7)	3.95	1.45	0.010	ND			
Silver (200.7)	0.120	0.0351	0.010	ND			
Tin (200.7)	0.409	0.120	0.10	ND			
Titanium (200.7)	0.0947	0.0618	0.0050	ND			
Vanadium (200.7)	0.218	0.0662	0.010	ND			
Zinc (200.7)	2.87	0.641	0.020	0.045			

Analyte	CWT Limits 40 CFR 437.46(b)		Method 625	Sample Result[2]			
Organics - 625	Maximum Daily[1]	Monthly Average[1]	Reporting Limit[2]				
Bis(2-ethylhexyl) phthalate	0.267	0.158	9.5 - 9.6	ND	ND	ND	ND
Carbazole	0.392	0.233	4.8	ND	ND	ND	ND
o-Cresol	1.92	0.561	4.8	ND	ND	ND	ND
p-Cresol	0.698	0.205	4.8	ND	ND	ND	ND
n-Decane	5.79	3.31	4.8	ND	ND	ND	ND
Fluoranthene	0.787	0.393	9.5 - 9.6	ND	ND	ND	ND
n-Octadecane	1.22	0.925	4.8	ND	ND	ND	ND
2,4,6-Trichlorophenol	0.155	0.106	9.5 - 9.6	ND	ND	ND	ND

Analyte	CWT Limits		Method HEM 1664	Sample Result[1]			
Oil & Grease - HEM EPA 1664	Maximum Daily[1]	Monthly Average[1]	Reporting Limit[1]				
Oil and Grease	127	38	4.7	ND	ND	ND	ND

[1] mg/l (ppm) [2] ug/l (ppb)

ND - Analyte Not Detected at or above reporting limit

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-111986-1
Client Project/Site: CWT June 2015

For:
Evoqua Water Technologies eProcurement
PO BOX 3308 IMA065
Parker, Arizona 85344

Attn: Roy Provins

Authorized for release by:
6/18/2015 7:50:12 PM

Camille Murray, Project Manager I
(949)261-1022
camille.murray@testamericainc.com

Links
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Evoqua Water Technologies eProcurement
Project/Site: CWT June 2015

TestAmerica Job ID: 440-111986-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-111986-1	500 mL P Metals	Water	06/03/15 08:00	06/04/15 12:00
440-111986-2	Sample 1, 1L Amber(Black)	Water	06/02/15 10:00	06/04/15 12:00
440-111986-3	Sample 2, 1L Amber(Blue)	Water	06/02/15 16:00	06/04/15 12:00
440-111986-4	Sample 3, 1L Amber(Pink)	Water	06/02/15 22:00	06/04/15 12:00
440-111986-5	Sample 4, 1L Amber(Green)	Water	06/03/15 04:00	06/04/15 12:00

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Job ID: 440-111986-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-111986-1

Comments
No additional comments.

Receipt
The samples were received on 6/4/2015 12:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 4.2º C and 5.6º C.

GC/MS Semi VOA
Method(s) 625: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-259926 and analytical batch 440-260509. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method(s) 1664A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-261004. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Client Sample ID: 500 mL P Metals

Lab Sample ID: 440-111986-1

Date Collected: 06/03/15 08:00
Matrix: Water
Date Received: 06/04/15 12:00

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.011**		0.010		mg/L		06/10/15 10:27	06/15/15 12:29	1
Cadmium	ND		0.0050		mg/L		06/10/15 10:27	06/15/15 12:29	1
Cobalt	ND		0.010		mg/L		06/10/15 10:27	06/15/15 12:29	1
Chromium	ND		0.0050		mg/L		06/10/15 10:27	06/15/15 12:29	1
Copper	ND		0.010		mg/L		06/10/15 10:27	06/15/15 12:29	1
Nickel	ND		0.010		mg/L		06/10/15 10:27	06/15/15 12:29	1
Lead	ND		0.0050		mg/L		06/10/15 10:27	06/15/15 12:29	1
Antimony	ND		0.010		mg/L		06/10/15 10:27	06/16/15 13:30	1
Tin	ND		0.10		mg/L		06/10/15 10:27	06/15/15 12:29	1
Titanium	ND		0.0050		mg/L		06/10/15 10:27	06/15/15 12:29	1
Vanadium	ND		0.010		mg/L		06/10/15 10:27	06/15/15 12:29	1
Zinc	**0.045**		0.020		mg/L		06/10/15 10:27	06/15/15 12:29	1
Silver	ND		0.010		mg/L		06/10/15 10:27	06/15/15 12:29	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00024**		0.00020		mg/L		06/18/15 13:27	06/18/15 17:52	1

Client Sample ID: Sample 1, 1L Amber(Black)

Lab Sample ID: 440-111986-2

Date Collected: 06/02/15 10:00
Matrix: Water
Date Received: 06/04/15 12:00

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		20		ug/L		06/07/15 13:29	06/10/15 20:36	1
Carbazole	ND		20		ug/L		06/07/15 13:29	06/10/15 20:36	1
Fluoranthene	ND		10		ug/L		06/07/15 13:29	06/10/15 20:36	1
para-Cresol	ND		10		ug/L		06/07/15 13:29	06/10/15 20:36	1
n-Decane	ND		5.1		ug/L		06/07/15 13:29	06/10/15 20:36	1
n-Octadecane	ND		5.1		ug/L		06/07/15 13:29	06/10/15 20:36	1
o-Cresol	ND		10		ug/L		06/07/15 13:29	06/10/15 20:36	1
2,4,6-Trichlorophenol	ND		20		ug/L		06/07/15 13:29	06/10/15 20:36	1
Total Cresols	ND		10		ug/L		06/07/15 13:29	06/10/15 20:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*72*		*50 - 120*	*06/07/15 13:29*	*06/10/15 20:36*	*1*
2-Fluorophenol	*56*		*30 - 120*	*06/07/15 13:29*	*06/10/15 20:36*	*1*
Nitrobenzene-d5	*62*		*45 - 120*	*06/07/15 13:29*	*06/10/15 20:36*	*1*
Phenol-d6	*60*		*35 - 120*	*06/07/15 13:29*	*06/10/15 20:36*	*1*
Terphenyl-d14	*97*		*10 - 150*	*06/07/15 13:29*	*06/10/15 20:36*	*1*
2,4,6-Tribromophenol	*82*		*40 - 120*	*06/07/15 13:29*	*06/10/15 20:36*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		5.0		mg/L		06/12/15 07:04	06/12/15 11:42	1

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Client Sample ID: Sample 2, 1L Amber(Blue)

Lab Sample ID: 440-111986-3

Date Collected: 06/02/15 16:00
Matrix: Water
Date Received: 06/04/15 12:00

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		20		ug/L		06/07/15 13:29	06/10/15 20:59	1
Carbazole	ND		20		ug/L		06/07/15 13:29	06/10/15 20:59	1
Fluoranthene	ND		10		ug/L		06/07/15 13:29	06/10/15 20:59	1
para-Cresol	ND		10		ug/L		06/07/15 13:29	06/10/15 20:59	1
n-Decane	ND		5.1		ug/L		06/07/15 13:29	06/10/15 20:59	1
n-Octadecane	ND		5.1		ug/L		06/07/15 13:29	06/10/15 20:59	1
o-Cresol	ND		10		ug/L		06/07/15 13:29	06/10/15 20:59	1
2,4,6-Trichlorophenol	ND		20		ug/L		06/07/15 13:29	06/10/15 20:59	1
Total Cresols	ND		10		ug/L		06/07/15 13:29	06/10/15 20:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*68*		*50 - 120*	*06/07/15 13:29*	*06/10/15 20:59*	*1*
2-Fluorophenol	*58*		*30 - 120*	*06/07/15 13:29*	*06/10/15 20:59*	*1*
Nitrobenzene-d5	*61*		*45 - 120*	*06/07/15 13:29*	*06/10/15 20:59*	*1*
Phenol-d6	*64*		*35 - 120*	*06/07/15 13:29*	*06/10/15 20:59*	*1*
Terphenyl-d14	*90*		*10 - 150*	*06/07/15 13:29*	*06/10/15 20:59*	*1*
2,4,6-Tribromophenol	*80*		*40 - 120*	*06/07/15 13:29*	*06/10/15 20:59*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		4.8		mg/L		06/12/15 07:04	06/12/15 11:42	1

Client Sample ID: Sample 3, 1L Amber(Pink)

Lab Sample ID: 440-111986-4

Date Collected: 06/02/15 22:00
Matrix: Water
Date Received: 06/04/15 12:00

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		20		ug/L		06/07/15 13:29	06/10/15 23:15	1
Carbazole	ND		20		ug/L		06/07/15 13:29	06/10/15 23:15	1
Fluoranthene	ND		9.8		ug/L		06/07/15 13:29	06/10/15 23:15	1
para-Cresol	ND		9.8		ug/L		06/07/15 13:29	06/10/15 23:15	1
n-Decane	ND		4.9		ug/L		06/07/15 13:29	06/10/15 23:15	1
n-Octadecane	ND		4.9		ug/L		06/07/15 13:29	06/10/15 23:15	1
o-Cresol	ND		9.8		ug/L		06/07/15 13:29	06/10/15 23:15	1
2,4,6-Trichlorophenol	ND		20		ug/L		06/07/15 13:29	06/10/15 23:15	1
Total Cresols	ND		9.8		ug/L		06/07/15 13:29	06/10/15 23:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*72*		*50 - 120*	*06/07/15 13:29*	*06/10/15 23:15*	*1*
2-Fluorophenol	*57*		*30 - 120*	*06/07/15 13:29*	*06/10/15 23:15*	*1*
Nitrobenzene-d5	*62*		*45 - 120*	*06/07/15 13:29*	*06/10/15 23:15*	*1*
Phenol-d6	*61*		*35 - 120*	*06/07/15 13:29*	*06/10/15 23:15*	*1*
Terphenyl-d14	*89*		*10 - 150*	*06/07/15 13:29*	*06/10/15 23:15*	*1*
2,4,6-Tribromophenol	*81*		*40 - 120*	*06/07/15 13:29*	*06/10/15 23:15*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		5.0		mg/L		06/12/15 07:04	06/12/15 11:42	1

US EPA ARCHIVE DOCUMENT

Client: Evoqua Water Technologies eProcurement
Project/Site: CWT June 2015

TestAmerica Job ID: 440-111986-1

Client Sample ID: Sample 4, 1L Amber(Green)
Date Collected: 06/03/15 04:00
Date Received: 06/04/15 12:00

Lab Sample ID: 440-111986-5
Matrix: Water

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		21		ug/L		06/07/15 13:29	06/10/15 23:38	1
Carbazole	ND		21		ug/L		06/07/15 13:29	06/10/15 23:38	1
Fluoranthene	ND		10		ug/L		06/07/15 13:29	06/10/15 23:38	1
para-Cresol	ND		10		ug/L		06/07/15 13:29	06/10/15 23:38	1
n-Decane	ND		5.2		ug/L		06/07/15 13:29	06/10/15 23:38	1
n-Octadecane	ND		5.2		ug/L		06/07/15 13:29	06/10/15 23:38	1
o-Cresol	ND		10		ug/L		06/07/15 13:29	06/10/15 23:38	1
2,4,6-Trichlorophenol	ND		21		ug/L		06/07/15 13:29	06/10/15 23:38	1
Total Cresols	ND		10		ug/L		06/07/15 13:29	06/10/15 23:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*50 - 120*	*06/07/15 13:29*	*06/10/15 23:38*	*1*
2-Fluorophenol	*39*		*30 - 120*	*06/07/15 13:29*	*06/10/15 23:38*	*1*
Nitrobenzene-d5	*47*		*45 - 120*	*06/07/15 13:29*	*06/10/15 23:38*	*1*
Phenol-d6	*41*		*35 - 120*	*06/07/15 13:29*	*06/10/15 23:38*	*1*
Terphenyl-d14	*73*		*10 - 150*	*06/07/15 13:29*	*06/10/15 23:38*	*1*
2,4,6-Tribromophenol	*64*		*40 - 120*	*06/07/15 13:29*	*06/10/15 23:38*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		5.0		mg/L		06/12/15 07:04	06/12/15 11:42	1

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Method Summary

Client: Evoqua Water Technologies eProcurement
Project/Site: CWT June 2015

TestAmerica Job ID: 440-111986-1

Method	Method Description	Protocol	Laboratory
625	Semivolatile Organic Compounds (GC/MS)	40CFR136A	TAL IRV
200.7 Rev 4.4	Metals (ICP)	EPA	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV
1664A	HEM and SGT-HEM	1664A	TAL IRV

Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

US EPA ARCHIVE DOCUMENT

Lab Chronicle

Client: Evoqua Water Technologies eProcurement
Project/Site: CWT June 2015

TestAmerica Job ID: 440-111986-1

Client Sample ID: 500 mL P Metals

Lab Sample ID: 440-111986-1
Matrix: Water
Date Collected: 06/03/15 08:00
Date Received: 06/04/15 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			25 mL	25 mL	260523	06/10/15 10:27	APS	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1	25 mL	25 mL	261456	06/15/15 12:29	TK	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	260523	06/10/15 10:27	APS	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1	25 mL	25 mL	261693	06/16/15 13:30	TK	TAL IRV
Total/NA	Prep	7470A			20 mL	20 mL	262226	06/18/15 13:27	DB	TAL IRV
Total/NA	Analysis	7470A		1	20 mL	20 mL	262310	06/18/15 17:52	DB	TAL IRV

Client Sample ID: Sample 1, 1L Amber(Black)

Lab Sample ID: 440-111986-2
Matrix: Water
Date Collected: 06/02/15 10:00
Date Received: 06/04/15 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			985 mL	2 mL	259926	06/07/15 13:29	AK	TAL IRV
Total/NA	Analysis	625		1	985 mL	2 mL	260509	06/10/15 20:36	AI	TAL IRV
Total/NA	Prep	1664A			1010 mL	1000 mL	261004	06/12/15 07:04	QCT	TAL IRV
Total/NA	Analysis	1664A		1	1010 mL	1000 mL	261102	06/12/15 11:42	QCT	TAL IRV

Client Sample ID: Sample 2, 1L Amber(Blue)

Lab Sample ID: 440-111986-3
Matrix: Water
Date Collected: 06/02/15 16:00
Date Received: 06/04/15 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			990 mL	2 mL	259926	06/07/15 13:29	AK	TAL IRV
Total/NA	Analysis	625		1	990 mL	2 mL	260509	06/10/15 20:59	AI	TAL IRV
Total/NA	Prep	1664A			1035 mL	1000 mL	261004	06/12/15 07:04	QCT	TAL IRV
Total/NA	Analysis	1664A		1	1035 mL	1000 mL	261102	06/12/15 11:42	QCT	TAL IRV

Client Sample ID: Sample 3, 1L Amber(Pink)

Lab Sample ID: 440-111986-4
Matrix: Water
Date Collected: 06/02/15 22:00
Date Received: 06/04/15 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			1025 mL	2 mL	259926	06/07/15 13:29	AK	TAL IRV
Total/NA	Analysis	625		1	1025 mL	2 mL	260509	06/10/15 23:15	AI	TAL IRV
Total/NA	Prep	1664A			1005 mL	1000 mL	261004	06/12/15 07:04	QCT	TAL IRV
Total/NA	Analysis	1664A		1	1005 mL	1000 mL	261102	06/12/15 11:42	QCT	TAL IRV

Client Sample ID: Sample 4, 1L Amber(Green)

Lab Sample ID: 440-111986-5
Matrix: Water
Date Collected: 06/03/15 04:00
Date Received: 06/04/15 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			960 mL	2 mL	259926	06/07/15 13:29	AK	TAL IRV

US EPA ARCHIVE DOCUMENT

Lab Chronicle

Client: Evoqua Water Technologies eProcurement
Project/Site: CWT June 2015

TestAmerica Job ID: 440-111986-1

Client Sample ID: Sample 4, 1L Amber(Green)

Date Collected: 06/03/15 04:00
Date Received: 06/04/15 12:00

Lab Sample ID: 440-111986-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	625		1	960 mL	2 mL	260509	06/10/15 23:38	AI	TAL IRV
Total/NA	Prep	1664A			1000 mL	1000 mL	261004	06/12/15 07:04	QCT	TAL IRV
Total/NA	Analysis	1664A		1	1000 mL	1000 mL	261102	06/12/15 11:42	QCT	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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Method: 625 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-259926/1-A
Matrix: Water
Analysis Batch: 260509

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 259926

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		20		ug/L		06/07/15 13:29	06/10/15 10:46	1
Carbazole	ND		20		ug/L		06/07/15 13:29	06/10/15 10:46	1
Fluoranthene	ND		10		ug/L		06/07/15 13:29	06/10/15 10:46	1
para-Cresol	ND		10		ug/L		06/07/15 13:29	06/10/15 10:46	1
n-Decane	ND		5.0		ug/L		06/07/15 13:29	06/10/15 10:46	1
n-Octadecane	ND		5.0		ug/L		06/07/15 13:29	06/10/15 10:46	1
o-Cresol	ND		10		ug/L		06/07/15 13:29	06/10/15 10:46	1
2,4,6-Trichlorophenol	ND		20		ug/L		06/07/15 13:29	06/10/15 10:46	1
Total Cresols	ND		10		ug/L		06/07/15 13:29	06/10/15 10:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*68*		*50 - 120*	*06/07/15 13:29*	*06/10/15 10:46*	*1*
2-Fluorophenol	*60*		*30 - 120*	*06/07/15 13:29*	*06/10/15 10:46*	*1*
Nitrobenzene-d5	*67*		*45 - 120*	*06/07/15 13:29*	*06/10/15 10:46*	*1*
Phenol-d6	*60*		*35 - 120*	*06/07/15 13:29*	*06/10/15 10:46*	*1*
Terphenyl-d14	*70*		*10 - 150*	*06/07/15 13:29*	*06/10/15 10:46*	*1*
2,4,6-Tribromophenol	*76*		*40 - 120*	*06/07/15 13:29*	*06/10/15 10:46*	*1*

Lab Sample ID: LCS 440-259926/2-A
Matrix: Water
Analysis Batch: 260509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259926

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Bis(2-ethylhexyl) phthalate			100	80.3		ug/L		80	10 - 150		
Carbazole			100	87.5		ug/L		87	58 - 109		
Fluoranthene			100	86.7		ug/L		87	26 - 137		
para-Cresol			100	69.4		ug/L		69	49 - 100		
o-Cresol			100	68.7		ug/L		69	47 - 97		
2,4,6-Trichlorophenol			100	77.1		ug/L		77	37 - 144		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*72*		*50 - 120*
2-Fluorophenol	*57*		*30 - 120*
Nitrobenzene-d5	*67*		*45 - 120*
Phenol-d6	*59*		*35 - 120*
Terphenyl-d14	*83*		*10 - 150*
2,4,6-Tribromophenol	*84*		*40 - 120*

Lab Sample ID: LCSD 440-259926/3-A
Matrix: Water
Analysis Batch: 260509

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 259926

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-ethylhexyl) phthalate			100	68.1		ug/L		68	10 - 150	17	35
Carbazole			100	71.9		ug/L		72	58 - 109	20	35
Fluoranthene			100	70.8		ug/L		71	26 - 137	20	35
para-Cresol			100	57.8		ug/L		58	49 - 100	18	35

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Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-259926/3-A
Matrix: Water
Analysis Batch: 260509

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 259926

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
o-Cresol			100	56.4		ug/L		56	47 - 97	20	35
2,4,6-Trichlorophenol			100	66.4		ug/L		66	37 - 144	15	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*62*		*50 - 120*
2-Fluorophenol	*46*		*30 - 120*
Nitrobenzene-d5	*55*		*45 - 120*
Phenol-d6	*49*		*35 - 120*
Terphenyl-d14	*70*		*10 - 150*
2,4,6-Tribromophenol	*71*		*40 - 120*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 440-260523/1-A
Matrix: Water
Analysis Batch: 261456

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 260523

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.010		mg/L		06/10/15 10:27	06/15/15 12:19	1
Cadmium	ND		0.0050		mg/L		06/10/15 10:27	06/15/15 12:19	1
Cobalt	ND		0.010		mg/L		06/10/15 10:27	06/15/15 12:19	1
Chromium	ND		0.0050		mg/L		06/10/15 10:27	06/15/15 12:19	1
Copper	ND		0.010		mg/L		06/10/15 10:27	06/15/15 12:19	1
Nickel	ND		0.010		mg/L		06/10/15 10:27	06/15/15 12:19	1
Lead	ND		0.0050		mg/L		06/10/15 10:27	06/15/15 12:19	1
Tin	ND		0.10		mg/L		06/10/15 10:27	06/15/15 12:19	1
Titanium	ND		0.0050		mg/L		06/10/15 10:27	06/15/15 12:19	1
Vanadium	ND		0.010		mg/L		06/10/15 10:27	06/15/15 12:19	1
Zinc	ND		0.020		mg/L		06/10/15 10:27	06/15/15 12:19	1
Silver	ND		0.010		mg/L		06/10/15 10:27	06/15/15 12:19	1

Lab Sample ID: MB 440-260523/1-A
Matrix: Water
Analysis Batch: 261693

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 260523

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		06/10/15 10:27	06/16/15 13:18	1

Lab Sample ID: LCS 440-260523/2-A
Matrix: Water
Analysis Batch: 261693

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 260523

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony			0.500	0.512		mg/L		102	85 - 115

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Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 440-111887-A-1-B MS
Matrix: Water
Analysis Batch: 261456

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 260523

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.11		0.500	0.610		mg/L		100	70 - 130
Cadmium	ND		0.500	0.479		mg/L		96	70 - 130
Cobalt	ND		0.500	0.496		mg/L		99	70 - 130
Chromium	0.32		0.500	0.812		mg/L		99	70 - 130
Copper	ND		0.500	0.497		mg/L		99	70 - 130
Nickel	ND		0.500	0.471		mg/L		94	70 - 130
Lead	ND		0.500	0.468		mg/L		94	70 - 130
Tin	ND		0.500	0.472		mg/L		94	70 - 130
Titanium	ND		0.500	0.509		mg/L		102	70 - 130
Vanadium	0.032		0.500	0.536		mg/L		101	70 - 130
Zinc	ND		0.500	0.494		mg/L		99	70 - 130
Silver	ND		0.250	0.246		mg/L		98	70 - 130

Lab Sample ID: 440-111887-A-1-B MS
Matrix: Water
Analysis Batch: 261693

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 260523

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND	L	0.500	0.487		mg/L		97	70 - 130

Lab Sample ID: 440-111887-A-1-C MSD
Matrix: Water
Analysis Batch: 261456

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 260523

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.11		0.500	0.598		mg/L		97	70 - 130	2	20
Cadmium	ND		0.500	0.472		mg/L		94	70 - 130	2	20
Cobalt	ND		0.500	0.487		mg/L		97	70 - 130	2	20
Chromium	0.32		0.500	0.794		mg/L		95	70 - 130	2	20
Copper	ND		0.500	0.487		mg/L		97	70 - 130	2	20
Nickel	ND		0.500	0.459		mg/L		92	70 - 130	2	20
Lead	ND		0.500	0.463		mg/L		93	70 - 130	1	20
Tin	ND		0.500	0.462		mg/L		92	70 - 130	2	20
Titanium	ND		0.500	0.501		mg/L		100	70 - 130	2	20
Vanadium	0.032		0.500	0.533		mg/L		100	70 - 130	1	20
Zinc	ND		0.500	0.479		mg/L		96	70 - 130	3	20
Silver	ND		0.250	0.245		mg/L		98	70 - 130	0	20

Lab Sample ID: 440-111887-A-1-C MSD
Matrix: Water
Analysis Batch: 261693

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 260523

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND	L	0.500	0.480		mg/L		96	70 - 130	1	20

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Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 440-262226/1-A
Matrix: Water
Analysis Batch: 262310

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 262226

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		06/18/15 13:27	06/18/15 17:47	1

Lab Sample ID: LCS 440-262226/2-A
Matrix: Water
Analysis Batch: 262310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00800	0.00851		mg/L		106	80 - 120

Lab Sample ID: 440-111986-1 MS
Matrix: Water
Analysis Batch: 262310

Client Sample ID: 500 mL P Metals
Prep Type: Total/NA
Prep Batch: 262226

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00024		0.00800	0.00815		mg/L		99	70 - 130

Lab Sample ID: 440-111986-1 MSD
Matrix: Water
Analysis Batch: 262310

Client Sample ID: 500 mL P Metals
Prep Type: Total/NA
Prep Batch: 262226

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00024		0.00800	0.00797		mg/L		97	70 - 130	2	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-261004/1-A
Matrix: Water
Analysis Batch: 261102

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 261004

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		5.0		mg/L		06/12/15 07:04	06/12/15 11:42	1

Lab Sample ID: LCS 440-261004/2-A
Matrix: Water
Analysis Batch: 261102

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 261004

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	20.0	17.8		mg/L		89	78 - 114

Lab Sample ID: LCSD 440-261004/3-A
Matrix: Water
Analysis Batch: 261102

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 261004

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	20.0	18.6		mg/L		93	78 - 114	5	11

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GC/MS Semi VOA

Prep Batch: 259926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-111986-2	Sample 1, 1L Amber(Black)	Total/NA	Water	625	
440-111986-3	Sample 2, 1L Amber(Blue)	Total/NA	Water	625	
440-111986-4	Sample 3, 1L Amber(Pink)	Total/NA	Water	625	
440-111986-5	Sample 4, 1L Amber(Green)	Total/NA	Water	625	
LCS 440-259926/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 440-259926/3-A	Lab Control Sample Dup	Total/NA	Water	625	
MB 440-259926/1-A	Method Blank	Total/NA	Water	625	

Analysis Batch: 260509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-111986-2	Sample 1, 1L Amber(Black)	Total/NA	Water	625	259926
440-111986-3	Sample 2, 1L Amber(Blue)	Total/NA	Water	625	259926
440-111986-4	Sample 3, 1L Amber(Pink)	Total/NA	Water	625	259926
440-111986-5	Sample 4, 1L Amber(Green)	Total/NA	Water	625	259926
LCS 440-259926/2-A	Lab Control Sample	Total/NA	Water	625	259926
LCSD 440-259926/3-A	Lab Control Sample Dup	Total/NA	Water	625	259926
MB 440-259926/1-A	Method Blank	Total/NA	Water	625	259926

Metals

Prep Batch: 260523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-111887-A-1-B MS	Matrix Spike	Total Recoverable	Water	200.2	
440-111887-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.2	
440-111986-1	500 mL P Metals	Total Recoverable	Water	200.2	
LCS 440-260523/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-260523/1-A	Method Blank	Total Recoverable	Water	200.2	

Analysis Batch: 261456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-111887-A-1-B MS	Matrix Spike	Total Recoverable	Water	200.7 Rev 4.4	260523
440-111887-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.7 Rev 4.4	260523
440-111986-1	500 mL P Metals	Total Recoverable	Water	200.7 Rev 4.4	260523
MB 440-260523/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	260523

Analysis Batch: 261693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-111887-A-1-B MS	Matrix Spike	Total Recoverable	Water	200.7 Rev 4.4	260523
440-111887-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.7 Rev 4.4	260523
440-111986-1	500 mL P Metals	Total Recoverable	Water	200.7 Rev 4.4	260523
LCS 440-260523/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	260523
MB 440-260523/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	260523

Prep Batch: 262226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-111986-1	500 mL P Metals	Total/NA	Water	7470A	
440-111986-1 MS	500 mL P Metals	Total/NA	Water	7470A	
440-111986-1 MSD	500 mL P Metals	Total/NA	Water	7470A	
LCS 440-262226/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 440-262226/1-A	Method Blank	Total/NA	Water	7470A	

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Metals (Continued)

Analysis Batch: 262310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-111986-1	500 mL P Metals	Total/NA	Water	7470A	262226
440-111986-1 MS	500 mL P Metals	Total/NA	Water	7470A	262226
440-111986-1 MSD	500 mL P Metals	Total/NA	Water	7470A	262226
LCS 440-262226/2-A	Lab Control Sample	Total/NA	Water	7470A	262226
MB 440-262226/1-A	Method Blank	Total/NA	Water	7470A	262226

General Chemistry

Prep Batch: 261004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-111986-2	Sample 1, 1L Amber(Black)	Total/NA	Water	1664A	
440-111986-3	Sample 2, 1L Amber(Blue)	Total/NA	Water	1664A	
440-111986-4	Sample 3, 1L Amber(Pink)	Total/NA	Water	1664A	
440-111986-5	Sample 4, 1L Amber(Green)	Total/NA	Water	1664A	
LCS 440-261004/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-261004/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-261004/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 261102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-111986-2	Sample 1, 1L Amber(Black)	Total/NA	Water	1664A	261004
440-111986-3	Sample 2, 1L Amber(Blue)	Total/NA	Water	1664A	261004
440-111986-4	Sample 3, 1L Amber(Pink)	Total/NA	Water	1664A	261004
440-111986-5	Sample 4, 1L Amber(Green)	Total/NA	Water	1664A	261004
LCS 440-261004/2-A	Lab Control Sample	Total/NA	Water	1664A	261004
LCSD 440-261004/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	261004
MB 440-261004/1-A	Method Blank	Total/NA	Water	1664A	261004

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

US EPA ARCHIVE DOCUMENT

Certification Summary

Client: Evoqua Water Technologies eProcurement
Project/Site: CWT June 2015

TestAmerica Job ID: 440-111986-1

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-15
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-16
Hawaii	State Program	9	N/A	01-29-16
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15 *
Northern Mariana Islands	State Program	9	MP0002	01-29-15 *
Oregon	NELAP	10	4005	01-29-16

* Certification renewal pending - certification considered valid.

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TestAmerica
ANALYTICAL TESTING CORPORATION

CHAIN OF CUSTODY RECORD

☐ Nashville, TN ☐ Dayton, OH ☐ Indianapolis, IN
☐ Orlando, FL ☐ Watertown, WI ■ Irvine,CA
☐ Cedar Falls, IA ☐ Pontiac, MI

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring? Yes No
Enforcement Action? Yes No

9#

Client Name/Account #: Evoqua Water Technologies
Address: POB 3308 / 2523 Mutahar St
City/State/Zip: Parker, AZ 85344
Project Manager:
Telephone Number: (928) 669-5758 Fax No.: (928) 669-5775
Sampler Name: (Print) Roy Provins
Sampler Signature:

Report To: James.R.Provins@evoqua.com
Invoice To:
TA Quote #:
Project ID: CWT June 2015
Project #:

440-111986 Chain of Custody

Sample ID / Description	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Ice	Preservative: H2SO4 (Red Label)	Preservative: HCl (Blue Label)	Preservative: NaOH (Orange Label)	Preservative: H2SO4 Plastic (Yellow Label)	Preservative: H2SO4 Glass(Yellow Label)	Preservative: None (White label)	Preservative: Other (Specify)	Matrix: Groundwater	Matrix: Water	Matrix: Drinking Water	Matrix: Sludge	Matrix: Soil	Matrix: Other (specify):	Analyze For: Ni, Zn, As, Ag 200.7	Analyze For: Ti, Pb, Cd, Cu, 200.7	Analyze For: Co, V, Sn, Sb, 200.7	Analyze For: Cr, 200.7	Analyze For: Hg - 7470A	Analyze For: 625-EFF	Analyze For: Oil & Grease 1664 HEM	RUSH TAT (Pre-Schedule)	Standard TAT	Fax Results	Send QC with report
500 ml P metals	6/3/2015	8:00	1		■											■					■	■	■	■	■					
Sample 1, 1L Amber(Black)	06/02/15	10:00	2	■					■							■										■		X		
Sample 1, 1L Amber(Black)	06/02/15	10:00	2	■									■			■									■			X		
Sample 2, 1L Amber(Blue)	06/02/15	16:00	2	■					■							■										■		X		
Sample 2, 1L Amber(Blue)	06/02/15	16:00	2	■									■			■									■			X		
Sample 3, 1L Amber(Pink)	06/02/15	22:00	2	■					■							■										■		X		
Sample 3, 1L Amber(Pink)	06/02/15	22:00	2	■									■			■									■			X		
Sample 4, 1L Amber(Green)	06/03/15	4:00	2	■					■							■										■		X		
Sample 4, 1L Amber(Green)	06/03/15	4:00	2	■									■			■									■			X		

Special Instructions:

Colors refer to tape on lid

Method of Shipment: UPS

Laboratory Comments:
Temperature Upon Receipt: 6.8/5.6 5.4/4.2
VOCs Free of Headspace? Y N
IR-71

Relinquished by:	Date	Time	Received by:	Date	Time
Provins	6/3/2015	12:00			
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time
			VnBaudt	6/4/15	12:00

UPS: 1Z A95 20E 13 9704 5444 9840 9853

6/18/2015

Login Sample Receipt Checklist

Client: Evoqua Water Technologies eProcurement

Job Number: 440-111986-1

Login Number: 111986
List Number: 1
Creator: Kim, Guerry

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Attachment 2

CERTIFICATION OF QUALIFIED PROFESSIONAL

40 CFR 403.12(b)(6)

US EPA ARCHIVE DOCUMENT

Certification of Qualified Professional

40 CFR 403.12(b)(6)

I have reviewed the Evoqua Water Technologies inc. LLC treatment process and the effluent analytical results from the wastewater treatment plant contained in this report. Based on this review, I certify, as a qualified professional, that the Evoqua facility is meeting the applicable Pretreatment Standards on a consistent basis.

I am also an authorized representative for Evoqua Water Technoloties., and I have reviewed this statement.



Monte McCue
Director of Plant Operations

Date: June 22, 2015

US EPA ARCHIVE DOCUMENT

Attachment 3

AUTHORIZATION OF SIGNATORY

40 CFR 403.12(l)5

USFilter
A Siemens Business

WESTATES
2523 MUTAHAR STREET (PHYSICAL)
PO BOX 3308(MAILING)
PARKER, AZ 85344

TELEPHONE 928-669-5758
FACSIMILE 928-669-5775
WEBSITE www.usfilter.com

June 1, 2005

Keith Silva
WTR-7
U.S. EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105

RE: Authorization of Signatory

Dear Mr. Silva:

Pursuant to the signatory requirements under *40 CFR 403.12 (l)*, US Filter Corporation grants authorization to Monte McCue, Director of Plant Operations and/or Willard Bolyard, Jr. Plant Manager to sign on behalf of Westates Carbon-Arizona, Inc. for the purposes of certifying industrial user reports.

The above persons have the overall responsibility for the operations of the facility and the overall responsibility for environmental matters for Westates Carbon-Arizona, Inc.

Yours Truly,

Chuck Gordon
Executive Vice President
Westates Carbon-Arizona Inc.

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Appendix M

Last Annual Emissions Results (2015) for Fugitive Emissions Measured Using a Foxboro FID

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Evoqua Water Technologies - Parker, AZ Facility

Annual Method 21 Testing

40 CFR 61.343, 345, 349

Instrument Used: Foxboro TVA 1000 FID **Tested By: Monte McCue**

No.	Location ID	Date Inspected	Measured Concentration (PPMV)	Background Concentration (PPMV)	Leak Detected? (Y/N) *	Description Of Problem	Corrective Action Taken	Date Of Successful Repair **
1	B-1 Baghouse Doors	8/5/2015	<5	<5	N			NA
2	B-1 Dust Collector Blower Outlet Flanges	8/5/2015	<5	<5	N			NA
3	H-1 Hopper Lid	8/5/2015	12	<5	N	Dumping Spent Carbon Lid Open		NA
4	H-1 Hopper Eductor, Piping and Victaulics	8/5/2015	30	30	N			NA
5	H-1 Hopper Flanges, Piping and Victaulics	8/5/2015	<5	<5	N			NA
6	H-1 Hopper Vault Door	8/5/2015	<5	<5	N			NA
7	H-2 Hopper Lid	8/5/2015	<5	<5	N			NA
8	H-2 Hopper Eductor Flanges and Victaulics	8/5/2015	<5	<5	N			NA
9	H-2 Hopper Piping and Victaulics	8/5/2015	<5	<5	N			NA
10	H-2 Hopper Vent Piping	8/5/2015	<5	<5	N			NA
11	RF-2 Hearth 1 Door West	8/5/2015	<5	<5	N			NA
12	RF-2 Seal Welded Flat - between 1 and 2	8/5/2015	<5	<5	N			NA
13	RF-2 Hearth 2 Door East	8/5/2015	**<5**	<5	N			NA
14	RF-2 Seal Welded Flat - between 2 and 3	8/5/2015	<5	<5	N			NA
15	RF-2 Hearth 3 Door East	8/5/2015	**<5**	<5	N			NA

*A leak is detected if the container is not sealed closed, or if the instrument reading exceeds 500 ppmv over the background concentration. **Repair must be completed within 15 days.

US EPA ARCHIVE DOCUMENT

Evoqua Water Technologies - Parker, AZ Facility

Annual Method 21 Testing

40 CFR 61.343, 345, 349

Instrument Used: Foxboro TVA 1000 FID **Tested By: Monte McCue**

No.	Location ID	Date Inspected	Measured Concentration (PPMV)	Background Concentration (PPMV)	Leak Detected? (Y/N) *	Description Of Problem	Corrective Action Taken	Date Of Successful Repair **
16	RF-2 Seal Welded Flat - between 3 and 4	8/5/2015	**<5**	<5	N			NA
17	RF-2 Hearth 4 Door East	8/5/2015	<5	<5	N			NA
18	RF-2 Seal Welded Flat - between 4 and 5	8/5/2015	<5	<5	N			NA
19	RF-2 Hearth 5 Door East	8/5/2015	<5	<5	N			NA
20	RF-2 Welded Seam on Furnace Bottom	8/5/2015	<5	<5	N			NA
21	RF-2 Top Sand Seal	8/5/2015	<5	<5	N			NA
22	RF-2 Bottom Sand Seal	8/5/2015	<5	<5	N			NA
23	RF-2 Carbon Outlet Piping and Flanges	8/5/2015	<5	<5	N			NA
24	T-1 Ball Valves	8/5/2015	<5	<5	N	Not in Use		NA
25	T-1 Couplings	8/5/2015	<5	<5	N	Not in Use		NA
26	T-1 Eductor & Fittings	8/5/2015	<5	<5	N	Not in Use		NA
27	T-1 Fill Slurry Lines & Vics From H-1, H-2	8/5/2015	<5	<5	N	Not in Use		NA
28	T-1 Fittings & Valves	8/5/2015	<5	<5	N	Not in Use		NA
29	T-1 (SEE ATTACHMENT No. 1)	8/5/2015			N	Not in Use		NA
30	T-1 Pressure Relief Valve	8/5/2015	<5	<5	N	Not in Use		NA

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US EPA ARCHIVE DOCUMENT

Evoqua Water Technologies - Parker, AZ Facility

Annual Method 21 Testing

40 CFR 61.343, 345, 349

Instrument Used: Foxboro TVA 1000 FID **Tested By: Monte McCue**

No.	Location ID	Date Inspected	Measured Concentration (PPMV)	Background Concentration (PPMV)	Leak Detected? (Y/N) *	Description Of Problem	Corrective Action Taken	Date Of Successful Repair **
31	T-1 Slurry Line	8/5/2015	<5	<5	N	Not in Use		NA
32	T-1 Tank Flanges	8/5/2015	<5	<5	N	Not in Use		NA
33	T-1 Vent Pipe To WS-1	8/5/2015	<5	<5	N	Not in Use		NA
34	T-2 Ball Valves	8/5/2015	<5	<5	N	Not in Use		NA
35	T-2 Couplings	8/5/2015	<5	<5	N	Not in Use		NA
36	T-2 Eductor & Fittings	8/5/2015	<5	<5	N	Not in Use		NA
37	T-2 Fill Slurry Lines & Vics From H-1, H-2	8/5/2015	<5	<5	N	Not in Use		NA
38	T-2 Fittings & Valves	8/5/2015	<5	<5	N	Not in Use		NA
39	T-2 Tank (SEE ATTACHMENT No. 1)	8/5/2015			N	Not in Use		NA
40	T-2 Pressure Relief Valve	8/5/2015	<5	<5	N	Not in Use		NA
41	T-2 Slurry Line	8/5/2015	<5	<5	N	Not in Use		NA
42	T-2 Tank Flanges	8/5/2015	<5	<5	N	Not in Use		NA
43	T-2 Vent Pipe To WS-1	8/5/2015	<5	<5	N	Not in Use		NA
44	T-5 Ball Valves	8/5/2015	<5	<5	N			NA
45	T-5 Couplings	8/5/2015	<5	<5	N			NA

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US EPA ARCHIVE DOCUMENT

Evoqua Water Technologies - Parker, AZ Facility

Annual Method 21 Testing

40 CFR 61.343, 345, 349

Instrument Used: Foxboro TVA 1000 FID **Tested By: Monte McCue**

No.	Location ID	Date Inspected	Measured Concentration (PPMV)	Background Concentration (PPMV)	Leak Detected? (Y/N) *	Description Of Problem	Corrective Action Taken	Date Of Successful Repair **
46	T-5 Eductor & Fittings	8/5/2015	<5	<5	N			NA
47	T-5 Fill Slurry Lines & Vics From H-1, H-2	8/5/2015	<5	<5	N			NA
48	T-5 Fittings & Valves	8/5/2015	<5	<5	N			NA
49	T-5 (SEE ATTACHMENT No. 2)	8/5/2015			N			NA
50	T-5 Pressure Relief Valve	8/5/2015	<5	<5	N			NA
51	T-5 Slurry Line	8/5/2015	<5	<5	N			NA
52	T-5 Tank Flanges	8/5/2015	<5	<5	N			NA
53	T-5 Vent Pipe To WS-1	8/5/2015	<5	<5	N			NA
54	T-6 Ball Valves	8/5/2015	<5	<5	N	Not in Use		NA
55	T-6 Couplings	8/5/2015	<5	<5	N	Not in Use		NA
56	T-6 Eductor & Fittings	8/5/2015	<5	<5	N	Not in Use		NA
57	T-6 Fill Slurry Lines & Vics From H-1, H-2	8/5/2015	<5	<5	N	Not in Use		NA
58	T-6 Fittings & Valves	8/5/2015	<5	<5	N	Not in Use		NA
59	T-6 (SEE ATTACHMENT No. 2)	8/5/2015			N	Not in Use		NA
60	T-6 Pressure Relief Valve	8/5/2015	<5	<5	N	Not in Use		NA

*A leak is detected if the container is not sealed closed, or if the instrument reading exceeds 500 ppmv over the background concentration. **Repair must be completed within 15 days.

US EPA ARCHIVE DOCUMENT

Evoqua Water Technologies - Parker, AZ Facility

Annual Method 21 Testing

40 CFR 61.343, 345, 349

Instrument Used: Foxboro TVA 1000 FID **Tested By: Monte McCue**

No.	Location ID	Date Inspected	Measured Concentration (PPMV)	Background Concentration (PPMV)	Leak Detected? (Y/N) *	Description Of Problem	Corrective Action Taken	Date Of Successful Repair **
61	T-6 Slurry Line	8/5/2015	<5	<5	N	Not in Use		NA
62	T-6 Tank Flanges	8/5/2015	<5	<5	N	Not in Use		NA
63	T-6 Vent Pipe To WS-1	8/5/2015	<5	<5	N	Not in Use		NA
64	T-9 (SEE ATTACHMENT No. 3)	8/5/2015			N		Note: There was no reading <500 ppm but the lid was re-siliconed and rebolt to insure a good seal	NA
65	T-9 Level Transmitter	8/5/2015	<5	<5	N			NA
66	T-9 Main Bottom Manway Door	8/5/2015	<5	<5	N			NA
67	T-9 Return Line and Fittings From T Tanks	8/5/2015	<5	<5	N			NA
68	T-9 Return Line and Fittings From T-18	8/5/2015	<5	<5	N			NA
69	T-9 Sump Pump Fittings	8/5/2015	<5	<5	N			NA
70	T-9 Vent Line and Fittings To WS-1	8/5/2015	<5	<5	N			NA
71	T-9/P-4 Pump - Inlet Pipe and Fittings	8/5/2015	<5	<5	N			NA
72	T-9/P-5 Pump - Inlet Pipe and Fittings	8/5/2015	<5	<5	N			NA
73	T-9/P-4 Pump - Outlet Pipe and Fittings	8/5/2015	<5	<5	N			NA
74	T-9/P-5 Pump - Outlet Pipe and Fittings	8/5/2015	<5	<5	N			NA
75	H-18 Feed Hose & Couplings	8/5/2015	<5	<5	N			NA

*A leak is detected if the container is not sealed closed, or if the instrument reading exceeds 500 ppmv over the background concentration. **Repair must be completed within 15 days.

US EPA ARCHIVE DOCUMENT

Evoqua Water Technologies - Parker, AZ Facility

Annual Method 21 Testing

40 CFR 61.343, 345, 349

Instrument Used: Foxboro TVA 1000 FID **Tested By: Monte McCue**

No.	Location ID	Date Inspected	Measured Concentration (PPMV)	Background Concentration (PPMV)	Leak Detected? (Y/N) *	Description Of Problem	Corrective Action Taken	Date Of Successful Repair **
76	H-18 Feed Valve & Piping	8/5/2015	<5	<5	N			NA
77	H-18 Level Indicators	8/5/2015	<5	<5	N			NA
78	H-18 Lids (SEE ATTACHMENT No. 4)	8/5/2015			N			NA
79	H-18 Return Line, Couplings and Vics	8/5/2015	<5	<5	N			NA
80	H-18 Piping and Couplings From T-Tanks	8/5/2015	<5	<5	N			NA
81	WS-1 Hatches & Sample Port	8/5/2015	<5	<5	N			NA
82	WS-1 Inlet	8/5/2015	8120	NA	N			NA
83	WS-1 Outlet	8/5/2015	6	<5	N			NA
84	WS-2 Hatches & Sample Port	8/5/2015	<5	<5	N			NA
85	WS-2 Inlet	8/5/2015	<5	<5	N			NA
86	WS-2 Outlet	8/5/2015	<5	<5	N			NA
87	WS-3 Hatches & Sample Port	8/5/2015	<5	<5	N			NA
88	WS-3 Inlet	8/5/2015	<5	<5	N			NA
89	WS-3 Outlet	8/5/2015	<5	<5	N			NA
90	Dewater Screw (SEE ATTACHMENT No. 4)	8/5/2015			N			NA

*A leak is detected if the container is not sealed closed, or if the instrument reading exceeds 500 ppmv over the background concentration. **Repair must be completed within 15 days.

US EPA ARCHIVE DOCUMENT

Evoqua Water Technologies - Parker, AZ Facility

Annual Method 21 Testing

40 CFR 61.343, 345, 349

Instrument Used: Foxboro TVA 1000 FID **Tested By: Monte McCue**

No.	Location ID	Date Inspected	Measured Concentration (PPMV)	Background Concentration (PPMV)	Leak Detected? (Y/N) *	Description Of Problem	Corrective Action Taken	Date Of Successful Repair **
91	Weigh Belt Feeder (SEE ATTACHMENT No. 4)	8/5/2015			N			NA
92	Rotary Valve (SEE ATTACHMENT No. 4)	8/5/2015			N			NA
93								
94								
95								
96								
97								
98								
99								
100								

*A leak is detected if the container is not sealed closed, or if the instrument reading exceeds 500 ppmv over the background concentration. **Repair must be completed within 15 days.

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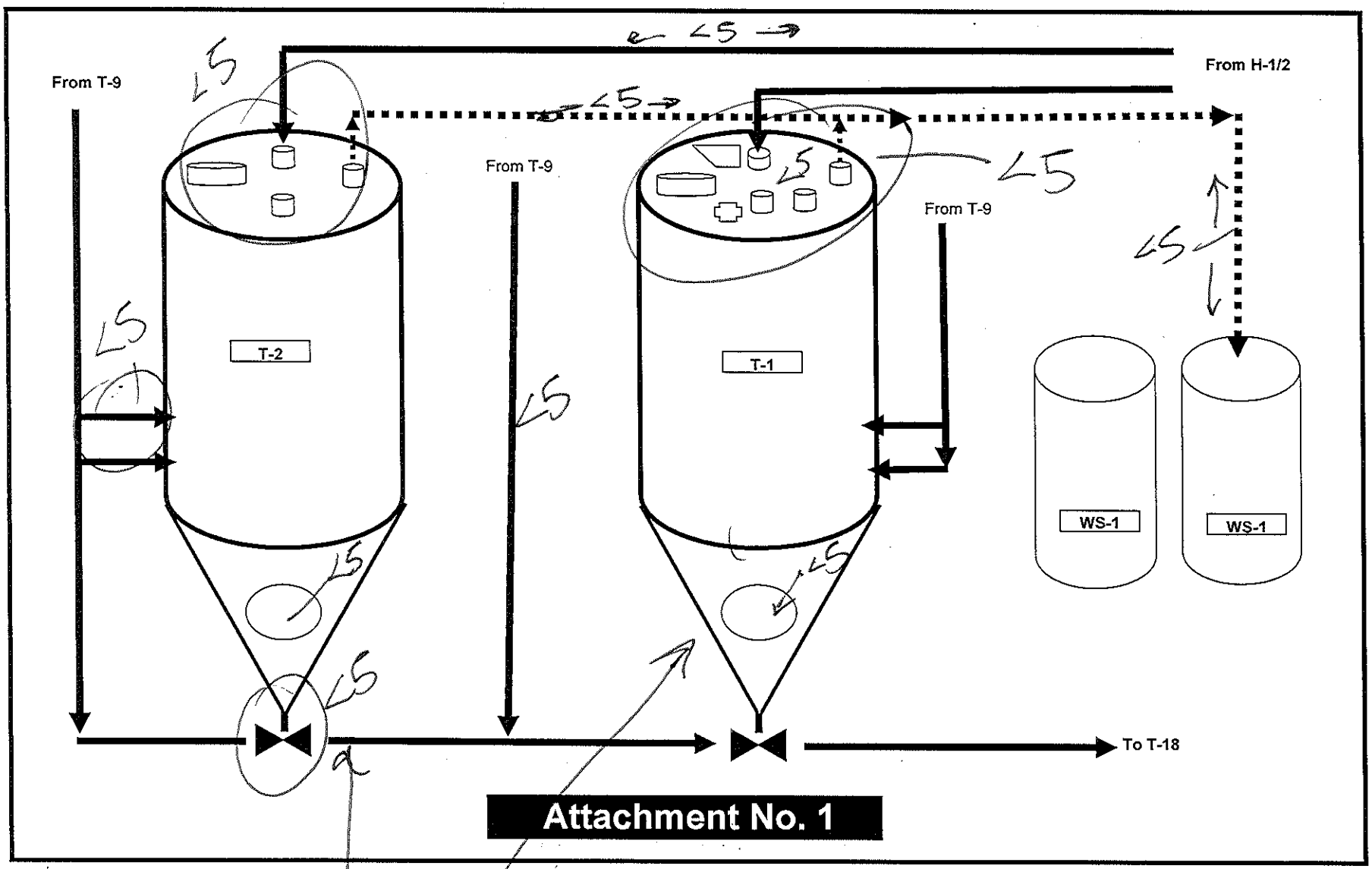
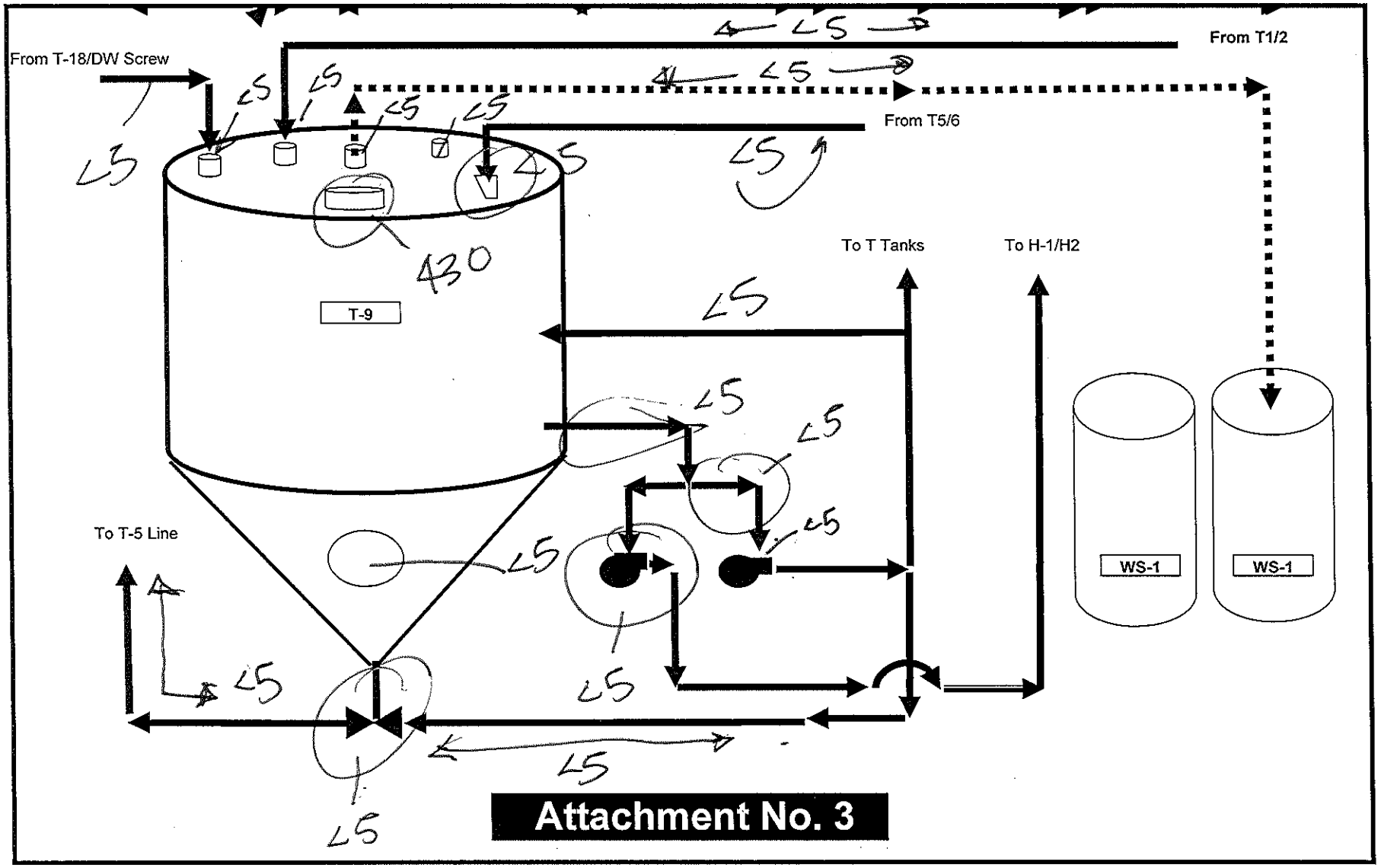


NOT IN USE

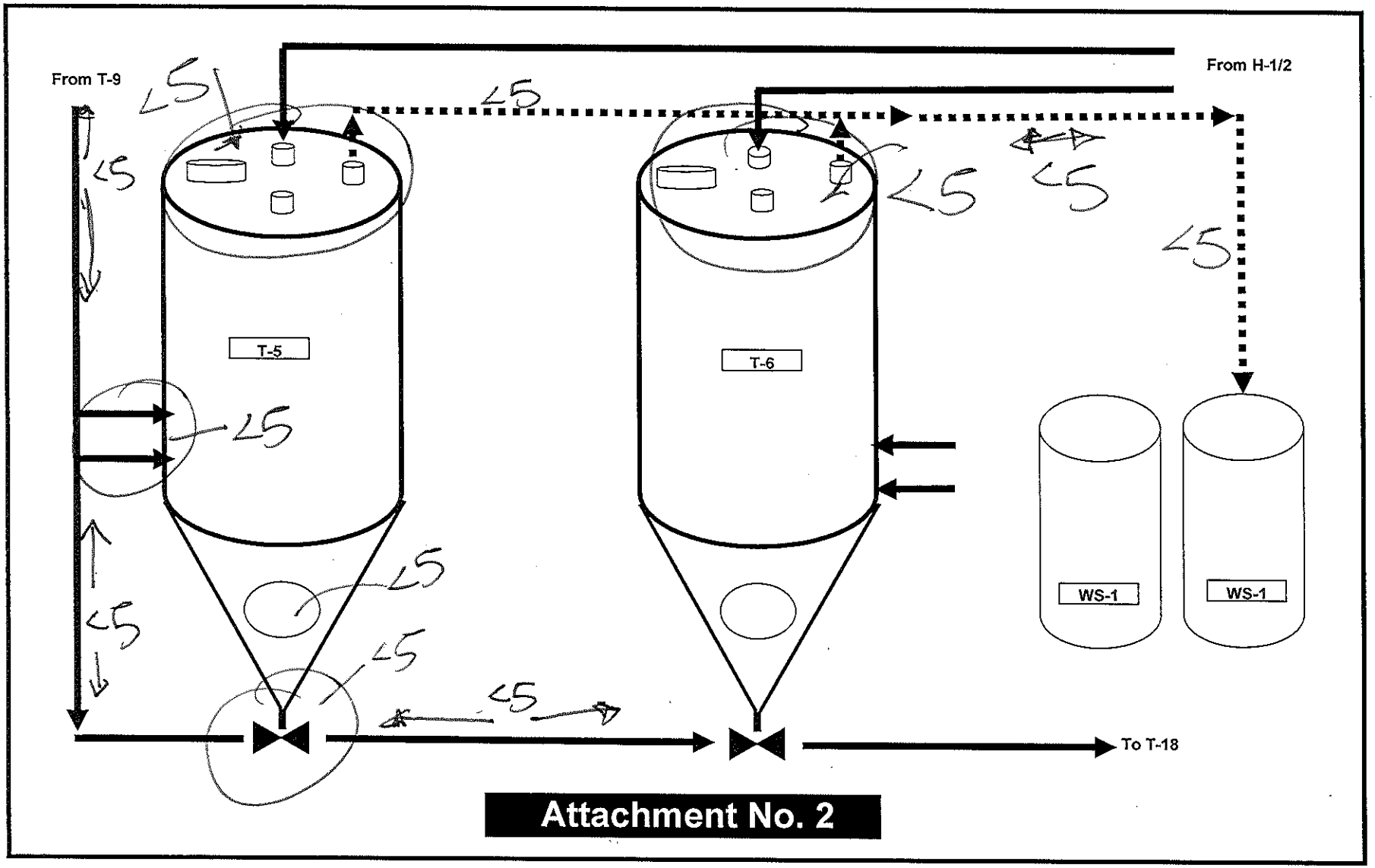
8/5/15

US EPA ARCHIVE DOCUMENT



8/5/13

US EPA ARCHIVE DOCUMENT



Attachment No. 2

8/5/15

T-6 NOT IN USE

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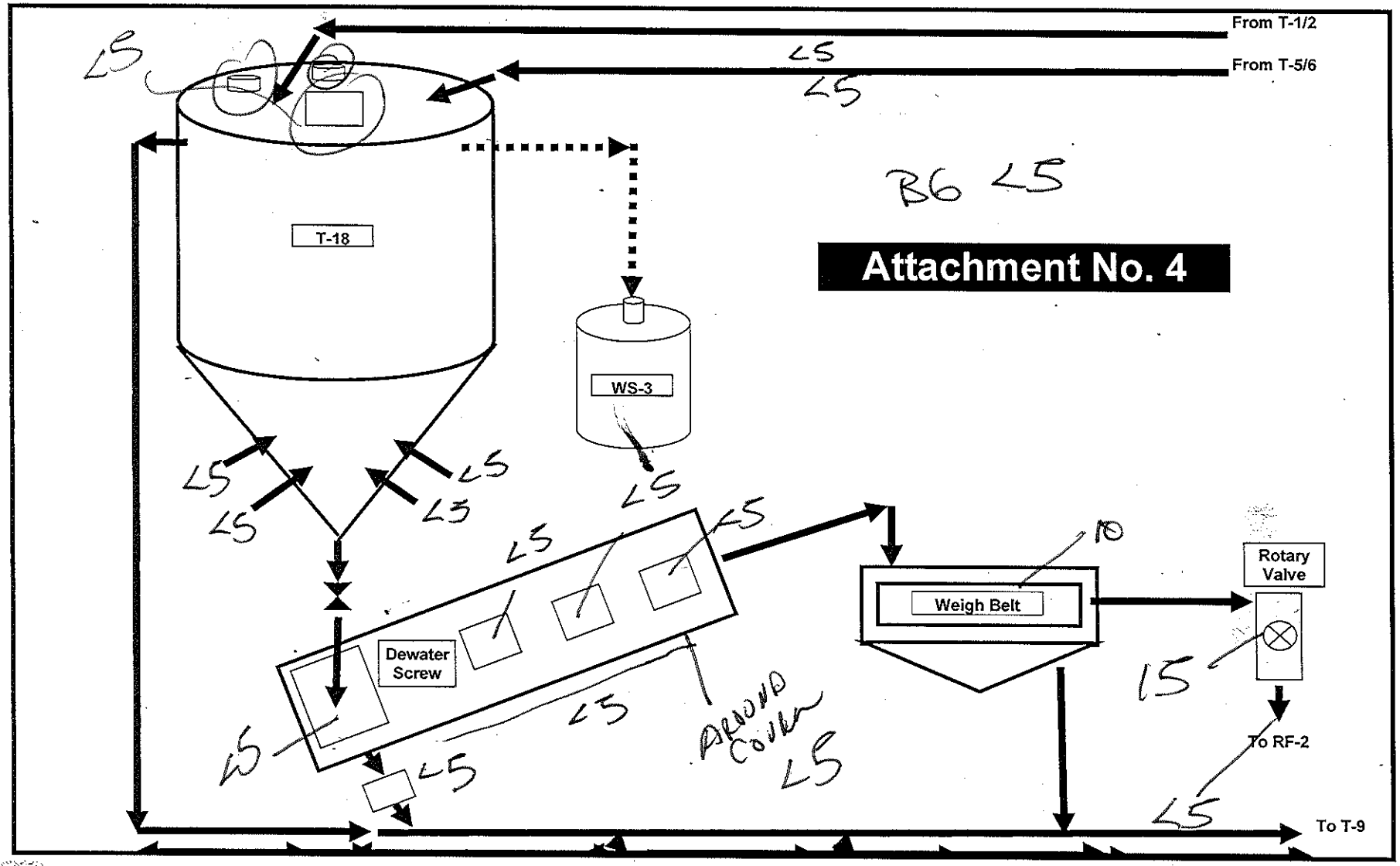

8/5/15

US EPA ARCHIVE DOCUMENT

Foxboro TVA1000A Calibration Record
Calibration Documentation
Serial Number: 11575766

Calibrated By: Monte McCue Date: 5-Aug-2015

Test No.	Time * Sec.	H/L	Response ppm	Gas Value ppm	Difference ppm
	X	X	0.90	0.5	X
1	5.65	H	9,900	10,000	-100
2	5.52	H	10,000	10,000	0
3	5.47	H	9,900	10,000	-100

* Denotes seconds to reach 90% of the gas value

Methane Values: HIGH 10,000

LOW 0.0

CALCULATIONS: H AVG. = 5.55 seconds ←

	High
ABSOLUTE MEAN DIFFERENCE	66.67
CALIBRATION ERROR (CE)	0.67% ←

Calibration Precision Requirements (8.1.2)

1. Calibration must be less than or equal 10% of the gas value
2. Response time must be less than or equal to 30 seconds to reach 90% of gas value
3. The calibration test must be completed prior to placing the analyzer into service and at subsequent 3-month intervals or at next use, whichever is later.

Appendix N

Appendix I of the Permit Application Reference 5

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APPENDIX I

RCRA PART A

PERMIT APPLICATION

FOR

SIEMENS INDUSTRY, INC.

PARKER REACTIVATION FACILITY

PARKER, ARIZONA

Revision 1
April 2012

US EPA ARCHIVE DOCUMENT

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1 RCRA PART A PERMIT APPLICATION 1996

2 RCRA PART A PERMIT APPLICATION - Revised Part A Forms (Consistent with Part B Application – For Information Purposes Only)

ATTACHMENT A – Item 9 – Legal Owner Information

ATTACHMENT B – Item 11 – Topographic Map

ATTACHMENT C – Item 12 – Facility Drawing

ATTACHMENT D – Item 13 – Photographs

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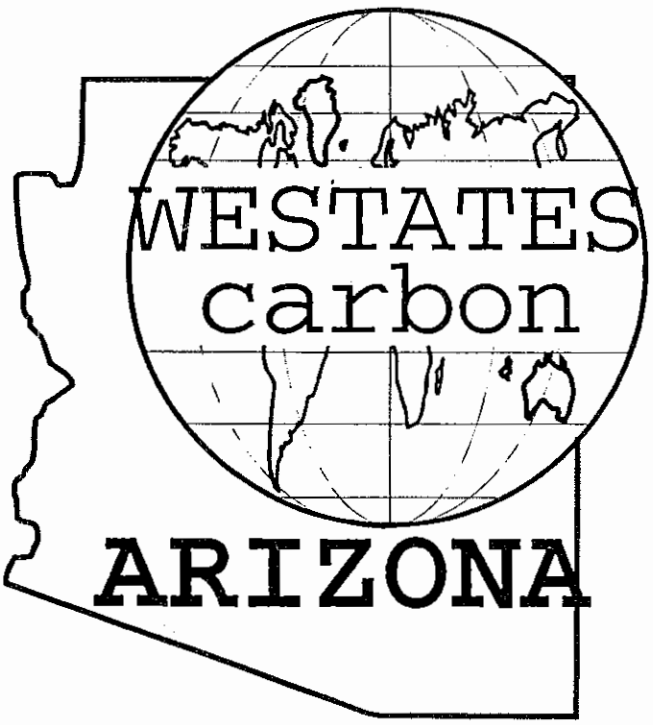
US EPA ARCHIVE DOCUMENT

REVISED RCRA PART A PERMIT APPLICATION



PARKER, ARIZONÁ

OCTOBER 1996

US EPA ARCHIVE DOCUMENT

REVISED RCRA

PART A

PERMIT APPLICATION

FOR

WESTATES CARBON - ARIZONA, INC.

PARKER REACTIVATION FACILITY

PARKER, ARIZONA

TABLE OF CONTENTS

TAB	DESCRIPTION
1	INTRODUCTION
2	REVISED RCRA PART A PERMIT APPLICATION FORM
3	INDEX OF ATTACHMENTS
4	ATTACHMENT A: Item VIII -- Facility Owner
5	ATTACHMENT B: Item XV -- Map
6	ATTACHMENT C: Item XVI -- Facility Drawing
7	ATTACHMENT D: Item XVII -- Photographs

US EPA ARCHIVE DOCUMENT

1.0 INTRODUCTION

WCAI is submitting a revised Part A permit application to reflect current facility operations.

Revisions include the following.

1 .Revision of the process flow diagram (Drawing No. 11135-002) to reflect recent facility modifications.

a. Addition of existing overflow lines, from spent carbon storage tanks (T-1, T-2, T-5, and T-6) to Recycle Water Tank (T-12), to the process flow diagram (Drawing No. 11135-002). These overflow lines were installed during the initial construction of the facility, but were inadvertently omitted from the process flow diagram.

b. Proposed addition of a water treatment system for recycle water as part of the facility's exempt wastewater treatment system. This system constitutes a wastwater treatment unit that is exempt from the requirements of Parts 264 and 265 in accordance with 40 CFR Part 264, §264.1(g)(6) and 40 CFR Part 265, §265.1(c)(10).

c. Proposed addition of a third spent carbon feed hopper.

2. The reference to the process flow diagram number on page 3 of 7 (Section XI) of the Part A application form and the Index Attachments found at Tab 5 have been corrected to read 11135-002.

3. Revision of the general facility layout to indicate the change in designation of some of the equipment. While the function of the equipment has not changed, the new designations better describe their functions. The new designations are listed in Table 1.

The redesignation of the Rainwater Collection Tank reflects the fact that rainwater collected in the tank is used as recycle water.

4. Submittal of a current photograph of Reactivation Unit No. 1 (RF-1), identified as Process Code T04 on page 4 of 7 (Section XII) of the Part A application form. The photograph is included in Attachment D (Tab 7).

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TABLE 1	
Old Designation	Current Designation
Carbon Regeneration Unit No. 1 (CRU-1)	Carbon Reactivation Unit No. 1 (RF-1)
Carbon Regeneration Unit No. 1 (CRU-2)	Carbon Reactivation Unit No. 2 (RF-2)
Water Storage Tank (T-9)	Recycle Water Storage Tank (T-9)
Rainwater Collection Tank (T-12)	Recycle Water Storage Tank (T-12)
Industrial Sewer Surge Tank (T-11)	Equalization Tank (T-11)
Process Feed Tank (T-1)	Spent Carbon Storage Tank (T-1)
Process Feed Tank (T-2)	Spent Carbon Storage Tank (T-2)
Process Feed Tank (T-5)	Spent Carbon Storage Tank (T-5)
Process Feed Tank (T-6)	Spent Carbon Storage Tank (T-6)
Process Feed Tank (T-8)	Reactivation Unit No. 1 Feed Tank (T-8)

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Form Approved. OMB No. 2050-0034 Expires 12-31-91

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GSA No. 0246-EPA-OT

For EPA Regional Use Only

EPA

United States Environmental Protection Agency
Washington, DC 20460

Hazardous Waste Permit Application Part A

(Read the Instructions before starting)

For State Use Only

Date Received
Month Day Year

I. ID Number(s)

A. EPA ID Number: AZD982441263

B. Secondary ID Number *(if applicable)*:

II. Name of Facility

WESTATES CARBON-ARIZONA INC.

III. Facility Location *(Physical address not P.O. Box or Route Number)*

A. Street: 2523 MUTAHAR STREET

Street *(continued)*:

City or Town: PARKER
State: AZ
ZIP Code: 85344-4005

County Code *(if known)*:
County Name: LA PAZ

B. Land Type *(enter code)*: I

C. Geographic Location
LATITUDE (degrees, minutes, & seconds): 34 07 50 N
LONGITUDE (degrees, minutes, & seconds): 114 16 22 W

D. Facility Existence Date
Month Day Year: 08 05 91

IV. Facility Mailing Address

Street or P. O. Box: PO BOX E

City or Town: PARKER
State: AZ
ZIP Code: 85344-4005

V. Facility Contact *(Person to be contacted regarding waste activities at facility)*

Name *(last)*: McCUE
(first): MONTE

Job Title: PLANT MANAGER
Phone Number *(area code and number)*: 602-669-5758

V. Facility Contact Address *(See Instructions)*

Contract Address
Location:
Mailing: X

B. Street or P. O. Box:

City or Town:
State:
ZIP Code:

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Form Approved. OMB No. 2050-0034 Expires 12-31-91

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

GSA No. 0246-EPA-OT

EPA I.D. Number *(enter from page 1)*: AZD982441263

Secondary ID Number *(enter from page 1)*:

VII. Operator Information *(see Instructions)*

Name of Operator: WESTATES CARBON-ARIZONA INC.

Street or P.O. Box: 2523 MUTAHAR STREET

City or Town: PARKER

State: AZ

Zip Code: 85344-4005

Phone Number *(area code and number)*: 602-669-5758

B. Operator Type: P

C. Change of Operator Indicator: Yes [ ] No [X]

Date Changed: Month / Day / Year

VIII. Facility Owner *(see Instructions)*

A. Name of Facility's Legal Owner: SEE ATTACHMENT A

Street or P.O. Box:

City or Town:

State:

Zip Code: -

Phone Number *(area code and number)*:

B. Owner Type:

C. Change of Owner Indicator: Yes [ ] No [ ]

Date Changed: Month / Day / Year

IX. SIC Codes *(4-digit, in order of significance)*

Primary		Secondary	
4953	*(description)* REFUSE SYSTEMS	9999	*(description)* OTHERWISE UNCLASSIFIABLE ESTABLISHMENTS
	(description)		*(description)*

X. Other Environmental Permits *(see Instructions)*

A. Permit Type *(enter code)*	B. Permit Number	C. Description
E	10019-3	Municipal Indust. Sewer Dischg. Permit
P	EXEMPT	PSD Permit (Minor Source)
E	B112-2-CR-3.07	CRIT BUSINESS LEASE

EPA I.D. Number *(enter from page 1)*: A Z D 9 8 2 4 4 1 2 6 3

Secondary ID Number *(enter from page 1)*:

XI. Nature of Business *(provide a brief description)*

Westates Carbon-Arizona, Inc. receives spent (used) activated carbon from its customers. These spent carbons arrive at the Parker facility in a variety of DOT approved containers; including: barrels, drums, portable tanks, bulk-bags, and bulk truck units. Some, but not all, spent carbons are received as manifested hazardous waste materials.

Received spent carbons are thermally reactivated in one of two furnaces. Reactivated carbons are certified non-hazardous and then shipped for recycling and/or reuse. This reactivation process is sketched in a Schematic Block Process Flow Diagram attached as Drawing No. 11135-002.

Incidental to the reactivation process is the management of container storage (area S01); spent carbon storage tanks (area S02); reactivation and reactivation off-gas treatment (area T04); and the non-hazardous slurry transfer water (recycle water) system, wastewater treatment system, rainwater collection system, and reactivated carbon product storage and shipping.

XII. Process - Codes and Design Capacities

A. PROCESS CODE - *Enter the code from the list of process codes below that best describes each process to be used at the facility. Twelve lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided in Item XIII.*

B. PROCESS DESIGN CAPACITY - *For each code entered in column A, enter the capacity of the process.*

1. AMOUNT - *Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process unit.*
2. UNIT OF MEASURE - *For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.*

C. PROCESS TOTAL NUMBER OF UNITS - *Enter the total number of units used with the corresponding process code.*

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	DISPOSAL:	
D79	INJECTION WELL	GALLONS; LITERS; GALLONS PER DAY; OR LITERS PER DAY
D80	LANDFILL	ACRE-FEET OR HECTARE-METER
D81	LAND APPLICATION	ACRES OR HECTARES
D82	OCEAN DISPOSAL	GALLONS PER DAY OR LITERS PER DAY
D83	SURFACE IMPOUNDMENT	GALLONS OR LITERS
	STORAGE:	
S01	CONTAINER (barrel, drum, etc.)	GALLONS OR LITERS
S02	TANK	GALLONS OR LITERS
S03	WASTE PILE	CUBIC YARDS OR CUBIC METERS
S04	SURFACE IMPOUNDMENT	GALLONS OR LITERS
	TREATMENT:	
T01	TANK	GALLONS PER DAY OR LITERS PER DAY
T02	SURFACE IMPOUNDMENT	GALLONS PER DAY OR LITERS PER DAY
T03	INCINERATOR	SHORT TONS PER HOUR; METRIC TONS PER HOUR; GALLONS PER HOUR; LITERS PER HOUR; OR BTUS PER HOUR
T04	OTHER TREATMENT (Use for physical, chemical, thermal or biological treatment processess not occurring in tanks, surface impoindment or incinerators. Describe the processes in the space provided in Item XIII.)	GALLONS PER DAY; LITERS PER DAY; POUNDS PER HOUR; SHORT TONS PER HOUR; KILOGRAMS PER HOUR; METRIC TONS PER DAY; METRIC TONS PER HOUR; OR SHORT TONS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
GALLONS PER HOUR	E
GALLONS PER DAY	U
LITERS	L
LITERS PER HOUR	H
LITERS PER DAY	V
SHORT TONS PER HOUR	D
METRIC TONS PER HOUR	W
SHORT TONS PER DAY	N
METRIC TONS PER DAY	S
POUNDS PER HOUR	J
KILOGRAMS PER HOUR	R
CUBIC YARDS	Y
CUBIC METERS	C
ACRES	B
ACRE-FEET	A
HECTARES	Q
HECTARE-METER	F
BTUS PER HOUR	K

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EPA I.D. Number ***(enter from page 1)*** **Secondary ID Number** ***(enter from page 1)***

A	Z	D	9	8	2	4	4	1	2	6	3

XII. Process - Codes and Design Capacities *(continued)*

EXAMPLE FOR COMPLETING ITEM XII (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

Line Number	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE	C. PROCESS TOTAL NUMBERS OF UNITS (enter code)	C. PROCESS FOR OFFICIAL USE ONLY
X 1	S 0 2	600	G	0 0 2	
X 2	T 0 3	20	E	0 0 1	
1	S 0 1	200,000	G	0 0 2	
2	S 0 2	35,000	G	0 0 5	
3	T 0 4	4,140	J	0 0 2	
4					
5					
6					
7					
8					
9					
0					
1 1					
1 2					

NOTE: If you need to list more than 12 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for additional treatment processes in Item XIII.

XIII. Additional Treatment Processes *(follow instructions from Item XII)*

Line Number (enter numbers in sequence with Item XII)	A. PROCESS CODE	B. TREATMENT PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. TREATMENT PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE	C. PROCESS TOTAL NUMBER OF UNITS	D. DESCRIPTION OF PROCESS (enter code)
	T 0 4				
	T 0 4				
	T 0 4				
	T 0 4				

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GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes

A. EPA HAZARDOUS WASTE NUMBER - *Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR, Part 261 Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.*

B. ESTIMATED ANNUAL QUANTITY - *For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.*

C. UNIT OF MEASURE - *For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:*

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous entered in column A select the code(s) from the list of process codes contained in Item XII A. on page 3 to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A select the code(s) from the list of process codes contained in Item XII A. on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that processes that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. *Enter the first two as described above.*
2. *Enter "000" in the extreme right box of Item XIV-D(I).*
3. *space provided on page 7, Item XIV-E, the line number and the additional code(s).*

2. PROCESS DESIGN AND OPERATION. *If a process that will be used, describe the proces in the space provided on the form (D(2)).*

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. *Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C,* and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. *line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In* column D(2) on that line enter "included with above" and make no other entries on that line.
3. *each EPA Hazardous Waste Number that can be used to describe the hazardous waste.*

COMPLETING ITEM XIV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an ounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. e is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number		A. EPA HAZARD WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF (enter code)	D. PROCESS (1) PROCESS CODES (enter)									(2) PROCESS DESCRIPTION (if a code is not entered in D(1)
X	1	K	0	5	4	900	P	7	0	3	D	8	0				
X	2	D	0	0	2	400	P	7	0	3	D	8	0				
X	3	D	0	0	1	100	P	7	0	3	D	8	0				
X	4	D	0	0			2										

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EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1)
	1	D	0	0	1	5,000	P	S	0	1	S	0	2	T	0	4	
	2	D	0	0	4	5,000	P	S	0	1	S	0	2	T	0	4	
	3	D	0	0	5	5,000	P	S	0	1	S	0	2	T	0	4	
	4	D	0	0	6	5,000	P	S	0	1	S	0	2	T	0	4	
	5	D	0	0	7	5,000	P	S	0	1	S	0	2	T	0	4	
	6	D	0	0	8	5,000	P	S	0	1	S	0	2	T	0	4	
	7	D	0	0	9	5,000	P	S	0	1	S	0	2	T	0	4	
	8	D	0	1	0	5,000	P	S	0	1	S	0	2	T	0	4	
	9	D	0	1	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	D	0	1	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	D	0	1	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	D	0	1	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	D	0	1	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	D	0	1	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	D	0	1	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	D	0	1	8	500,000	P	S	0	1	S	0	2	T	0	4	
1	7	D	0	1	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	D	0	2	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	D	0	2	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	D	0	2	2	100,000	P	S	0	1	S	0	2	T	0	4	
2	1	D	0	2	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	D	0	2	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	D	0	2	5	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	D	0	2	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	D	0	2	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	D	0	2	8	50,000	P	S	0	1	S	0	2	T	0	4	
2	7	D	0	2	9	100,000	P	S	0	1	S	0	2	T	0	4	
2	8	D	0	3	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	D	0	3	1	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	D	0	3	2	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	D	0	3	3	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	D	0	3	4	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	D	0	3	5	100,000	P	S	0	1	S	0	2	T	0	4	

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EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1))
	1	D	0	3	6	5,000	P	S	0	1	S	0	2	T	0	4	
	2	D	0	3	7	5,000	P	S	0	1	S	0	2	T	0	4	
	3	D	0	3	8	5,000	P	S	0	1	S	0	2	T	0	4	
	4	D	0	3	9	500,000	P	S	0	1	S	0	2	T	0	4	
	5	D	0	4	0	500,000	P	S	0	1	S	0	2	T	0	4	
	6	D	0	4	1	5,000	P	S	0	1	S	0	2	T	0	4	
	7	D	0	4	2	5,000	P	S	0	1	S	0	2	T	0	4	
	8	D	0	4	3	50,000	P	S	0	1	S	0	2	T	0	4	
	9	F	0	0	1	2,000,000	P	S	0	1	S	0	2	T	0	4	
1	0	F	0	0	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	F	0	0	3	1,500,000	P	S	0	1	S	0	2	T	0	4	
1	2	F	0	0	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	F	0	0	5	1,500,000	P	S	0	1	S	0	2	T	0	4	
1	4	F	0	0	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	F	0	1	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	F	0	1	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	F	0	2	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	F	0	3	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	F	0	3	5	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	F	0	3	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	F	0	3	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	F	0	3	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	K	0	0	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	K	0	0	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	K	0	0	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	K	0	0	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	K	0	0	5	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	K	0	0	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	K	0	0	7	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	K	0	0	8	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	K	0	0	9	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	K	0	1	0	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	K	0	1	4	5,000	P	S	0	1	S	0	2	T	0	4	

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Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1))
	1	K	0	6	5	5,000	P	S	0	1	S	0	2	T	0	4	
	2	K	0	6	6	5,000	P	S	0	1	S	0	2	T	0	4	
	3	K	0	7	1	5,000	P	S	0	1	S	0	2	T	0	4	
	4	K	0	7	3	5,000	P	S	0	1	S	0	2	T	0	4	
	5	K	0	8	3	5,000	P	S	0	1	S	0	2	T	0	4	
	6	K	0	8	4	5,000	P	S	0	1	S	0	2	T	0	4	
	7	K	0	8	5	5,000	P	S	0	1	S	0	2	T	0	4	
	8	K	0	8	6	5,000	P	S	0	1	S	0	2	T	0	4	
	9	K	0	8	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	K	0	8	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	K	0	9	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	K	0	9	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	K	0	9	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	K	0	9	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	K	0	9	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	K	0	9	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	K	0	9	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	K	0	9	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	K	1	0	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	K	1	0	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	K	1	0	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	K	1	0	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	K	1	0	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	K	1	0	5	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	K	1	0	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	K	1	1	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	K	1	1	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	K	1	1	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	K	1	1	5	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	K	1	1	6	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	K	1	1	7	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	K	1	1	8	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	K	1	2	5	5,000	P	S	0	1	S	0	2	T	0	4	

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Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1))
	1	K	0	1	5	5,000	P	S	0	1	S	0	2	T	0	4	
	2	K	0	1	6	5,000	P	S	0	1	S	0	2	T	0	4	
	3	K	0	1	7	5,000	P	S	0	1	S	0	2	T	0	4	
	4	K	0	1	8	5,000	P	S	0	1	S	0	2	T	0	4	
	5	K	0	1	9	5,000	P	S	0	1	S	0	2	T	0	4	
	6	K	0	2	0	5,000	P	S	0	1	S	0	2	T	0	4	
	7	K	0	2	2	5,000	P	S	0	1	S	0	2	T	0	4	
	8	K	0	2	3	5,000	P	S	0	1	S	0	2	T	0	4	
	9	K	0	2	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	K	0	2	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	K	0	2	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	K	0	2	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	K	0	3	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	K	0	3	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	K	0	3	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	K	0	3	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	K	0	3	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	K	0	3	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	K	0	3	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	K	0	3	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	K	0	3	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	K	0	3	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	K	0	4	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	K	0	4	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	K	0	4	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	K	0	4	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	K	0	4	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	K	0	4	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	K	0	5	0	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	K	0	5	1	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	K	0	5	2	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	K	0	6	1	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	K	0	6	4	5,000	P	S	0	1	S	0	2	T	0	4	

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GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									(2) PROCESS DESCRIPTION (if a code is not entered in D(1)
	1	K	1	2	6	5,000	P	S	0	1	S	0	2	T	0	4	
	2	P	0	0	1	5,000	P	S	0	1	S	0	2	T	0	4	
	3	P	0	0	2	5,000	P	S	0	1	S	0	2	T	0	4	
	4	P	0	0	3	5,000	P	S	0	1	S	0	2	T	0	4	
	5	P	0	0	4	5,000	P	S	0	1	S	0	2	T	0	4	
	6	P	0	0	5	5,000	P	S	0	1	S	0	2	T	0	4	
	7	P	0	0	7	5,000	P	S	0	1	S	0	2	T	0	4	
	8	P	0	0	8	5,000	P	S	0	1	S	0	2	T	0	4	
	9	P	0	1	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	P	0	1	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	P	0	1	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	P	0	1	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	P	0	1	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	P	0	1	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	P	0	1	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	P	0	1	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	P	0	1	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	P	0	2	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	P	0	2	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	P	0	2	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	P	0	2	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	P	0	2	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	P	0	2	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	P	0	2	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	P	0	2	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	P	0	2	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	P	0	3	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	P	0	3	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	P	0	3	3	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	P	0	3	4	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	P	0	3	6	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	P	0	3	7	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	P	0	3	8	5,000	P	S	0	1	S	0	2	T	0	4	

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GSA No. 0246-EPA-OT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1))
	1	P	0	3	9	5,000	P	S	0	1	S	0	2	T	0	4	
	2	P	0	4	0	5,000	P	S	0	1	S	0	2	T	0	4	
	3	P	0	4	1	5,000	P	S	0	1	S	0	2	T	0	4	
	4	P	0	4	2	5,000	P	S	0	1	S	0	2	T	0	4	
	5	P	0	4	3	5,000	P	S	0	1	S	0	2	T	0	4	
	6	P	0	4	4	5,000	P	S	0	1	S	0	2	T	0	4	
	7	P	0	4	5	5,000	P	S	0	1	S	0	2	T	0	4	
	8	P	0	4	6	5,000	P	S	0	1	S	0	2	T	0	4	
	9	P	0	4	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	P	0	4	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	P	0	4	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	P	0	5	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	P	0	5	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	P	0	5	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	P	0	5	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	P	0	5	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	P	0	5	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	P	0	5	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	P	0	6	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	P	0	6	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	P	0	6	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	P	0	6	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	P	0	6	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	P	0	6	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	P	0	6	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	P	0	6	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	P	0	7	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	P	0	7	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	P	0	7	2	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	P	0	7	3	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	P	0	7	4	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	P	0	7	5	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	P	0	7	7	5,000	P	S	0	1	S	0	2	T	0	4	

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GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1))
	1	P	0	7	8	5,000	P	S	0	1	S	0	2	T	0	4	
	2	P	0	8	2	5,000	P	S	0	1	S	0	2	T	0	4	
	3	P	0	8	4	5,000	P	S	0	1	S	0	2	T	0	4	
	4	P	0	8	5	5,000	P	S	0	1	S	0	2	T	0	4	
	5	P	0	8	7	5,000	P	S	0	1	S	0	2	T	0	4	
	6	P	0	8	8	5,000	P	S	0	1	S	0	2	T	0	4	
	7	P	0	8	9	5,000	P	S	0	1	S	0	2	T	0	4	
	8	P	0	9	2	5,000	P	S	0	1	S	0	2	T	0	4	
	9	P	0	9	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	P	0	9	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	P	0	9	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	P	0	9	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	P	0	9	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	P	0	9	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	P	0	9	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	P	1	0	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	P	1	0	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	P	1	0	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	P	1	0	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	P	1	0	5	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	P	1	0	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	P	1	0	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	P	1	0	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	P	1	1	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	P	1	1	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	P	1	1	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	P	1	1	5	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	P	1	1	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	P	1	1	8	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	P	1	1	9	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	P	1	2	0	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	P	1	2	1	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	P	1	2	3	5,000	P	S	0	1	S	0	2	T	0	4	

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Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1))
	1	U	0	0	1	5,000	P	S	0	1	S	0	2	T	0	4	
	2	U	0	0	2	5,000	P	S	0	1	S	0	2	T	0	4	
	3	U	0	0	3	5,000	P	S	0	1	S	0	2	T	0	4	
	4	U	0	0	4	5,000	P	S	0	1	S	0	2	T	0	4	
	5	U	0	0	5	5,000	P	S	0	1	S	0	2	T	0	4	
	6	U	0	0	7	5,000	P	S	0	1	S	0	2	T	0	4	
	7	U	0	0	8	5,000	P	S	0	1	S	0	2	T	0	4	
	8	U	0	0	9	5,000	P	S	0	1	S	0	2	T	0	4	
	9	U	0	1	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	U	0	1	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	U	0	1	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	U	0	1	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	U	0	1	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	U	0	1	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	U	0	1	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	U	0	1	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	U	0	1	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	U	0	2	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	U	0	2	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	U	0	2	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	U	0	2	5	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	U	0	2	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	U	0	2	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	U	0	2	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	U	0	2	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	U	0	3	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	U	0	3	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	U	0	3	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	U	0	3	4	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	U	0	3	5	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	U	0	3	6	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	U	0	3	7	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	U	0	3	8	5,000	P	S	0	1	S	0	2	T	0	4	

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GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1))
	1	U	0	3	9	5,000	P	S	0	1	S	0	2	T	0	4	
	2	U	0	4	1	5,000	P	S	0	1	S	0	2	T	0	4	
	3	U	0	4	2	5,000	P	S	0	1	S	0	2	T	0	4	
	4	U	0	4	3	5,000	P	S	0	1	S	0	2	T	0	4	
	5	U	0	4	4	5,000	P	S	0	1	S	0	2	T	0	4	
	6	U	0	4	5	5,000	P	S	0	1	S	0	2	T	0	4	
	7	U	0	4	6	5,000	P	S	0	1	S	0	2	T	0	4	
	8	U	0	4	7	5,000	P	S	0	1	S	0	2	T	0	4	
	9	U	0	4	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	U	0	4	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	U	0	5	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	U	0	5	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	U	0	5	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	U	0	5	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	U	0	5	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	U	0	5	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	U	0	5	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	U	0	5	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	U	0	5	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	U	0	6	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	U	0	6	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	U	0	6	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	U	0	6	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	U	0	6	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	U	0	6	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	U	0	6	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	U	0	6	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	U	0	6	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	U	0	7	0	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	U	0	7	1	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	U	0	7	2	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	U	0	7	3	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	U	0	7	4	5,000	P	S	0	1	S	0	2	T	0	4	

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GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1)
	1	U	0	7	5	5,000	P	S	0	1	S	0	2	T	0	4	
	2	U	0	7	6	5,000	P	S	0	1	S	0	2	T	0	4	
	3	U	0	7	7	5,000	P	S	0	1	S	0	2	T	0	4	
	4	U	0	7	8	5,000	P	S	0	1	S	0	2	T	0	4	
	5	U	0	7	9	5,000	P	S	0	1	S	0	2	T	0	4	
	6	U	0	8	0	5,000	P	S	0	1	S	0	2	T	0	4	
	7	U	0	8	1	5,000	P	S	0	1	S	0	2	T	0	4	
	8	U	0	8	2	5,000	P	S	0	1	S	0	2	T	0	4	
	9	U	0	8	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	U	0	8	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	U	0	8	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	U	0	8	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	U	0	8	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	U	0	8	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	U	0	8	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	U	0	9	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	U	0	9	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	U	0	9	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	U	0	9	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	U	0	9	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	U	0	9	5	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	U	0	9	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	U	0	9	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	U	0	9	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	U	1	0	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	U	1	0	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	U	1	0	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	U	1	0	5	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	U	1	0	6	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	U	1	0	7	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	U	1	0	8	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	U	1	0	9	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	U	1	1	0	5,000	P	S	0	1	S	0	2	T	0	4	

Form Approved. OMB No. 2050-0034 Expires 12-31-91
GSA No. 0246-EPA-OT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1)
	1	U	1	1	1	5,000	P	S	0	1	S	0	2	T	0	4	
	2	U	1	1	2	5,000	P	S	0	1	S	0	2	T	0	4	
	3	U	1	1	3	5,000	P	S	0	1	S	0	2	T	0	4	
	4	U	1	1	4	5,000	P	S	0	1	S	0	2	T	0	4	
	5	U	1	1	5	5,000	P	S	0	1	S	0	2	T	0	4	
	6	U	1	1	6	5,000	P	S	0	1	S	0	2	T	0	4	
	7	U	1	1	7	5,000	P	S	0	1	S	0	2	T	0	4	
	8	U	1	1	8	5,000	P	S	0	1	S	0	2	T	0	4	
	9	U	1	1	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	U	1	2	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	U	1	2	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	U	1	2	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	U	1	2	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	U	1	2	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	U	1	2	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	U	1	2	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	U	1	2	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	U	1	2	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	U	1	3	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	U	1	3	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	U	1	3	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	U	1	3	5	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	U	1	3	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	U	1	3	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	U	1	3	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	U	1	4	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	U	1	4	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	U	1	4	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	U	1	4	3	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	U	1	4	4	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	U	1	4	5	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	U	1	4	6	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	U	1	4	7	5,000	P	S	0	1	S	0	2	T	0	4	

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GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1))
	1	U	1	4	8	5,000	P	S	0	1	S	0	2	T	0	4	
	2	U	1	4	9	5,000	P	S	0	1	S	0	2	T	0	4	
	3	U	1	5	0	5,000	P	S	0	1	S	0	2	T	0	4	
	4	U	1	5	1	5,000	P	S	0	1	S	0	2	T	0	4	
	5	U	1	5	2	5,000	P	S	0	1	S	0	2	T	0	4	
	6	U	1	5	3	5,000	P	S	0	1	S	0	2	T	0	4	
	7	U	1	5	4	5,000	P	S	0	1	S	0	2	T	0	4	
	8	U	1	5	5	5,000	P	S	0	1	S	0	2	T	0	4	
	9	U	1	5	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	U	1	5	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	U	1	5	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	U	1	5	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	U	1	6	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	U	1	6	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	U	1	6	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	U	1	6	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	U	1	6	5	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	U	1	6	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	U	1	6	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	U	1	6	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	U	1	6	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	U	1	7	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	U	1	7	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	U	1	7	2	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	U	1	7	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	U	1	7	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	U	1	7	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	U	1	7	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	U	1	7	8	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	U	1	7	9	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	U	1	8	0	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	U	1	8	1	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	U	1	8	2	5,000	P	S	0	1	S	0	2	T	0	4	

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GSA No. 0246-EPA-OT

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EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									D. PROCESSES (2) PROCESS DESCRIPTION (if a code is not entered in D(1))
	1	U	1	8	3	5,000	P	S	0	1	S	0	2	T	0	4	
	2	U	1	8	4	5,000	P	S	0	1	S	0	2	T	0	4	
	3	U	1	8	5	5,000	P	S	0	1	S	0	2	T	0	4	
	4	U	1	8	6	5,000	P	S	0	1	S	0	2	T	0	4	
	5	U	1	8	7	5,000	P	S	0	1	S	0	2	T	0	4	
	6	U	1	8	8	5,000	P	S	0	1	S	0	2	T	0	4	
	7	U	1	9	0	5,000	P	S	0	1	S	0	2	T	0	4	
	8	U	1	9	1	5,000	P	S	0	1	S	0	2	T	0	4	
	9	U	1	9	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	U	1	9	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	U	1	9	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	U	1	9	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	U	1	9	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	U	2	0	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	U	2	0	1	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	U	2	0	2	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	U	2	0	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	U	2	0	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	U	2	0	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	U	2	0	7	5,000	P	S	0	1	S	0	2	T	0	4	
2	1	U	2	0	8	5,000	P	S	0	1	S	0	2	T	0	4	
2	2	U	2	0	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	3	U	2	1	0	5,000	P	S	0	1	S	0	2	T	0	4	
2	4	U	2	1	1	5,000	P	S	0	1	S	0	2	T	0	4	
2	5	U	2	1	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	6	U	2	1	4	5,000	P	S	0	1	S	0	2	T	0	4	
2	7	U	2	1	5	5,000	P	S	0	1	S	0	2	T	0	4	
2	8	U	2	1	6	5,000	P	S	0	1	S	0	2	T	0	4	
2	9	U	2	1	7	5,000	P	S	0	1	S	0	2	T	0	4	
3	0	U	2	1	8	5,000	P	S	0	1	S	0	2	T	0	4	
3	1	U	2	1	9	5,000	P	S	0	1	S	0	2	T	0	4	
3	2	U	2	2	0	5,000	P	S	0	1	S	0	2	T	0	4	
3	3	U	2	2	1	5,000	P	S	0	1	S	0	2	T	0	4	

Form Approved. OMB No. 2050-0034 Expires 12-31-91

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

GSA No. 0246-EPA-OT

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Wastes (continued)

Line Number		A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES (1) PROCESS CODES (enter)									(2) PROCESS DESCRIPTION (if a code is not entered in D(1)
	1	U	2	2	2	5,000	P	S	0	1	S	0	2	T	0	4	
	2	U	2	2	5	5,000	P	S	0	1	S	0	2	T	0	4	
	3	U	2	2	6	5,000	P	S	0	1	S	0	2	T	0	4	
	4	U	2	2	7	5,000	P	S	0	1	S	0	2	T	0	4	
	5	U	2	2	8	5,000	P	S	0	1	S	0	2	T	0	4	
	6	U	2	3	5	5,000	P	S	0	1	S	0	2	T	0	4	
	7	U	2	3	6	5,000	P	S	0	1	S	0	2	T	0	4	
	8	U	2	3	7	5,000	P	S	0	1	S	0	2	T	0	4	
	9	U	2	3	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	0	U	2	3	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	1	U	2	4	0	5,000	P	S	0	1	S	0	2	T	0	4	
1	2	U	2	4	3	5,000	P	S	0	1	S	0	2	T	0	4	
1	3	U	2	4	4	5,000	P	S	0	1	S	0	2	T	0	4	
1	4	U	2	4	6	5,000	P	S	0	1	S	0	2	T	0	4	
1	5	U	2	4	7	5,000	P	S	0	1	S	0	2	T	0	4	
1	6	U	2	4	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	7	U	2	4	9	5,000	P	S	0	1	S	0	2	T	0	4	
1	8	U	3	2	8	5,000	P	S	0	1	S	0	2	T	0	4	
1	9	U	3	5	3	5,000	P	S	0	1	S	0	2	T	0	4	
2	0	U	3	5	9	5,000	P	S	0	1	S	0	2	T	0	4	
2	1																
2	2																
2	3																
2	4																
2	5																
2	6																
2	7																
2	8																
2	9																
3	0																
3	1																
3	2																
3	3																

US EPA ARCHIVE DOCUMENT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0248-EPA-OT

EPA I.D. Number (Enter from page 1)	Secondary ID Number (Enter from page 1)
AZD982441263	

XV. Map

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

XVIII. Certification(s)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Operator Signature *	Date Signed 10-9-96
Name and Official Title (Type or print) Gregor E. Notgaard, Vice President, U.S. Filter Recovery Services, Inc. (Facility Owner)	
Owner Signature	Date Signed 10-16-96
Name and Official Title (Type or print) Daniel Eddy, Jr., Chairman, Colorado River Indian Tribes (Property Owner)	
Operator Signature	Date Signed
Name and Official Title (Type or print)	
Operator Signature	Date Signed
Name and Official Title (Type or print)	

XIX. Comments

Received spent carbons are thermally reactivated in one of two furnaces. Reactivated carbons are certified non-hazardous and then shipped for recycling and/or reuse. This reactivation process is sketched in a Schematic Block-Process Flow Diagram attached as Drawing No. 11135-002.

Incidental to the reactivation process is the management of container storage (area S01); spent carbon storage tanks (area S02); reactivation and reactivation off-gas treatment (area T04); and the non-hazardous slurry transfer water (recycle water) system, wastewater treatment system, rainwater collection system, and reactivated carbon product storage and shipping.

*(Footnote to Section XVIII) EPA currently has a Part A that is signed by Westates Carbon-Arizona, Inc. This Part A is signed on behalf of the company which has agreed to aquire the shares of Westates Carbon-Arizona, Inc.

Note: Mail completed form to the appropriate EPA Regional or State Office. (Refer to instructions for more information)

EPA I.D. Number (enter from page 1)												Secondary ID Number (enter from page 1)											
A	Z	D	9	8	2	4	4	1	2	6	3												

XIV. Description of Hazardous Waste (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 6.

Line Number	Additional Process Codes (enter)																											

XV. Map

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See Instructions for precise requirements.

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I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner Signature (Property Owner)	Date Signed

Name and Official Title *(type or print)*

Operator Signature (Facility Owner)	Date Signed

Name and Official Title *(type or print)*

XIX. Comments

Index of Attachments follows this page.

Note: Mail completed form to the appropriate EPA Regional or State Office. (refer to Instructions for more information)

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INDEX OF ATTACHMENTS

ATTACHMENTS	DESCRIPTION
A	ITEM VIII -- Facility Owner
B	ITEM XV -- Map
	1. Drawing No. C-100604 Sheet 1 of 2 (Rev. 0) Topographical Map 1 - Plant Site
	2. Drawing No. C-100604 Sheet 2 of 2 (Rev. 0) Topographical Map 2 - Adjacent Lands
C	ITEM XVI -- Facility Drawing
	1. Scale Drawing of Property Layout
	2. Scale Drawing of Facility Layout (Equipment Location)
	3. Drawing No. 11135-002 (Rev. 1) Schematic Process Flow Diagram
D	ITEM XVII -- Photographs
	1. Site Photographs 2. Site Aerial Photograph

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ATTACHMENT A

ITEM VIII -- FACILITY OWNER

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ADDITIONAL INFORMATION

EPA ID NUMBER: AZD982441263

ATTACHMENT A -- ITEM VIII

FACILITY OWNER

NAME OF FACILITY'S LEGAL OWNER

WESTATES CARBON-ARIZONA, INC.
2523 MUTAHAR STREET
PARKER, ARIZONA 85344-4005
TELEPHONE: 602-669-5758

OWNER TYPE - P

NAME OF PROPERTY OWNER:

COLORADO RIVER INDIAN TRIBES
RT - 1, BOX 23 - B
PARKER, ARIZONA 85344
TELEPHONE: 602-669-9211

OWNER TYPE - I

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ATTACHMENT B

ITEM XV -- MAP

1. DRAWING NO. C-100604 SHEET 1 OF 2 (REV. 0)
   TOPOGRAPHICAL MAP 1 - PLANT SITE

2. DRAWING NO. C-100604 SHEET 2 OF 2 (REV. 0)
   TOPOGRAPHICAL MAP 2 - ADJACENT LANDS

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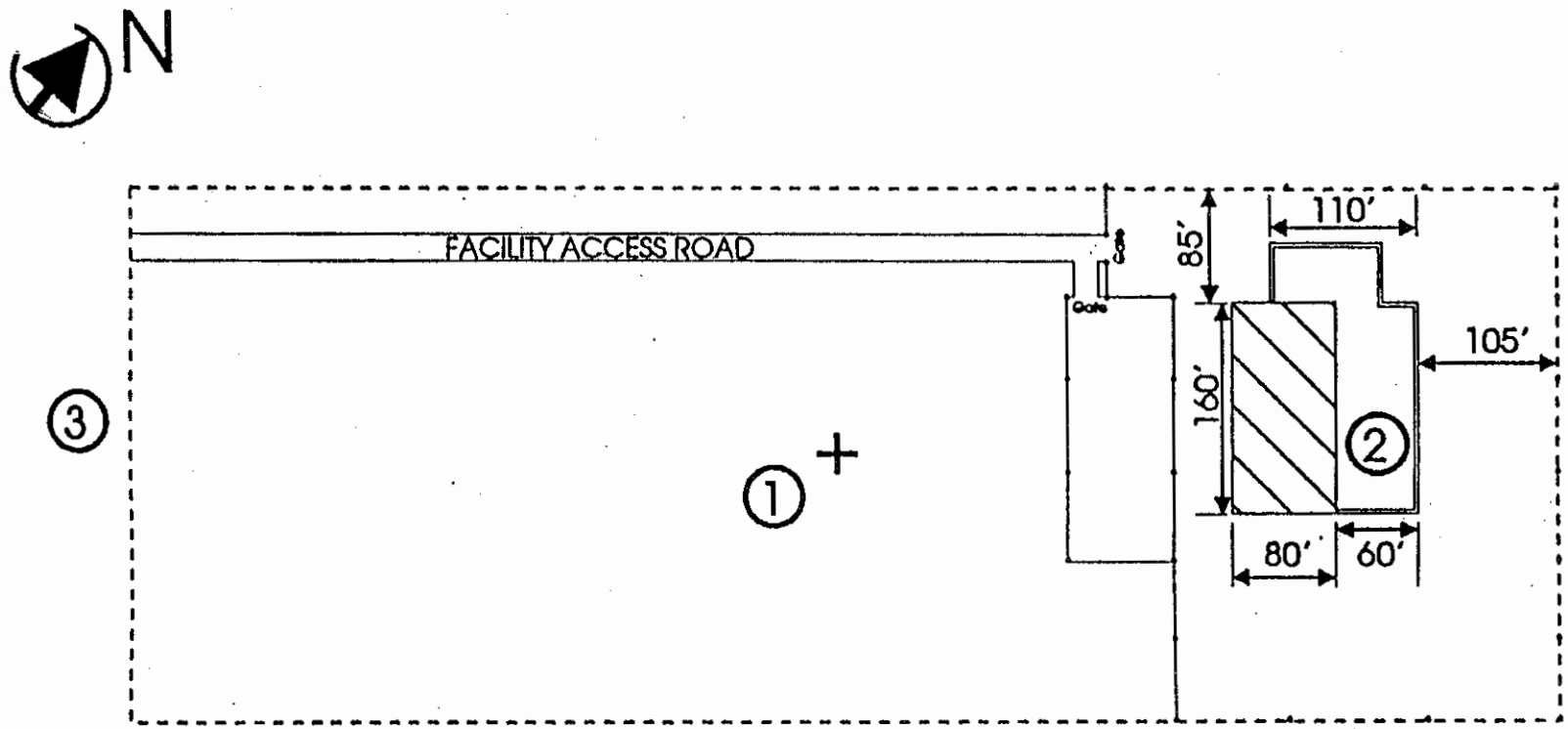
ATTACHMENT C

ITEM XVII -- FACILITY DRAWING

1. SCALE DRAWING OF PROPERTY LAYOUT
2. SCALE DRAWING OF FACILITY LAYOUT (EQUIPMENT LOCATION)
3. DRAWING NO. 11135-002 -- SCHEMATIC PROCESS FLOW DIAGRAM



LEGEND:

1. Center of Property is Approximately N 34°-07'-50" X W 114°-16'-22"
2. Uncovered Reactivation Facilities
3. Mutahar Street

------ Property Line

Covered Storage and Maintenance Facilities

--/-- Fence Line

WESTATES CARBON - ARIZONA
Parker, Arizona

General Property Layout
Reactivation Facilities

Scale 1"=150'	Location: 2523 Mutahar Street Parker, Arizona 85344

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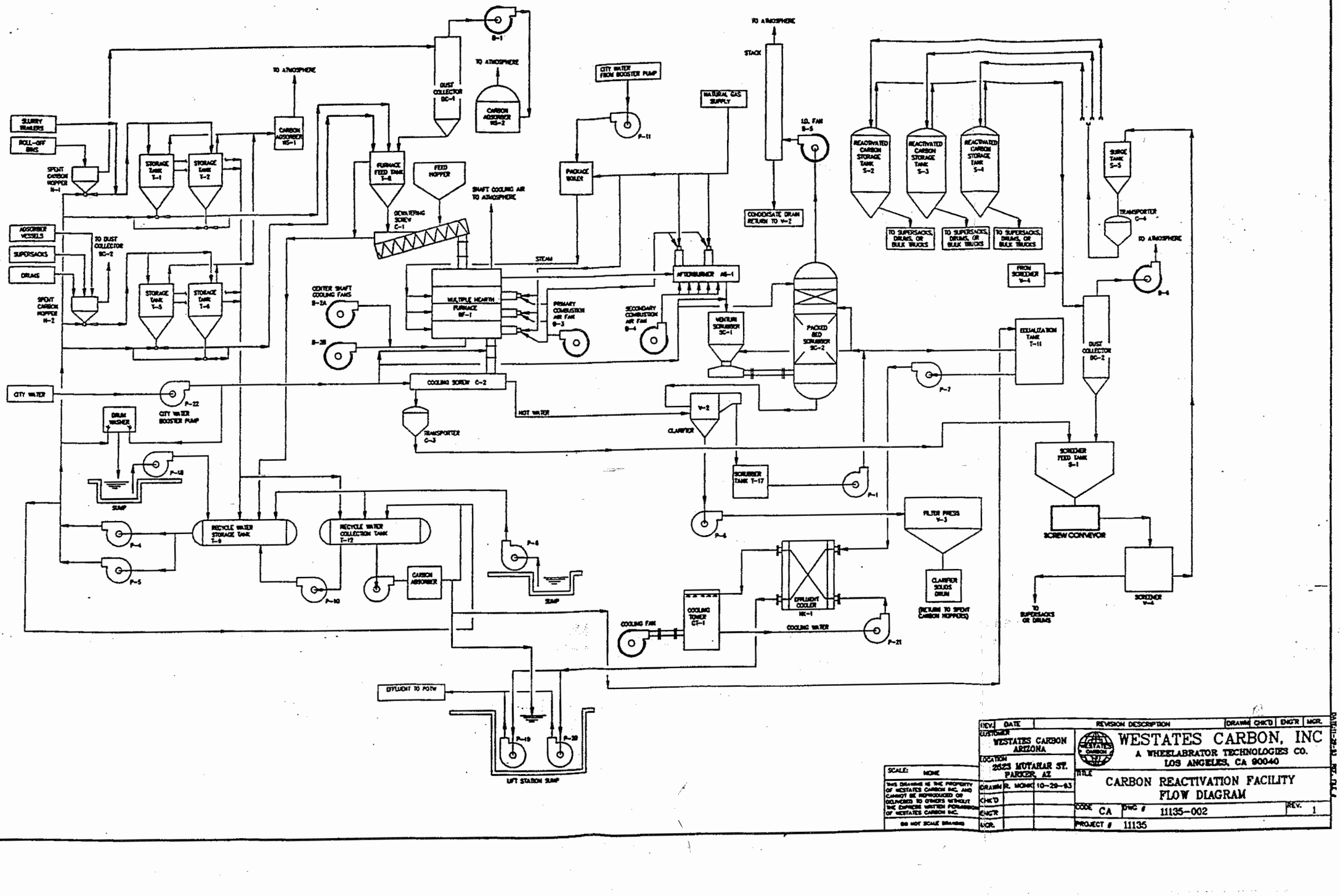
LIST OF COMPONENTS — DWG.# 11135-002

ITEM	QTY	DWG/PART No.	DESCRIPTION



REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R	MGR.

CUSTOMER: WESTATES CARBON ARIZONA

LOCATION: 2523 MOHAVE ST. PARKER, AZ

DRAWN	R. MONK	10-29-83
CHK'D		
ENG'R		
MGR.		

SCALE: NONE

THIS DRAWING IS THE PROPERTY OF WESTATES CARBON INC. AND CANNOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT THE EXPRESS WRITTEN PERMISSION OF WESTATES CARBON INC.

DO NOT SCALE DRAWING

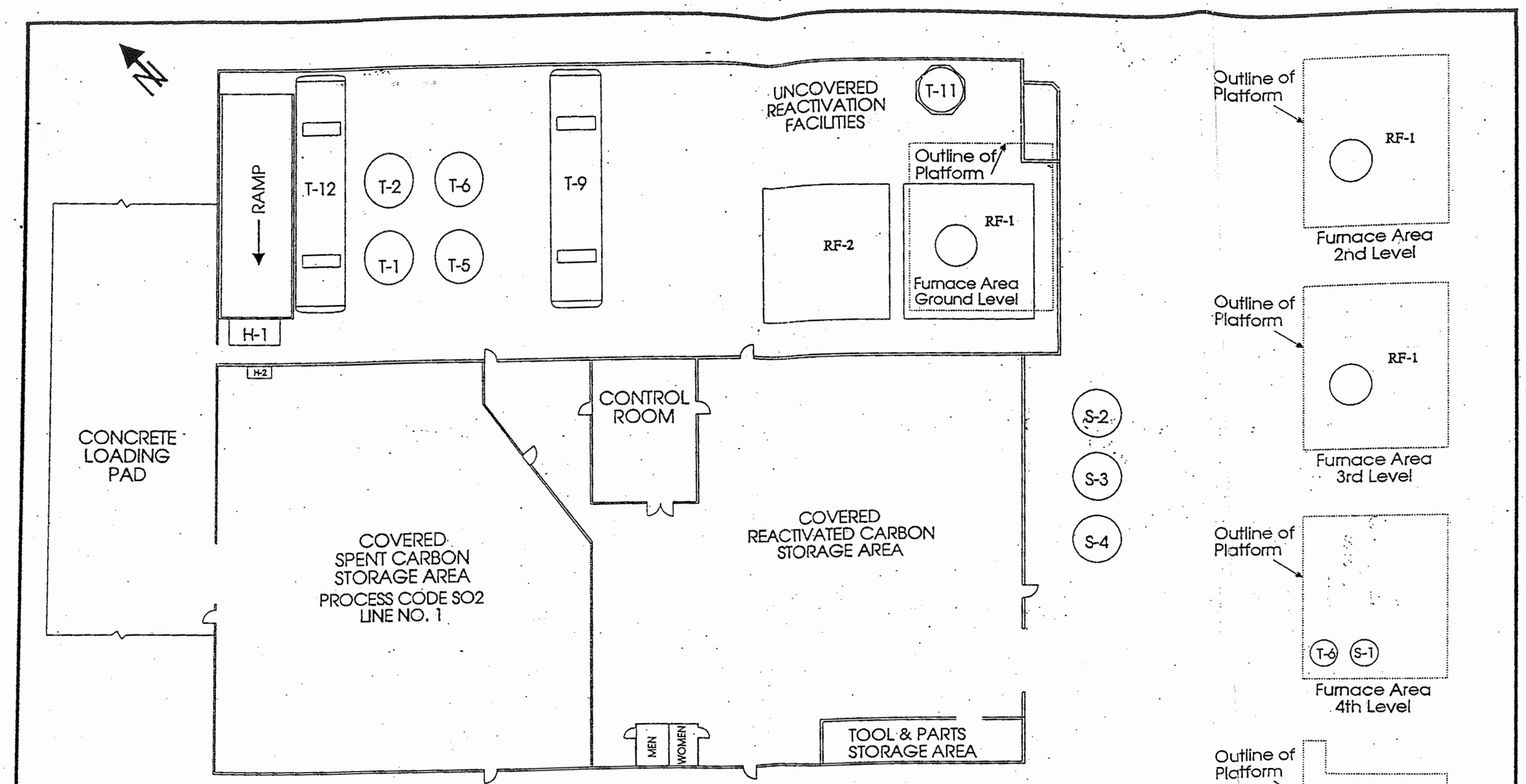
WESTATES CARBON, INC
A WHEELABRATOR TECHNOLOGIES CO.
LOS ANGELES, CA 90040

TITLE: CARBON REACTIVATION FACILITY FLOW DIAGRAM

CODE CA | DWG # 11135-002 | REV. 1

PROJECT # 11135

US EPA ARCHIVE DOCUMENT



LEGEND

T-1 - Spent Carbon Storage Tank (Process Code SO2; Line No. 2)
T-2 - Spent Carbon Storage Tank (Process Code SO2; Line No. 2)
T-5 - Spent Carbon Storage Tank (Process Code SO2; Line No. 2)
T-6 - Spent Carbon Storage Tank (Process Code SO2; Line No. 2)
T-8 - Reactivation Unit No. 1 Feed Tank (Process Code SO2; Line No. 2)
T-9 - Recycle Water Storage Tank
T-11 - Equalization Tank
T-12 - Recycle Water Tank
RF-1 - Reactivation Unit No. 1 (Process Code T04; Line No. 3)
RF-2 - Yet to be Completed Carbon Reactivation Unit No. 2 (Process Code T04; Line No. 3)
S-2 - Reactivated Carbon Storage Tank
S-3 - Reactivated Carbon Storage Tank
S-4 - Reactivated Carbon Storage Tank
H-1 - Roll-off Bin Unloading Hopper
H-2 - Container Unloading Hopper

WESTATES CARBON ARIZONA, INC.	GENERAL FACILITY LAYOUT	This drawing is the property of Westates Carbon Arizona, Inc. and cannot be reproduced nor delivered to others without the written permission of Westates Carbon Arizona, Inc.
LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344	REACTIVATION FACILITIES	
	SCALE: 1/4"=5'	

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ATTACHMENT D

ITEM XVII -- PHOTOGRAPHS

1. SITE PHOTOGRAPHS

2. SITE AERIAL PHOTOGRAPHS

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Process Code S02
(Identified as Line Number 2 in Section XII)

Spent Carbon Storage Feed Tanks
(Tank No. T-1 and T-2)



October 1996

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Process Code S02
(Identified as Line Number 2 in Section XII)

Spent Carbon Storage Feed Tanks
(Tank No. T-5 and T-6)



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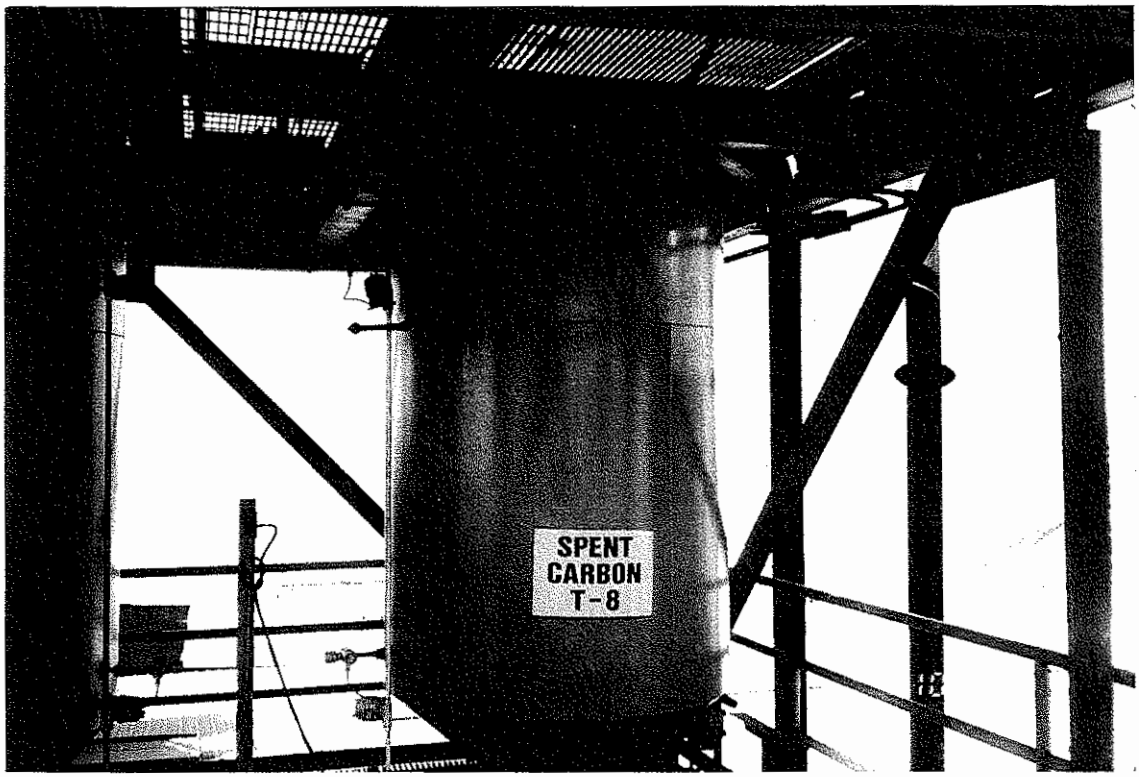
US EPA ARCHIVE DOCUMENT

Process Code S02
(Identified as Line Number 2 in Section XII)

Spent Carbon Storage Feed Tanks
(Tank No. T-8)



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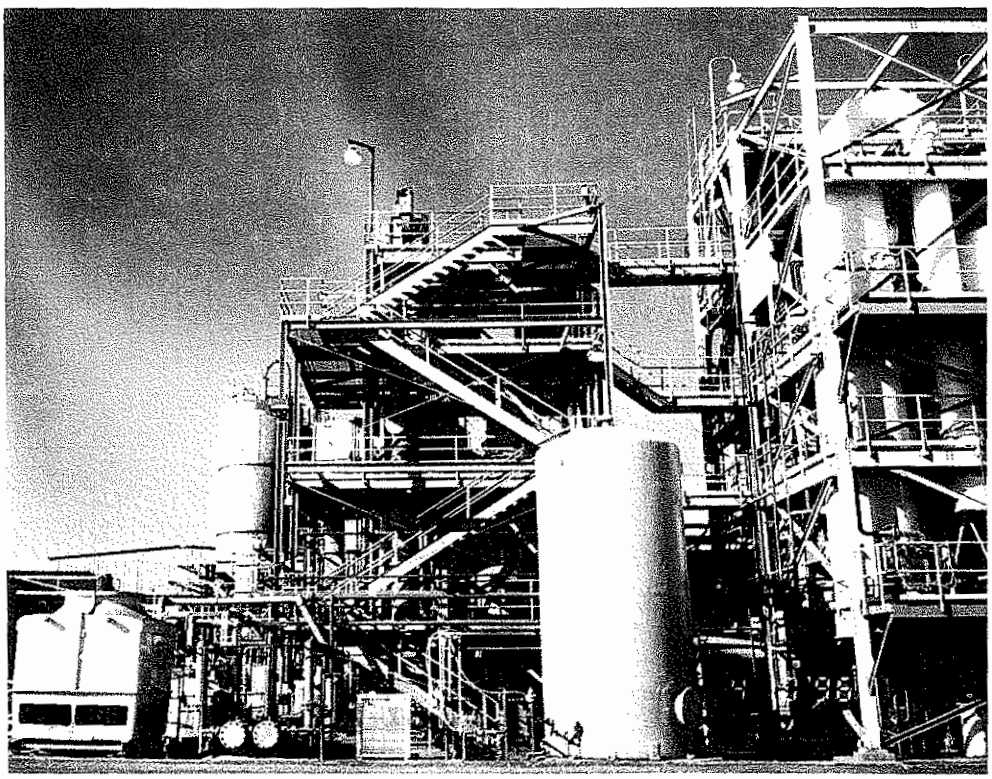
US EPA ARCHIVE DOCUMENT

Process Code T04
(Identified as Line Number 3 in Section XII)

Carbon Reactivation Unit No.1 (RF-1)
(1 of 2)



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Process Code T04
(Identified as Line Number 3 in Section XII)

Carbon Reactivation Unit No.2 (RF-2)
(2 of 2)



October 1996

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Process Code S01
(Identified as Line Number 1 in Section XII)

Spent Carbon Storage (Warehouse)



October 1996

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105

MAR 25 1992

Mr. Robert Babbitt
Project Manager
Westates Carbon - Arizona, Inc.
2250 Tubeway Avenue
Los Angeles, CA 90040

Dear Mr. Babbitt:

The United States Environmental Protection Agency ("EPA") has reviewed the information you provided in a letter dated February 14, 1992, regarding the interim status eligibility of Westates Carbon-Arizona, Inc. ("Westates") (ID# AZD982441263), located on the Colorado River Indian Reservation near Parker, Arizona.

The documentation you provided verifies that construction of the Westates facility had commenced before the effective date (August 21, 1991) of the boiler and industrial furnace (BIF) rule, thereby confirming Westates' status as an existing facility, pursuant to 40 CFR 260.10 and Section 3005(e)(1)(A)(ii) of RCRA. EPA hereby confirms that you have met the requirements as an interim status facility.

EPA will "call-in" your Part B permit application at a later date considering the relative hazard to human health and environment that Westates poses compared to other storage, treatment, and disposal facilities within the Director's purview. If you have any questions regarding this matter, please contact Chris Heppe at (415) 744-2027.

Sincerely,

Paula Bisson

Paula Bisson, Chief
Arizona, Nevada, Pacific Island Section

cc: Daniel Eddy, Jr., Chairman
Colorado Indian Tribe

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Printed on Recycled Paper

Revised Part A Forms

Provided for Information Purposes Only

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SEND COMPLETED FORM TO: The Appropriate State or EPA Regional Office.	United States Environmental Protection Agency **RCRA SUBTITLE C SITE IDENTIFICATION FORM**	

1. Reason for Submittal (See instructions on page 14.) MARK ALL BOX(ES) THAT APPLY	**Reason for Submittal:** ❑ To provide Initial Notification of Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities) ❑ To provide Subsequent Notification of Regulated Waste Activity (to update site identification information) ❑ As a component of a First RCRA Hazardous Waste Part A Permit Application ❑ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____) ❑ As a component of the Hazardous Waste Report	
2. Site EPA ID Number (page 15)	**EPA ID Number** |___|___|___| |___|___|___| |___|___|___| |___|___|___|	
3. Site Name (page 15)	**Name:**	
4. Site Location Information (page 15)	**Street Address:**	
	City, Town, or Village:	**State:**
	County Name:	**Zip Code:**
5. Site Land Type (page 15)	**Site Land Type:** ❑ Private ❑ County ❑ District ❑ Federal ❑ Indian ❑ Municipal ❑ State ❑ Other	
6. North American Industry Classification System (NAICS) Code(s) for the Site (page 15)	**A.** |___|___|___|___|___|___|	**B.** |___|___|___|___|___|___|
	C. |___|___|___|___|___|___|	**D.** |___|___|___|___|___|___|
7. Site Mailing Address (page 16)	**Street or P. O. Box:**	
	City, Town, or Village:	
	State:	
	Country:	**Zip Code:**
8. Site Contact Person (page 16)	**First Name:** **MI:**	**Last Name:**
	Phone Number: **Extension:**	**Email address:**
9. Operator and Legal Owner of the Site (pages 16 and 17)	**A. Name of Site's Operator:**	**Date Became Operator (mm/dd/yyyy):**
	Operator Type: ❑ Private ❑ County ❑ District ❑ Federal ❑ Indian ❑ Municipal ❑ State ❑ Other	
	B. Name of Site's Legal Owner:	**Date Became Owner (mm/dd/yyyy):**
	Owner Type: ❑ Private ❑ County ❑ District ❑ Federal ❑ Indian ❑ Municipal ❑ State ❑ Other	

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9. Legal Owner (Continued) Address	**Street or P. O. Box:**	
	City, Town, or Village:	
	State:	
	Country:	**Zip Code:**

10. Type of Regulated Waste Activity
Mark "Yes" or "No" for all activities; complete any additional boxes as instructed. (See instructions on pages 18 to 21.)

A. Hazardous Waste Activities
Complete all parts for 1 through 6.

Y ❑ N ❑ **1. Generator of Hazardous Waste**
If "Yes", choose only one of the following - a, b, or c.

❑ a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.) of non-acute hazardous waste; or

❑ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.) of non-acute hazardous waste; or

❑ c. CESQG: Less than 100 kg/mo (220 lbs./mo.) of non-acute hazardous waste

In addition, indicate other generator activities.

Y ❑ N ❑ d. United States Importer of Hazardous Waste

Y ❑ N ❑ e. Mixed Waste (hazardous and radioactive) Generator

Y ❑ N ❑ **2. Transporter of Hazardous Waste**

Y ❑ N ❑ **3. Treater, Storer, or Disposer of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.

Y ❑ N ❑ **4. Recycler of Hazardous Waste (at your site)**

Y ❑ N ❑ **5. Exempt Boiler and/or Industrial Furnace**
If "Yes", mark each that applies.
❑ a. Small Quantity On-site Burner Exemption
❑ b. Smelting, Melting, and Refining Furnace Exemption

Y ❑ N ❑ **6. Underground Injection Control**

B. Universal Waste Activities

Y ❑ N ❑ **1. Large Quantity Handler of Universal Waste (accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste generated and/or accumulated at your site. If "Yes", mark all boxes that apply:**

	Generate	Accumulate
a. Batteries	❑	❑
b. Pesticides	❑	❑
c. Thermostats	❑	❑
d. Lamps	❑	❑
e. Other (specify) _____	❑	❑
f. Other (specify) _____	❑	❑
g. Other (specify) _____	❑	❑

Y ❑ N ❑ **2. Destination Facility for Universal Waste**
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities
Mark all boxes that apply.

Y ❑ N ❑ **1. Used Oil Transporter**
If "Yes", mark each that applies.
❑ a. Transporter
❑ b. Transfer Facility

Y ❑ N ❑ **2. Used Oil Processor and/or Re-refiner**
If "Yes", mark each that applies.
❑ a. Processor
❑ b. Re-refiner

Y ❑ N ❑ **3. Off-Specification Used Oil Burner**

Y ❑ N ❑ **4. Used Oil Fuel Marketer**
If "Yes", mark each that applies.
❑ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
❑ b. Marketer Who First Claims the Used Oil Meets the Specifications

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11. Description of Hazardous Wastes (See instructions on page 22.)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

12. Comments (See instructions on page 22.)

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
For the RCRA Hazardous Waste Part A Permit Application, all operator(s) and owner(s) must sign (see 40 CFR 270.10 (b) and 270.11).
(See instructions on page 22.)

Signature of operator, owner, or an authorized representative	**Name and Official Title (type or print)**	**Date Signed (mm/dd/yyyy)**

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EPA ID NO: |___|___|___| |___|___|___| |___|___|___| |___|___|___|

OMB #: 2050-0034 Expires 11/30/2005

United States Environmental Protection Agency

HAZARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact (See instructions on page 23)	**First Name:**	**MI:**	**Last Name:**
	Phone Number:		**Phone Number Extension:**
2. Facility Permit Contact Mailing Address (See instructions on page 23)	**Street or P.O. Box:**		
	City, Town, or Village:		
	State:		
	Country:		**Zip Code:**
3. Operator Mailing Address and Telephone Number (See instructions on page 23)	**Street or P.O. Box:**		
	City, Town, or Village:		
	State:		
	Country:	**Zip Code:**	**Phone Number**
4. Legal Owner Mailing Address and Telephone Number (See instructions on page 23)	**Street or P.O. Box:**		
	City, Town, or Village:		
	State:		
	Country:	**Zip Code:**	**Phone Number**
5. Facility Existence Date (See instructions on page 24)	**Facility Existence Date (mm/dd/yyyy):**		

6. Other Environmental Permits (See instructions on page 24)

A. Permit Type *(Enter code)*	B. Permit Number	C. Description

7. Nature of Business (Provide a brief description; see instructions on page 24)

8. Process Codes and Design Capacities (See instructions on page 24) - Enter information in the Sections on Form Page 3.

A. PROCESS CODE - *Enter the code from the list of process codes in the table below that best describes each process to be used at the facility. Fifteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), enter the process information in Item 9 (including a description).*

B. PROCESS DESIGN CAPACITY- *For each code entered in Section A, enter the capacity of the process.*

1. **AMOUNT** - *Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.*

2. **UNIT OF MEASURE** - *For each amount entered in Section B(1), enter the code in Section B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.*

C. PROCESS TOTAL NUMBER OF UNITS - *Enter the total number of units for each corresponding process code.*

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Disposal:	
D79	Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards
D99	Other Disposal	Any Unit of Measure in Code Table Below
	Storage:	
S01	Container	Gallons; Liters; Cubic Meters; or Cubic Yards
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S05	Drip Pad	Gallons; Liters; Acres; Cubic Meters; Hectares; or Cubic Yards
S06	Containment Building Storage	Cubic Yards or Cubic Meters
S99	Other Storage	Any Unit of Measure in Code Table Below
	Treatment:	
T01	Tank Treatment	Gallons Per Day; Liters Per Day
T02	Surface Impoundment Treatment	Gallons Per Day; Liters Per Day
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Hour; or Million Btu Per Hour
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; Btu Per Hour; or Million Btu Per Hour

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Treatment (continued):	
T81	Cement Kiln	For T81-T93:
T82	Lime Kiln	
T83	Aggregate Kiln	Gallons Per Day; Liters Per Day; Pounds
T84	Phosphate Kiln	Per Hour; Short Tons Per Hour; Kilograms
T85	Coke Oven	Per Hour; Metric Tons Per Day; Metric
T86	Blast Furnace	Tons Per Hour; Short Tons Per Day; Btu Per
T87	Smelting, Melting, or Refining Furnace	Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
T88	Titanium Dioxide Chloride Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
T92	Halogen Acid Furnaces	
T93	Other Industrial Furnaces Listed In 40 CFR §260.10	
T94	Containment Building - Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
	Miscellaneous (Subpart X):	
X01	Open Burning/Open Detonation	Any Unit of Measure in Code Table Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V

UNIT OF MEASURE	UNIT OF MEASURE CODE
Short Tons Per Hour	D
Metric Tons Per Hour	W
Short Tons Per Day	N
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	R
Million Btu Per Hour	X

UNIT OF MEASURE	UNIT OF MEASURE CODE
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu Per Hour	I

8. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 8 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. (2) Unit of Measure (Enter code)	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	5 3 3 . 7 8 8	G	0 0 1	
	1				.			
	2				.			
	3				.			
	4				.			
	5				.			
	6				.			
	7				.			
	8				.			
	9				.			
1	0				.			
1	1				.			
1	2				.			
1	3				.			
1	4				.			
1	5				.			

NOTE: If you need to list more than 15 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item 9.

9. Other Processes (*See instructions on page 25 and follow instructions from Item 8 for D99, S99, T04 and X99 process codes*)

Line Number (Enter #s in sequence with Item 8)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. (2) Unit of Measure (Enter code)	C. Process Total Number of Units	D. Description of Process
X	2	T	0	4	1 0 0 . 0 0 0	U	0 0 1	In-situ Vitrification
					.			
					.			
					.			
					.			
					.			

10. Description of Hazardous Wastes (See instructions on page 25) - Enter information in the Sections on Form Page 5.

A. EPA HAZARDOUS WASTE NUMBER - ***Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.***

B. ESTIMATED ANNUAL QUANTITY - ***For each listed waste entered in Section A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in Section A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.***

C. UNIT OF MEASURE - ***For each quantity entered in Section B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:***

ENGLISH UNIT OF MEASURE	*CODE*	*METRIC UNIT OF MEASURE*	*CODE*
POUNDS	*P*	*KILOGRAMS*	*K*
TONS	*T*	*METRIC TONS*	*M*

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the listed hazardous wastes.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. ***Enter the first two as described above.***
2. ***Enter "000" in the extreme right box of Item 10.D(1).***
3. ***Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 10.E.***

2. PROCESS DESCRIPTION: ***If a code is not listed for a process that will be used, describe the process in Item 10.D(2) or in Item 10.E(2).***

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. ***Select one of the EPA Hazardous Waste Numbers and enter it in Section A. On the same line complete Sections B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.***
2. ***In Section A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In Section D(2) on that line enter "included with above" and make no other entries on that line.***
3. ***Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.***

EXAMPLE FOR COMPLETING Item 10 (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number		*A. EPA Hazardous Waste No. (Enter code)*				*B. Estimated Annual Quantity of Waste*	*C. Unit of Measure (Enter code)*	*D. PROCESSES*									
								(1) PROCESS CODES (Enter code)									*(2) PROCESS DESCRIPTION- (If a code is not entered in D(1))*
X	1	K	0	5	4	900	P	T	0	3	D	8	0				
X	2	D	0	0	2	400	P	T	0	3	D	8	0				
X	3	D	0	0	1	100	P	T	0	3	D	8	0				
X	4	D	0	0	2												Included With Above

10. Description of Hazardous Wastes (Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)

Line Number		A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
					(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
	1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
1	0					
1	1					
1	2					
1	3					
1	4					
1	5					
1	6					
1	7					
1	8					
1	9					
2	0					
2	1					
2	2					
2	3					
2	4					
2	5					
2	6					
2	7					
2	8					
2	9					
3	0					
3	1					
3	2					
3	3					
3	4					
3	5					
3	6					
3	7					
3	8					
3	9					

10. Description of Hazardous Wastes (Continued. Use this Additional Sheet(s) as necessary; number as 5 a, etc.)

Line Number		A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)									E. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in E(1))
4	0													

10. Description of Hazardous Wastes (Continued. Use this Additional Sheet (s) as necessary; munber as 5a, etc.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in E(1))
7 9	K 0 3 1	5,000	P	S 0 1 S 0 2 X 0 3	
8 0	K 0 3 2	5,000	P	S 0 1 S 0 2 X 0 3	
8 1	K 0 3 3	5,000	P	S 0 1 S 0 2 X 0 3	
8 2	K 0 3 4	5,000	P	S 0 1 S 0 2 X 0 3	
8 3	K 0 3 5	5,000	P	S 0 1 S 0 2 X 0 3	
8 4	K 0 3 6	5,000	P	S 0 1 S 0 2 X 0 3	
8 5	K 0 3 7	5,000	P	S 0 1 S 0 2 X 0 3	
8 6	K 0 3 8	5,000	P	S 0 1 S 0 2 X 0 3	
8 7	K 0 3 9	5,000	P	S 0 1 S 0 2 X 0 3	
8 8	K 0 4 0	5,000	P	S 0 1 S 0 2 X 0 3	
8 9	K 0 4 1	5,000	P	S 0 1 S 0 2 X 0 3	
9 0	K 0 4 1	5,000	P	S 0 1 S 0 2 X 0 3	
9 1	K 0 4 6	5,000	P	S 0 1 S 0 2 X 0 3	
9 2	K 0 4 8	5,000	P	S 0 1 S 0 2 X 0 3	
9 3	K 0 4 9	5,000	P	S 0 1 S 0 2 X 0 3	
9 4	K 0 5 0	5,000	P	S 0 1 S 0 2 X 0 3	
9 5	K 0 5 1	5,000	P	S 0 1 S 0 2 X 0 3	
9 6	K 0 5 2	5,000	P	S 0 1 S 0 2 X 0 3	
9 7	K 0 6 1	5,000	P	S 0 1 S 0 2 X 0 3	
9 8	K 0 6 4	5,000	P	S 0 1 S 0 2 X 0 3	
9 9	K 0 6 5	5,000	P	S 0 1 S 0 2 X 0 3	
10 0	K 0 6 6	5,000	P	S 0 1 S 0 2 X 0 3	
10 1	K 0 7 1	5,000	P	S 0 1 S 0 2 X 0 3	
10 2	K 0 7 3	5,000	P	S 0 1 S 0 2 X 0 3	
10 3	K 0 8 3	5,000	P	S 0 1 S 0 2 X 0 3	
10 4	K 0 8 4	5,000	P	S 0 1 S 0 2 X 0 3	
10 5	K 0 8 5	5,000	P	S 0 1 S 0 2 X 0 3	
10 6	K 0 8 6	5,000	P	S 0 1 S 0 2 X 0 3	
10 7	K 0 8 7	5,000	P	S 0 1 S 0 2 X 0 3	
10 8	K 0 8 8	5,000	P	S 0 1 S 0 2 X 0 3	
10 9	K 0 9 0	5,000	P	S 0 1 S 0 2 X 0 3	
11 0	K 0 9 1	5,000	P	S 0 1 S 0 2 X 0 3	
11 1	K 0 9 3	5,000	P	S 0 1 S 0 2 X 0 3	
11 2	K 0 9 4	5,000	P	S 0 1 S 0 2 X 0 3	
11 3	K 0 9 5	5,000	P	S 0 1 S 0 2 X 0 3	
11 4	K 0 9 6	5,000	P	S 0 1 S 0 2 X 0 3	
11 5	K 0 9 7	5,000	P	S 0 1 S 0 2 X 0 3	
11 6	K 0 9 8	5,000	P	S 0 1 S 0 2 X 0 3	
11 7	K 1 0 0	5,000	P	S 0 1 S 0 2 X 0 3	

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10. Description of Hazardous Wastes (Continued. Use this Additional Sheet (s) as necessary; munber as 5a, etc.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in E(1))
11 8	K 1 0 1	5,000	P	S 0 1 S 0 2 X 0 3	
11 9	K 1 0 2	5,000	P	S 0 1 S 0 2 X 0 3	
12 0	K 1 0 3	5,000	P	S 0 1 S 0 2 X 0 3	
12 1	K 1 0 4	5,000	P	S 0 1 S 0 2 X 0 3	
12 2	K 1 0 5	5,000	P	S 0 1 S 0 2 X 0 3	
12 3	K 1 0 6	5,000	P	S 0 1 S 0 2 X 0 3	
12 4	K 1 1 2	5,000	P	S 0 1 S 0 2 X 0 3	
12 5	K 1 1 3	5,000	P	S 0 1 S 0 2 X 0 3	
12 6	K 1 1 4	5,000	P	S 0 1 S 0 2 X 0 3	
12 7	K 1 1 5	5,000	P	S 0 1 S 0 2 X 0 3	
12 8	K 1 1 6	5,000	P	S 0 1 S 0 2 X 0 3	
12 9	K 1 1 7	5,000	P	S 0 1 S 0 2 X 0 3	
13 0	K 1 1 8	5,000	P	S 0 1 S 0 2 X 0 3	
13 1	K 1 2 5	5,000	P	S 0 1 S 0 2 X 0 3	
13 2	K 1 2 6	5,000	P	S 0 1 S 0 2 X 0 3	
13 3	P 0 0 1	5,000	P	S 0 1 S 0 2 X 0 3	
13 4	P 0 0 2	5,000	P	S 0 1 S 0 2 X 0 3	
13 5	P 0 0 3	5,000	P	S 0 1 S 0 2 X 0 3	
13 6	P 0 0 4	5,000	P	S 0 1 S 0 2 X 0 3	
13 7	P 0 0 5	5,000	P	S 0 1 S 0 2 X 0 3	
13 8	P 0 0 7	5,000	P	S 0 1 S 0 2 X 0 3	
13 9	P 0 0 8	5,000	P	S 0 1 S 0 2 X 0 3	
14 0	P 0 1 0	5,000	P	S 0 1 S 0 2 X 0 3	
14 1	P 0 1 1	5,000	P	S 0 1 S 0 2 X 0 3	
14 2	P 0 1 2	5,000	P	S 0 1 S 0 2 X 0 3	
14 3	P 0 1 3	5,000	P	S 0 1 S 0 2 X 0 3	
14 4	P 0 1 4	5,000	P	S 0 1 S 0 2 X 0 3	
14 5	P 0 1 5	5,000	P	S 0 1 S 0 2 X 0 3	
14 6	P 0 1 6	5,000	P	S 0 1 S 0 2 X 0 3	
14 7	P 0 1 7	5,000	P	S 0 1 S 0 2 X 0 3	
14 8	P 0 1 8	5,000	P	S 0 1 S 0 2 X 0 3	
14 9	P 0 2 0	5,000	P	S 0 1 S 0 2 X 0 3	
15 0	P 0 2 1	5,000	P	S 0 1 S 0 2 X 0 3	
15 1	P 0 2 2	5,000	P	S 0 1 S 0 2 X 0 3	
15 2	P 0 2 3	5,000	P	S 0 1 S 0 2 X 0 3	
15 3	P 0 2 4	5,000	P	S 0 1 S 0 2 X 0 3	
15 4	P 0 2 6	5,000	P	S 0 1 S 0 2 X 0 3	
15 5	P 0 2 7	5,000	P	S 0 1 S 0 2 X 0 3	
15 6	P 0 2 8	5,000	P	S 0 1 S 0 2 X 0 3	

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10. Description of Hazardous Wastes (Continued. Use this Additional Sheet (s) as necessary; munber as 5a, etc.)

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)									E. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in E(1))
15	7	P	0	2	9	5,000	P	S	0	1	S	0	2	X	0	3	
15	8	P	0	3	0	5,000	P	S	0	1	S	0	2	X	0	3	
15	9	P	0	3	1	5,000	P	S	0	1	S	0	2	X	0	3	
16	0	P	0	3	3	5,000	P	S	0	1	S	0	2	X	0	3	
16	1	P	0	3	4	5,000	P	S	0	1	S	0	2	X	0	3	
16	2	P	0	3	6	5,000	P	S	0	1	S	0	2	X	0	3	
16	3	P	0	3	7	5,000	P	S	0	1	S	0	2	X	0	3	
16	4	P	0	3	8	5,000	P	S	0	1	S	0	2	X	0	3	
16	5	P	0	3	9	5,000	P	S	0	1	S	0	2	X	0	3	
16	6	P	0	4	0	5,000	P	S	0	1	S	0	2	X	0	3	
16	7	P	0	4	1	5,000	P	S	0	1	S	0	2	X	0	3	
16	8	P	0	4	2	5,000	P	S	0	1	S	0	2	X	0	3	
16	9	P	0	4	3	5,000	P	S	0	1	S	0	2	X	0	3	
17	0	P	0	4	4	5,000	P	S	0	1	S	0	2	X	0	3	
17	1	P	0	4	5	5,000	P	S	0	1	S	0	2	X	0	3	
17	2	P	0	4	6	5,000	P	S	0	1	S	0	2	X	0	3	
17	3	P	0	4	7	5,000	P	S	0	1	S	0	2	X	0	3	
17	4	P	0	4	8	5,000	P	S	0	1	S	0	2	X	0	3	
17	5	P	0	4	9	5,000	P	S	0	1	S	0	2	X	0	3	
17	6	P	0	5	0	5,000	P	S	0	1	S	0	2	X	0	3	
17	7	P	0	5	1	5,000	P	S	0	1	S	0	2	X	0	3	
17	8	P	0	5	4	5,000	P	S	0	1	S	0	2	X	0	3	
17	9	P	0	5	6	5,000	P	S	0	1	S	0	2	X	0	3	
18	0	P	0	5	7	5,000	P	S	0	1	S	0	2	X	0	3	
18	1	P	0	5	8	5,000	P	S	0	1	S	0	2	X	0	3	
18	2	P	0	5	9	5,000	P	S	0	1	S	0	2	X	0	3	
18	3	P	0	6	0	5,000	P	S	0	1	S	0	2	X	0	3	
18	4	P	0	6	2	5,000	P	S	0	1	S	0	2	X	0	3	
18	5	P	0	6	3	5,000	P	S	0	1	S	0	2	X	0	3	
18	6	P	0	6	4	5,000	P	S	0	1	S	0	2	X	0	3	
18	7	P	0	6	6	5,000	P	S	0	1	S	0	2	X	0	3	
18	8	P	0	6	7	5,000	P	S	0	1	S	0	2	X	0	3	
18	9	P	0	6	8	5,000	P	S	0	1	S	0	2	X	0	3	
19	0	P	0	6	9	5,000	P	S	0	1	S	0	2	X	0	3	
19	1	P	0	7	0	5,000	P	S	0	1	S	0	2	X	0	3	
19	2	P	0	7	1	5,000	P	S	0	1	S	0	2	X	0	3	
19	3	P	0	7	2	5,000	P	S	0	1	S	0	2	X	0	3	
19	4	P	0	7	3	5,000	P	S	0	1	S	0	2	X	0	3	
19	5	P	0	7	4	5,000	P	S	0	1	S	0	2	X	0	3	

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10. Description of Hazardous Wastes (Continued. Use this Additional Sheet (s) as necessary; munber as 5a, etc.)

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)									E. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in E(1))
19	6	P	0	7	5	5,000	P	S	0	1	S	0	2	X	0	3	
19	7	P	0	7	7	5,000	P	S	0	1	S	0	2	X	0	3	
19	8	P	0	7	8	5,000	P	S	0	1	S	0	2	X	0	3	
19	9	P	0	8	2	5,000	P	S	0	1	S	0	2	X	0	3	
20	0	P	0	8	4	5,000	P	S	0	1	S	0	2	X	0	3	
20	1	P	0	8	5	5,000	P	S	0	1	S	0	2	X	0	3	
20	2	P	0	8	7	5,000	P	S	0	1	S	0	2	X	0	3	
20	3	P	0	8	8	5,000	P	S	0	1	S	0	2	X	0	3	
20	4	P	0	8	9	5,000	P	S	0	1	S	0	2	X	0	3	
20	5	P	0	9	2	5,000	P	S	0	1	S	0	2	X	0	3	
20	6	P	0	9	3	5,000	P	S	0	1	S	0	2	X	0	3	
20	7	P	0	9	4	5,000	P	S	0	1	S	0	2	X	0	3	
20	8	P	0	9	5	5,000	P	S	0	1	S	0	2	X	0	3	
20	9	P	0	9	6	5,000	P	S	0	1	S	0	2	X	0	3	
21	0	P	0	9	7	5,000	P	S	0	1	S	0	2	X	0	3	
21	1	P	0	9	8	5,000	P	S	0	1	S	0	2	X	0	3	
21	2	P	0	9	9	5,000	P	S	0	1	S	0	2	X	0	3	
21	3	P	1	0	1	5,000	P	S	0	1	S	0	2	X	0	3	
21	4	P	1	0	2	5,000	P	S	0	1	S	0	2	X	0	3	
21	5	P	1	0	3	5,000	P	S	0	1	S	0	2	X	0	3	
21	6	P	1	0	4	5,000	P	S	0	1	S	0	2	X	0	3	
21	7	P	1	0	5	5,000	P	S	0	1	S	0	2	X	0	3	
21	8	P	1	0	8	5,000	P	S	0	1	S	0	2	X	0	3	
21	9	P	1	0	9	5,000	P	S	0	1	S	0	2	X	0	3	
22	0	P	1	1	0	5,000	P	S	0	1	S	0	2	X	0	3	
22	1	P	1	1	3	5,000	P	S	0	1	S	0	2	X	0	3	
22	2	P	1	1	4	5,000	P	S	0	1	S	0	2	X	0	3	
22	3	P	1	1	5	5,000	P	S	0	1	S	0	2	X	0	3	
22	4	P	1	1	6	5,000	P	S	0	1	S	0	2	X	0	3	
22	5	P	1	1	8	5,000	P	S	0	1	S	0	2	X	0	3	
22	6	P	1	1	9	5,000	P	S	0	1	S	0	2	X	0	3	
22	7	P	1	2	0	5,000	P	S	0	1	S	0	2	X	0	3	
22	8	P	1	2	1	5,000	P	S	0	1	S	0	2	X	0	3	
22	9	P	1	2	3	5,000	P	S	0	1	S	0	2	X	0	3	
23	0	U	0	0	1	5,000	P	S	0	1	S	0	2	X	0	3	
23	1	U	0	0	2	5,000	P	S	0	1	S	0	2	X	0	3	
23	2	U	0	0	3	5,000	P	S	0	1	S	0	2	X	0	3	
23	3	U	0	0	4	5,000	P	S	0	1	S	0	2	X	0	3	
23	4	U	0	0	5	5,000	P	S	0	1	S	0	2	X	0	3	

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10. Description of Hazardous Wastes (Continued. Use this Additional Sheet (s) as necessary; munber as 5a, etc.)

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)									E. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in E(1))
23	5	U	0	0	7	5,000	P	S	0	1	S	0	2	X	0	3	
23	6	U	0	0	8	5,000	P	S	0	1	S	0	2	X	0	3	
23	7	U	0	0	9	5,000	P	S	0	1	S	0	2	X	0	3	
23	8	U	0	1	0	5,000	P	S	0	1	S	0	2	X	0	3	
23	9	U	0	1	1	5,000	P	S	0	1	S	0	2	X	0	3	
24	0	U	0	1	2	5,000	P	S	0	1	S	0	2	X	0	3	
24	1	U	0	1	4	5,000	P	S	0	1	S	0	2	X	0	3	
24	2	U	0	1	5	5,000	P	S	0	1	S	0	2	X	0	3	
24	3	U	0	1	6	5,000	P	S	0	1	S	0	2	X	0	3	
24	4	U	0	1	7	5,000	P	S	0	1	S	0	2	X	0	3	
24	5	U	0	1	8	5,000	P	S	0	1	S	0	2	X	0	3	
24	6	U	0	1	9	5,000	P	S	0	1	S	0	2	X	0	3	
24	7																Intentionally blank
24	8	U	0	2	2	5,000	P	S	0	1	S	0	2	X	0	3	
24	9	U	0	2	4	5,000	P	S	0	1	S	0	2	X	0	3	
25	0	U	0	2	5	5,000	P	S	0	1	S	0	2	X	0	3	
25	1	U	0	2	6	5,000	P	S	0	1	S	0	2	X	0	3	
25	2	U	0	2	7	5,000	P	S	0	1	S	0	2	X	0	3	
25	3	U	0	2	8	5,000	P	S	0	1	S	0	2	X	0	3	
25	4	U	0	2	9	5,000	P	S	0	1	S	0	2	X	0	3	
25	5	U	0	3	0	5,000	P	S	0	1	S	0	2	X	0	3	
25	6	U	0	3	1	5,000	P	S	0	1	S	0	2	X	0	3	
25	7	U	0	3	2	5,000	P	S	0	1	S	0	2	X	0	3	
25	8	U	0	3	4	5,000	P	S	0	1	S	0	2	X	0	3	
25	9	U	0	3	5	5,000	P	S	0	1	S	0	2	X	0	3	
26	0	U	0	3	6	5,000	P	S	0	1	S	0	2	X	0	3	
26	1	U	0	3	7	5,000	P	S	0	1	S	0	2	X	0	3	
26	2	U	0	3	8	5,000	P	S	0	1	S	0	2	X	0	3	
26	3	U	0	3	9	5,000	P	S	0	1	S	0	2	X	0	3	
26	4	U	0	4	1	5,000	P	S	0	1	S	0	2	X	0	3	
26	5	U	0	4	2	5,000	P	S	0	1	S	0	2	X	0	3	
26	6	U	0	4	3	5,000	P	S	0	1	S	0	2	X	0	3	
26	7	U	0	4	4	5,000	P	S	0	1	S	0	2	X	0	3	
26	8	U	0	4	5	5,000	P	S	0	1	S	0	2	X	0	3	
26	9	U	0	4	6	5,000	P	S	0	1	S	0	2	X	0	3	
27	0	U	0	4	7	5,000	P	S	0	1	S	0	2	X	0	3	
27	1	U	0	4	8	5,000	P	S	0	1	S	0	2	X	0	3	
27	2	U	0	4	9	5,000	P	S	0	1	S	0	2	X	0	3	
27	3	U	0	5	0	5,000	P	S	0	1	S	0	2	X	0	3	

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10. Description of Hazardous Wastes (Continued. Use this Additional Sheet (s) as necessary; munber as 5a, etc.)

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in E(1))
27	4	U	0	5	1	5,000	P	S	0	1	S	0	2	X	0	3	
27	5	U	0	5	2	5,000	P	S	0	1	S	0	2	X	0	3	
27	6	U	0	5	3	5,000	P	S	0	1	S	0	2	X	0	3	
27	7	U	0	5	5	5,000	P	S	0	1	S	0	2	X	0	3	
27	8	U	0	5	6	5,000	P	S	0	1	S	0	2	X	0	3	
27	9	U	0	5	7	5,000	P	S	0	1	S	0	2	X	0	3	
28	0	U	0	5	8	5,000	P	S	0	1	S	0	2	X	0	3	
28	1	U	0	5	9	5,000	P	S	0	1	S	0	2	X	0	3	
28	2	U	0	6	0	5,000	P	S	0	1	S	0	2	X	0	3	
28	3	U	0	6	1	5,000	P	S	0	1	S	0	2	X	0	3	
28	4	U	0	6	2	5,000	P	S	0	1	S	0	2	X	0	3	
28	5	U	0	6	3	5,000	P	S	0	1	S	0	2	X	0	3	
28	6	U	0	6	4	5,000	P	S	0	1	S	0	2	X	0	3	
28	7	U	0	6	6	5,000	P	S	0	1	S	0	2	X	0	3	
28	8	U	0	6	7	5,000	P	S	0	1	S	0	2	X	0	3	
28	9	U	0	6	8	5,000	P	S	0	1	S	0	2	X	0	3	
29	0	U	0	6	9	5,000	P	S	0	1	S	0	2	X	0	3	
29	1	U	0	7	0	5,000	P	S	0	1	S	0	2	X	0	3	
29	2	U	0	7	1	5,000	P	S	0	1	S	0	2	X	0	3	
29	3	U	0	7	2	5,000	P	S	0	1	S	0	2	X	0	3	
29	4	U	0	7	3	5,000	P	S	0	1	S	0	2	X	0	3	
29	5	U	0	7	4	5,000	P	S	0	1	S	0	2	X	0	3	
29	6	U	0	7	5	5,000	P	S	0	1	S	0	2	X	0	3	
29	7	U	0	7	6	5,000	P	S	0	1	S	0	2	X	0	3	
29	8	U	0	7	7	5,000	P	S	0	1	S	0	2	X	0	3	
29	9	U	0	7	8	5,000	P	S	0	1	S	0	2	X	0	3	
30	0	U	0	7	9	5,000	P	S	0	1	S	0	2	X	0	3	
30	1	U	0	8	0	5,000	P	S	0	1	S	0	2	X	0	3	
30	2	U	0	8	1	5,000	P	S	0	1	S	0	2	X	0	3	
30	3	U	0	8	2	5,000	P	S	0	1	S	0	2	X	0	3	
30	4	U	0	8	3	5,000	P	S	0	1	S	0	2	X	0	3	
30	5	U	0	8	4	5,000	P	S	0	1	S	0	2	X	0	3	
30	6	U	0	8	5	5,000	P	S	0	1	S	0	2	X	0	3	
30	7	U	0	8	6	5,000	P	S	0	1	S	0	2	X	0	3	
30	8	U	0	8	7	5,000	P	S	0	1	S	0	2	X	0	3	
30	9	U	0	8	8	5,000	P	S	0	1	S	0	2	X	0	3	
31	0	U	0	8	9	5,000	P	S	0	1	S	0	2	X	0	3	
31	1	U	0	9	0	5,000	P	S	0	1	S	0	2	X	0	3	
31	2	U	0	9	1	5,000	P	S	0	1	S	0	2	X	0	3	

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10. Description of Hazardous Wastes (Continued. Use this Additional Sheet (s) as necessary; munber as 5a, etc.)

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in E(1))
31	3	U	0	9	2	5,000	P	S	0	1	S	0	2	X	0	3	
31	4	U	0	9	3	5,000	P	S	0	1	S	0	2	X	0	3	
31	5	U	0	9	4	5,000	P	S	0	1	S	0	2	X	0	3	
31	6	U	0	9	5	5,000	P	S	0	1	S	0	2	X	0	3	
31	7	U	0	9	7	5,000	P	S	0	1	S	0	2	X	0	3	
31	8	U	0	9	8	5,000	P	S	0	1	S	0	2	X	0	3	
31	9	U	0	9	9	5,000	P	S	0	1	S	0	2	X	0	3	
32	0	U	1	0	1	5,000	P	S	0	1	S	0	2	X	0	3	
32	1	U	1	0	2	5,000	P	S	0	1	S	0	2	X	0	3	
32	2	U	1	0	3	5,000	P	S	0	1	S	0	2	X	0	3	
32	3	U	1	0	5	5,000	P	S	0	1	S	0	2	X	0	3	
32	4	U	1	0	6	5,000	P	S	0	1	S	0	2	X	0	3	
32	5	U	1	0	7	5,000	P	S	0	1	S	0	2	X	0	3	
32	6	U	1	0	8	5,000	P	S	0	1	S	0	2	X	0	3	
32	7	U	1	0	9	5,000	P	S	0	1	S	0	2	X	0	3	
32	8	U	1	1	0	5,000	P	S	0	1	S	0	2	X	0	3	
32	9	U	1	1	1	5,000	P	S	0	1	S	0	2	X	0	3	
33	0	U	1	1	2	5,000	P	S	0	1	S	0	2	X	0	3	
33	1	U	1	1	3	5,000	P	S	0	1	S	0	2	X	0	3	
33	2	U	1	1	4	5,000	P	S	0	1	S	0	2	X	0	3	
33	3	U	1	1	5	5,000	P	S	0	1	S	0	2	X	0	3	
33	4	U	1	1	6	5,000	P	S	0	1	S	0	2	X	0	3	
33	5	U	1	1	7	5,000	P	S	0	1	S	0	2	X	0	3	
33	6	U	1	1	8	5,000	P	S	0	1	S	0	2	X	0	3	
33	7	U	1	1	9	5,000	P	S	0	1	S	0	2	X	0	3	
33	8	U	1	2	0	5,000	P	S	0	1	S	0	2	X	0	3	
33	9	U	1	2	1	5,000	P	S	0	1	S	0	2	X	0	3	
34	0	U	1	2	2	5,000	P	S	0	1	S	0	2	X	0	3	
34	1	U	1	2	4	5,000	P	S	0	1	S	0	2	X	0	3	
34	2	U	1	2	5	5,000	P	S	0	1	S	0	2	X	0	3	
34	3	U	1	2	6	5,000	P	S	0	1	S	0	2	X	0	3	
34	4	U	1	2	7	5,000	P	S	0	1	S	0	2	X	0	3	
34	5	U	1	2	8	5,000	P	S	0	1	S	0	2	X	0	3	
34	6	U	1	2	9	5,000	P	S	0	1	S	0	2	X	0	3	
34	7	U	1	3	0	5,000	P	S	0	1	S	0	2	X	0	3	
34	8	U	1	3	1	5,000	P	S	0	1	S	0	2	X	0	3	
34	9	U	1	3	2	5,000	P	S	0	1	S	0	2	X	0	3	
35	0	U	1	3	5	5,000	P	S	0	1	S	0	2	X	0	3	
35	1	U	1	3	6	5,000	P	S	0	1	S	0	2	X	0	3	

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10. Description of Hazardous Wastes (Continued. Use this Additional Sheet (s) as necessary; munber as 5a, etc.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)	E. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in E(1))
35 2	U 1 3 7	5,000	P	S 0 1 S 0 2 X 0 3	
35 3	U 1 3 8	5,000	P	S 0 1 S 0 2 X 0 3	
35 4	U 1 4 0	5,000	P	S 0 1 S 0 2 X 0 3	
35 5	U 1 4 1	5,000	P	S 0 1 S 0 2 X 0 3	
35 6	U 1 4 2	5,000	P	S 0 1 S 0 2 X 0 3	
35 7	U 1 4 3	5,000	P	S 0 1 S 0 2 X 0 3	
35 8	U 1 4 4	5,000	P	S 0 1 S 0 2 X 0 3	
35 9	U 1 4 5	5,000	P	S 0 1 S 0 2 X 0 3	
36 0	U 1 4 6	5,000	P	S 0 1 S 0 2 X 0 3	
36 1	U 1 4 7	5,000	P	S 0 1 S 0 2 X 0 3	
36 2	U 1 4 8	5,000	P	S 0 1 S 0 2 X 0 3	
36 3	U 1 4 9	5,000	P	S 0 1 S 0 2 X 0 3	
36 4	U 1 5 0	5,000	P	S 0 1 S 0 2 X 0 3	
36 5	U 1 5 1	5,000	P	S 0 1 S 0 2 X 0 3	
36 6	U 1 5 2	5,000	P	S 0 1 S 0 2 X 0 3	
36 7	U 1 5 3	5,000	P	S 0 1 S 0 2 X 0 3	
36 8	U 1 5 4	5,000	P	S 0 1 S 0 2 X 0 3	
36 9	U 1 5 5	5,000	P	S 0 1 S 0 2 X 0 3	
37 0	U 1 5 6	5,000	P	S 0 1 S 0 2 X 0 3	
37 1	U 1 5 7	5,000	P	S 0 1 S 0 2 X 0 3	
37 2	U 1 5 8	5,000	P	S 0 1 S 0 2 X 0 3	
37 3	U 1 5 9	5,000	P	S 0 1 S 0 2 X 0 3	
37 4	U 1 6 1	5,000	P	S 0 1 S 0 2 X 0 3	
37 5	U 1 6 2	5,000	P	S 0 1 S 0 2 X 0 3	
37 6	U 1 6 3	5,000	P	S 0 1 S 0 2 X 0 3	
37 7	U 1 6 4	5,000	P	S 0 1 S 0 2 X 0 3	
37 8	U 1 6 5	5,000	P	S 0 1 S 0 2 X 0 3	
37 9	U 1 6 6	5,000	P	S 0 1 S 0 2 X 0 3	
38 0	U 1 6 7	5,000	P	S 0 1 S 0 2 X 0 3	
38 1	U 1 6 8	5,000	P	S 0 1 S 0 2 X 0 3	
38 2	U 1 6 9	5,000	P	S 0 1 S 0 2 X 0 3	
38 3	U 1 7 0	5,000	P	S 0 1 S 0 2 X 0 3	
38 4	U 1 7 1	5,000	P	S 0 1 S 0 2 X 0 3	
38 5	U 1 7 2	5,000	P	S 0 1 S 0 2 X 0 3	
38 6	U 1 7 3	5,000	P	S 0 1 S 0 2 X 0 3	
38 7	U 1 7 4	5,000	P	S 0 1 S 0 2 X 0 3	
38 8	U 1 7 6	5,000	P	S 0 1 S 0 2 X 0 3	
38 9	U 1 7 7	5,000	P	S 0 1 S 0 2 X 0 3	
39 0	U 1 7 8	5,000	P	S 0 1 S 0 2 X 0 3	

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10. Description of Hazardous Wastes (Continued. Use this Additional Sheet (s) as necessary; munber as 5a, etc.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in E(1))
39 1	U 1 7 9	5,000	P	S 0 1 S 0 2 X 0 3	
39 2	U 1 8 0	5,000	P	S 0 1 S 0 2 X 0 3	
39 3	U 1 8 1	5,000	P	S 0 1 S 0 2 X 0 3	
39 4	U 1 8 2	5,000	P	S 0 1 S 0 2 X 0 3	
39 5	U 1 8 3	5,000	P	S 0 1 S 0 2 X 0 3	
39 6	U 1 8 4	5,000	P	S 0 1 S 0 2 X 0 3	
39 7	U 1 8 5	5,000	P	S 0 1 S 0 2 X 0 3	
39 8	U 1 8 6	5,000	P	S 0 1 S 0 2 X 0 3	
39 9	U 1 8 7	5,000	P	S 0 1 S 0 2 X 0 3	
40 0	U 1 8 8	5,000	P	S 0 1 S 0 2 X 0 3	
40 1	U 1 9 0	5,000	P	S 0 1 S 0 2 X 0 3	
40 2	U 1 9 1	5,000	P	S 0 1 S 0 2 X 0 3	
40 3	U 1 9 2	5,000	P	S 0 1 S 0 2 X 0 3	
40 4	U 1 9 3	5,000	P	S 0 1 S 0 2 X 0 3	
40 5	U 1 9 4	5,000	P	S 0 1 S 0 2 X 0 3	
40 6	U 1 9 6	5,000	P	S 0 1 S 0 2 X 0 3	
40 7	U 1 9 7	5,000	P	S 0 1 S 0 2 X 0 3	
40 8	U 2 0 0	5,000	P	S 0 1 S 0 2 X 0 3	
40 9	U 2 0 1	5,000	P	S 0 1 S 0 2 X 0 3	
41 0	U 2 0 2	5,000	P	S 0 1 S 0 2 X 0 3	
41 1	U 2 0 3	5,000	P	S 0 1 S 0 2 X 0 3	
41 2	U 2 0 4	5,000	P	S 0 1 S 0 2 X 0 3	
41 3	U 2 0 6	5,000	P	S 0 1 S 0 2 X 0 3	
41 4	U 2 0 7	5,000	P	S 0 1 S 0 2 X 0 3	
41 5	U 2 0 8	5,000	P	S 0 1 S 0 2 X 0 3	
41 6	U 2 0 9	5,000	P	S 0 1 S 0 2 X 0 3	
41 7	U 2 1 0	5,000	P	S 0 1 S 0 2 X 0 3	
41 8	U 2 1 1	5,000	P	S 0 1 S 0 2 X 0 3	
41 9	U 2 1 3	5,000	P	S 0 1 S 0 2 X 0 3	
42 0	U 2 1 4	5,000	P	S 0 1 S 0 2 X 0 3	
42 1	U 2 1 5	5,000	P	S 0 1 S 0 2 X 0 3	
42 2	U 2 1 6	5,000	P	S 0 1 S 0 2 X 0 3	
42 3	U 2 1 7	5,000	P	S 0 1 S 0 2 X 0 3	
42 4	U 2 1 8	5,000	P	S 0 1 S 0 2 X 0 3	
42 5	U 2 1 9	5,000	P	S 0 1 S 0 2 X 0 3	
42 6	U 2 2 0	5,000	P	S 0 1 S 0 2 X 0 3	
42 7	U 2 2 1	5,000	P	S 0 1 S 0 2 X 0 3	
42 8	U 2 2 2	5,000	P	S 0 1 S 0 2 X 0 3	
42 9	U 2 2 5	5,000	P	S 0 1 S 0 2 X 0 3	

US EPA ARCHIVE DOCUMENT

10. Description of Hazardous Wastes (Continued. Use this Additional Sheet (s) as necessary; munber as 5a, etc.)

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)									E. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in E(1))
43	0	U	2	2	6	5,000	P	S	0	1	S	0	2	X	0	3	
44	1	U	2	2	7	5,000	P	S	0	1	S	0	2	X	0	3	
44	2	U	2	2	8	5,000	P	S	0	1	S	0	2	X	0	3	
44	3	U	2	3	5	5,000	P	S	0	1	S	0	2	X	0	3	
44	4	U	2	3	6	5,000	P	S	0	1	S	0	2	X	0	3	
44	5	U	2	3	7	5,000	P	S	0	1	S	0	2	X	0	3	
44	6	U	2	3	8	5,000	P	S	0	1	S	0	2	X	0	3	
44	7	U	2	3	9	5,000	P	S	0	1	S	0	2	X	0	3	
44	8	U	2	4	0	5,000	P	S	0	1	S	0	2	X	0	3	
44	9	U	2	4	3	5,000	P	S	0	1	S	0	2	X	0	3	
45	0	U	2	4	4	5,000	P	S	0	1	S	0	2	X	0	3	
45	1	U	2	4	6	5,000	P	S	0	1	S	0	2	X	0	3	
45	2	U	2	4	7	5,000	P	S	0	1	S	0	2	X	0	3	
45	3	U	2	4	8	5,000	P	S	0	1	S	0	2	X	0	3	
45	4	U	2	4	9	5,000	P	S	0	1	S	0	2	X	0	3	
45	5	U	3	2	8	5,000	P	S	0	1	S	0	2	X	0	3	
45	6	U	3	5	3	5,000	P	S	0	1	S	0	2	X	0	3	
45	7	U	3	5	9	5,000	P	S	0	1	S	0	2	X	0	3	
45	8																
45	9																
46	0																
46	1																
46	2																
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46	6																
46	7																
46	8																
46	9																
47	0																
47	1																
47	2																
47	3																
47	4																
47	5																
47	6																
47	7																
47	8																

US EPA ARCHIVE DOCUMENT

11. Map (See instructions on pages 25 and 26)

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

12. Facility Drawing (See instructions on page 26)

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

13. Photographs (See instructions on page 26)

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

14. Comments (See instructions on page 26)

ATTACHMENT A – Item 9 – Facility Owner Information

EPA ID NUMBER: AZD982441236

NAME OF FACILITY'S LEGAL OWNER (Owner Type P):

SIEMENS INDUSTRY, INC.
2523 MUTAHAR STREET
PARKER, ARIZONA 85344-4005
TELEPHONE: (928) 669-5758

CORPORATE HEADQUARTERS OF FACILITY'S LEGAL OWNER:

SIEMENS INDUSTRY, INC.
181 THORN HILL ROAD
WARRENDALE, PENNSYLVANIA 15086
TELEPHONE: (724) 772-1402

NAME OF PROPERTY OWNER (Owner Type I):

COLORADO RIVER INDIAN TRIBES
RT – 1, BOX 23 – B
PARKER, ARIZONA 85344
TELEPHONE: (928) 669-9211

US EPA ARCHIVE DOCUMENT

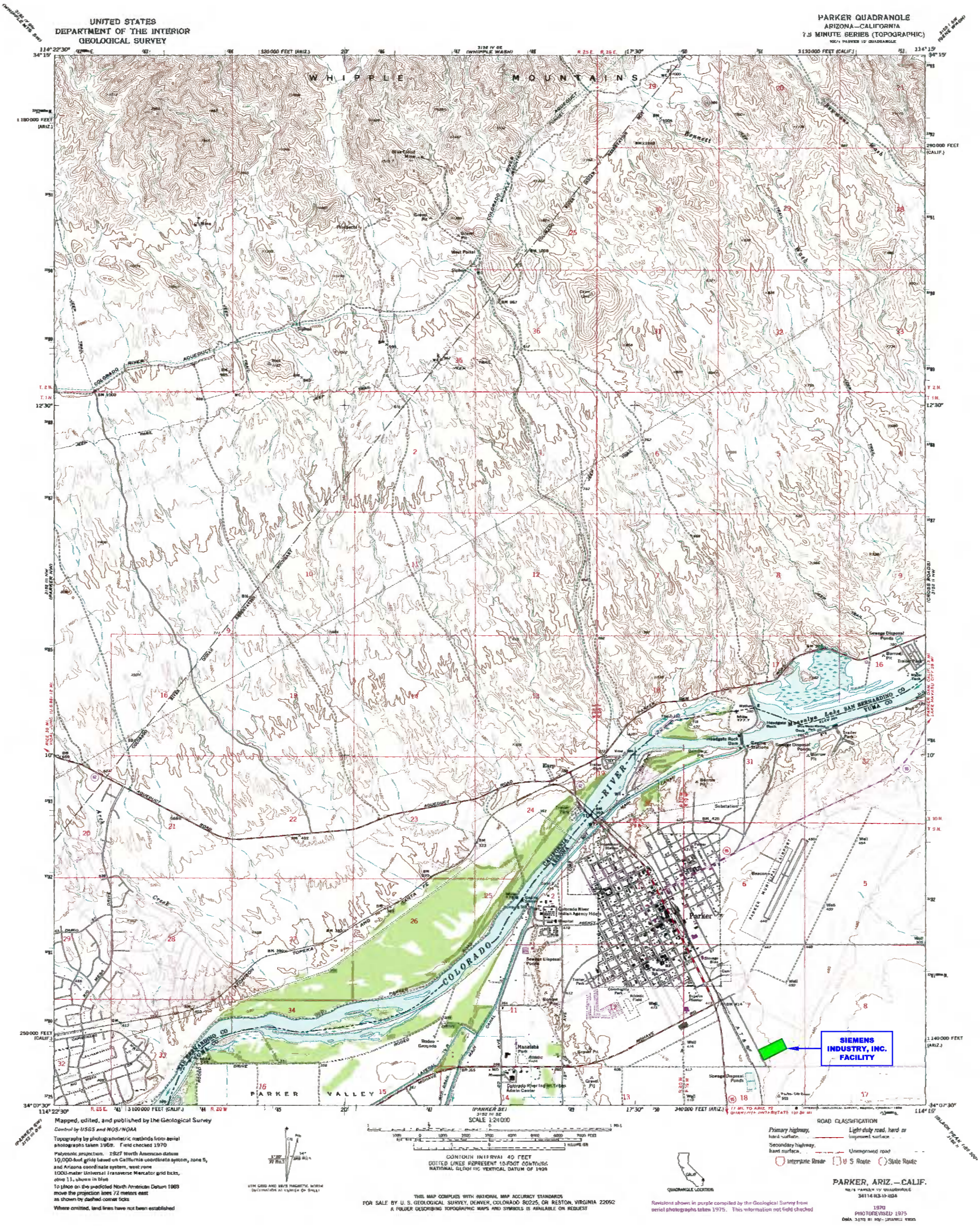
ATTACHMENT B – Item 11 – Topographic Map

DRAWING NO. C-100604 SHEET 1 OF 2 (REV. 0)
TOPOGRAPHICAL MAP 1 – PLANT SITE

DRAWING NO. C-100604 SHEET 2OF 2 (REV. 0)
TOPOGRAPHICAL MAP 2 – ADJACENT LANDS

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT



NOTES:

1. SEE ATTACHED SIEMENS INDUSTRY, INC. DRAWING D–14789–02 FOR DETAILED LOCATION OF S01, S02, AND X03.
2. THERE ARE NO INJECTION WELLS ASSOCIATED WITH THIS FACILITY.
3. THERE ARE NO SPRINGS, DRINKING WATER WELLS, NOR SURFACE WATER BODIES LOCATED WITHIN 1/4 MILE OF THIS FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
1	3/15/12	NAME CHANGED TO SIEMENS INDUSTRY, INC.	JBE	KEM	

PLOT SCALE: AS NOTED

DO NOT SCALE DRAWING

THIS DRAWING IS THE PROPERTY OF SIEMENS AND CANNOT BE REPRODUCED OR DELIVERED TO OTHERS WITHOUT THE EXPRESS WRITTEN PERMISSION OF SIEMENS INDUSTRY, INC.

CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.

DRAWN:	JBE	1/22/07
CHK'D:	KEM	1/22/07
ENG'R:		

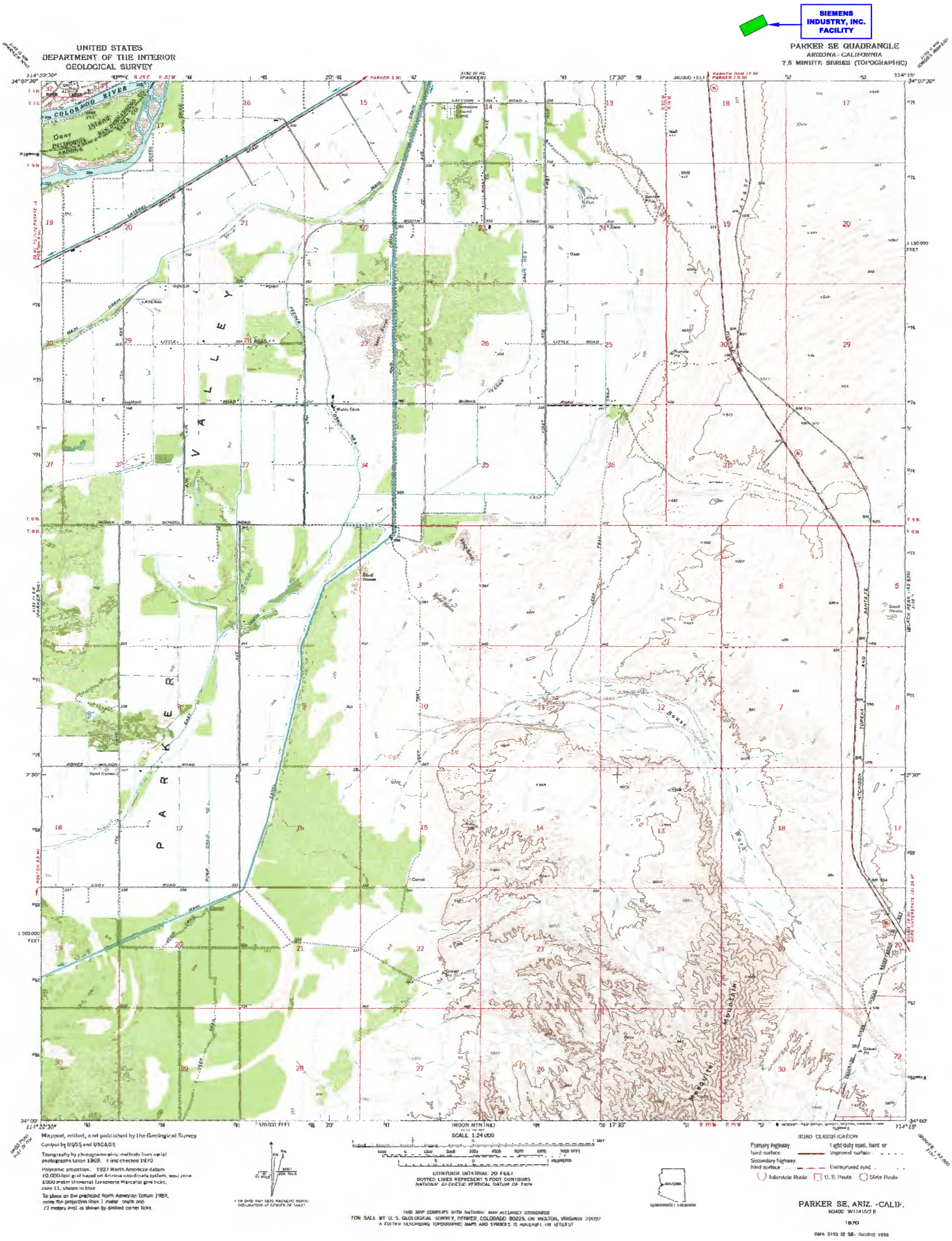
SIEMENS INDUSTRY, INC.
Parker, AZ

TITLE: U.S.G.S. SURVEY – PARKER, AZ
TOPOGRAPHIC MAP

DWG No. C–100604 | SHEET No. 1 of 2 | REV. 1

PRINT DATE: 4/19/12

US EPA ARCHIVE DOCUMENT



NOTES:

1. SEE ATTACHED SIEMENS WATER TECHNOLOGIES CORP. DRAWING D-14789-02 FOR DETAILED LOCATION OF S01, S02, AND X03.
2. THERE ARE NO INJECTION WELLS ASSOCIATED WITH THIS FACILITY.
3. THERE ARE NO SPRINGS, DRINKING WATER WELLS, NOR SURFACE WATER BODIES LOCATED WITHIN 1/4 MILE OF THIS FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
1	3/15/12	NAME CHANGED TO SIEMENS INDUSTRY, INC.	JBE	KEM	

PLOT SCALE: AS NOTED

DO NOT SCALE DRAWING

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CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.

DRAWN:	JBE	1/22/07
CHK'D:	KEM	1/22/07
ENG'R:		

SIEMENS INDUSTRY, INC.
Parker, AZ

TITLE: U.S.G.S. SURVEY – PARKER SE, AZ TOPOGRAPHIC MAP

DWG No. C-100604 | SHEET No. 2 of 2 | REV. 1

PRINT DATE: 4/19/12

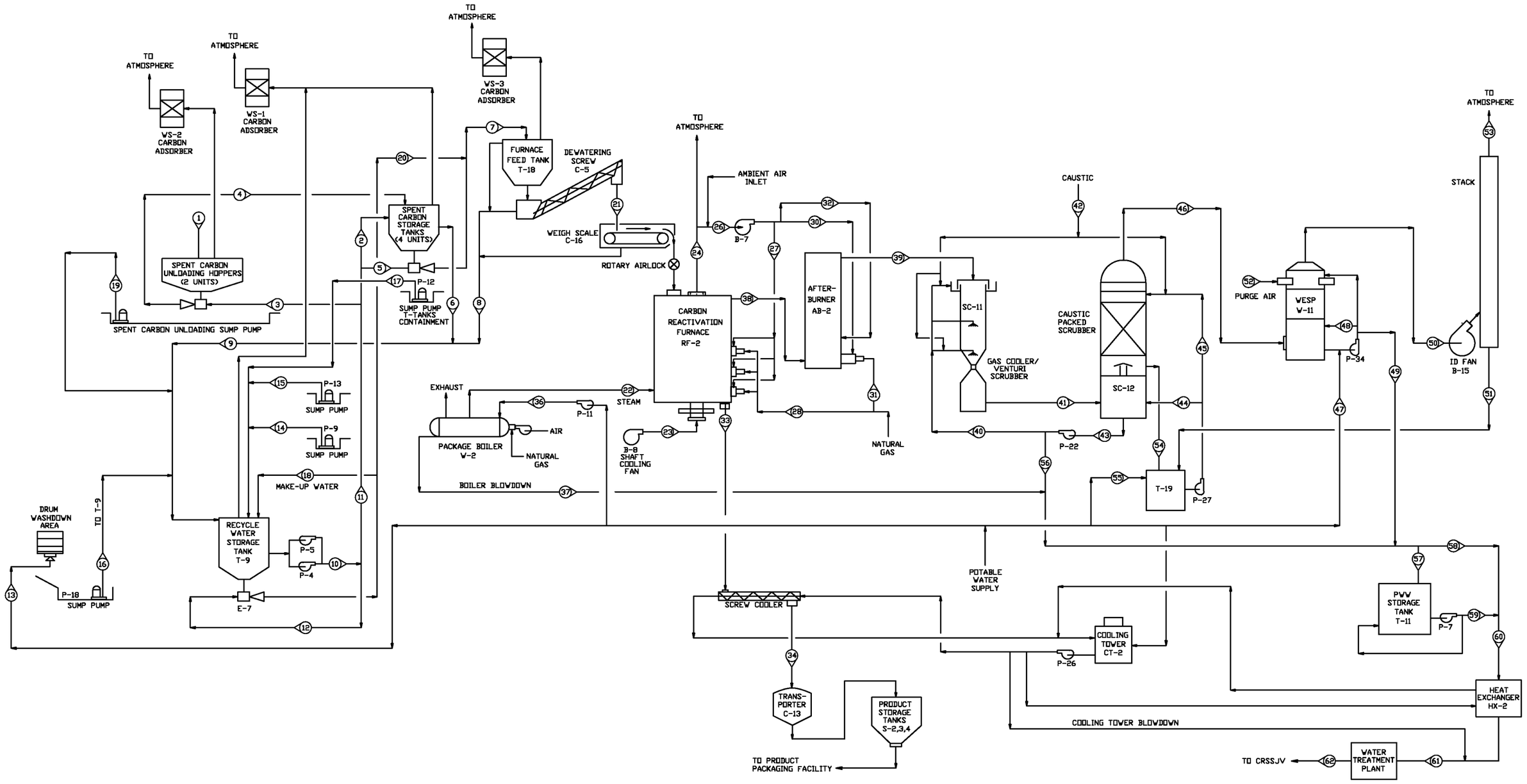
ATTACHMENT C – Item 12 – Facility Drawing

SCALE DRAWING OF PROPERTY LAYOUT

SCALE DRAWING OF FACILITY LAYOUT (EQUIPMENT LOCATION)

SCHEMATIC PROCESS FLOW DIAGRAM

US EPA ARCHIVE DOCUMENT



NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

NO	DWN	CK'D	APP	REVISIONS	DATE
2	JBE	KEM		NAME CHANGED TO SIEMENS INDUSTRY	3-15-12
1	JBE	KEM		UPDATED FOR PERMIT SUBMITTAL	2-8-07

CBE CHAVOND-BARRY ENGINEERING CORP.
400 Route 518 • P.O. Box 205 • Blawenburg, New Jersey 08504

SIEMENS INDUSTRY, INC.
2523 MUTAHAR STREET, PARKER, AZ 85344

FACILITY PROCESS FLOW DIAGRAM

DRAWN	DATE	CHECKED	DATE	APPROVED	DATE
AJW	11/27/96	KEM	11/27/96		

SCALE	DWG. NO.	REV.
NONE	1525-PR-001	2

PRINT DATE: 4/19/12

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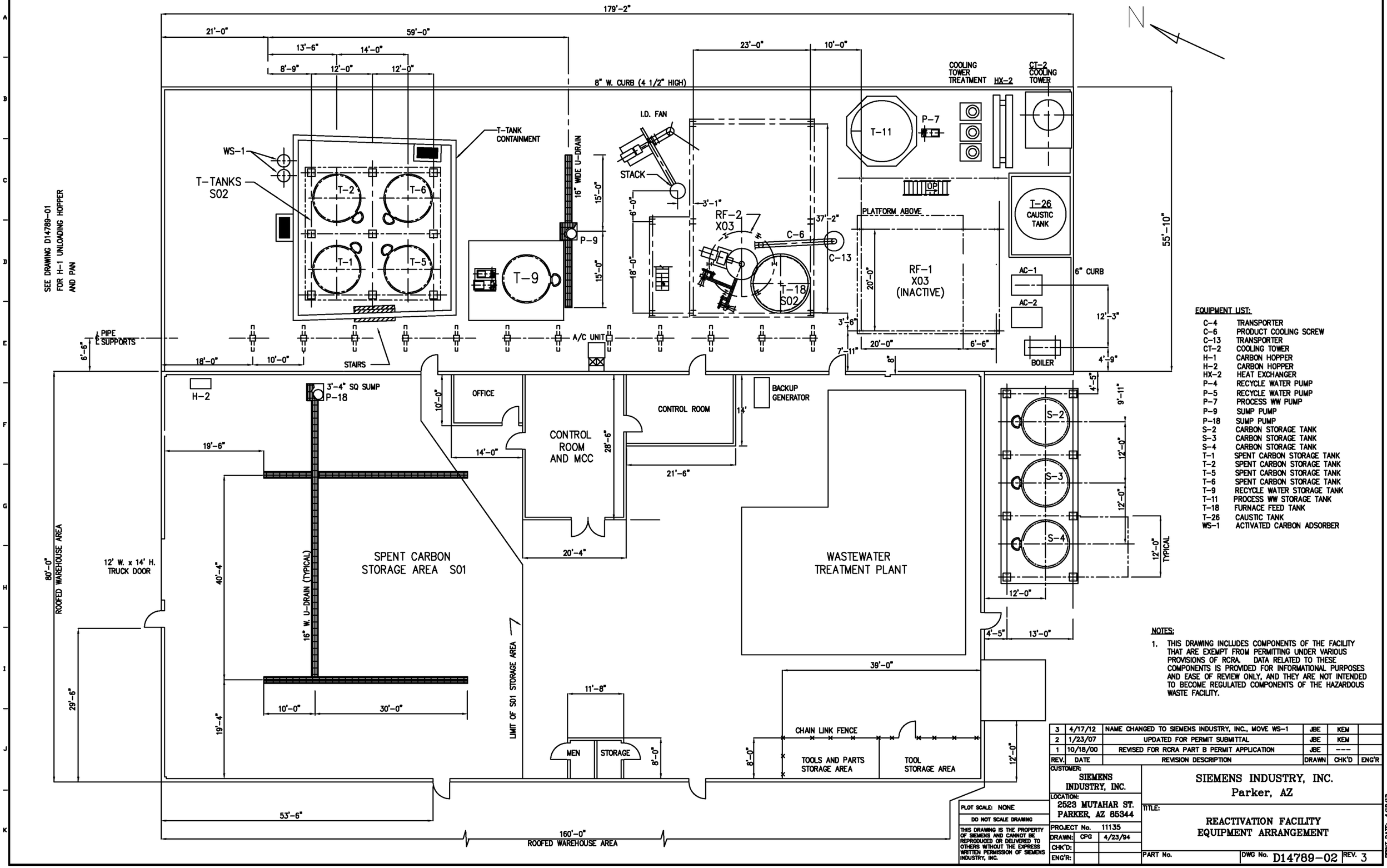
DWG: D14789-02



EQUIPMENT LIST:

C-4	TRANSPORTER
C-6	PRODUCT COOLING SCREW
C-13	TRANSPORTER
CT-2	COOLING TOWER
H-1	CARBON HOPPER
H-2	CARBON HOPPER
HX-2	HEAT EXCHANGER
P-4	RECYCLE WATER PUMP
P-5	RECYCLE WATER PUMP
P-7	PROCESS WW PUMP
P-9	SUMP PUMP
P-18	SUMP PUMP
S-2	CARBON STORAGE TANK
S-3	CARBON STORAGE TANK
S-4	CARBON STORAGE TANK
T-1	SPENT CARBON STORAGE TANK
T-2	SPENT CARBON STORAGE TANK
T-5	SPENT CARBON STORAGE TANK
T-6	SPENT CARBON STORAGE TANK
T-9	RECYCLE WATER STORAGE TANK
T-11	PROCESS WW STORAGE TANK
T-18	FURNACE FEED TANK
T-26	CAUSTIC TANK
WS-1	ACTIVATED CARBON ADSORBER

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
3	4/17/12	NAME CHANGED TO SIEMENS INDUSTRY, INC., MOVE WS-1	JBE	KEM	
2	1/23/07	UPDATED FOR PERMIT SUBMITTAL	JBE	KEM	
1	10/18/00	REVISED FOR RCRA PART B PERMIT APPLICATION	JBE	---	

PLOT SCALE: NONE

DO NOT SCALE DRAWING

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CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No. 11135

DRAWN:	CPG	4/23/94
CHK'D:		
ENG'R:		

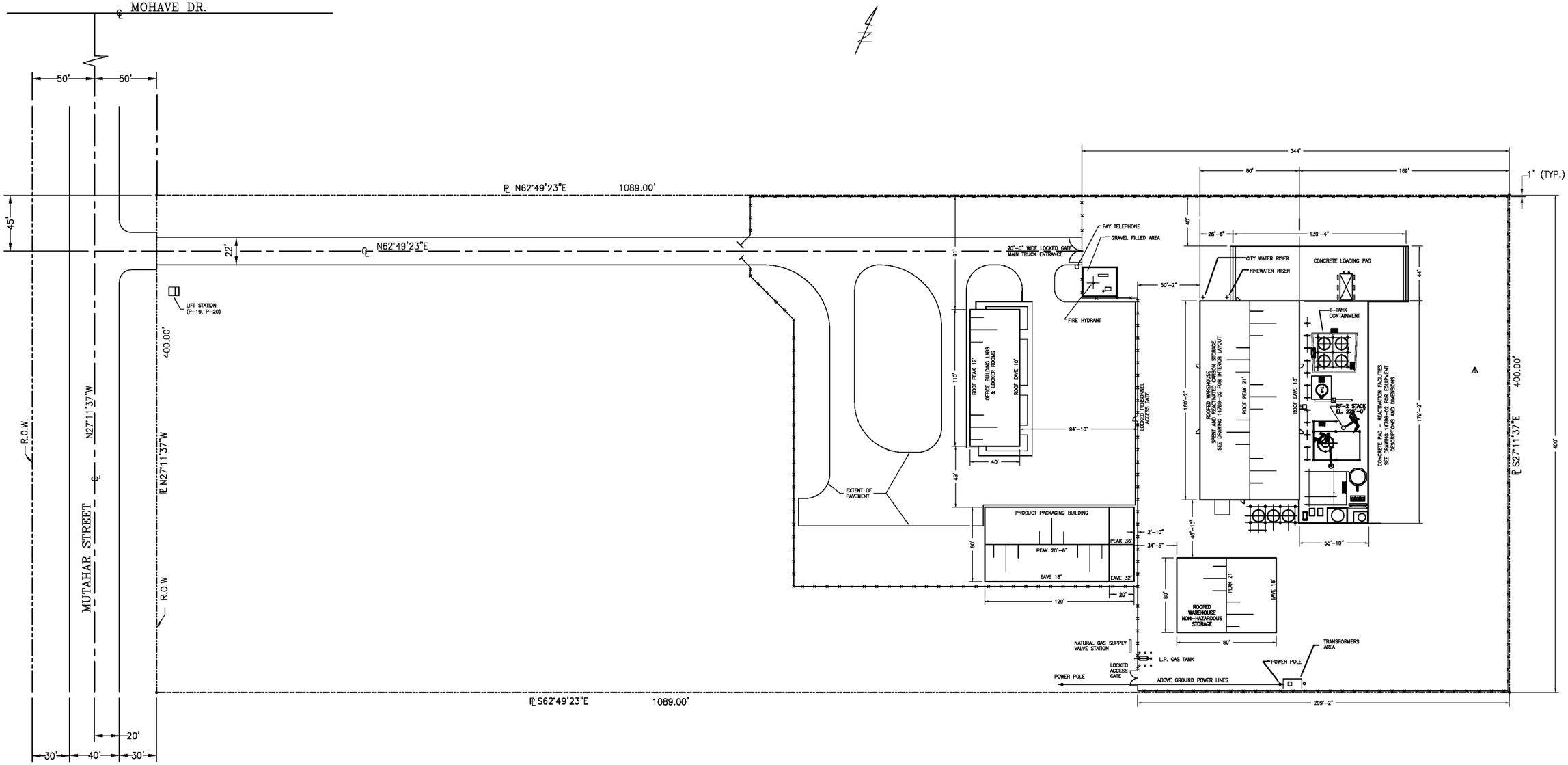
SIEMENS INDUSTRY, INC.
Parker, AZ

TITLE:
REACTIVATION FACILITY
EQUIPMENT ARRANGEMENT

PART No. | DWG No. D14789-02 | REV. 3

PRINT DATE: 4/19/12

DWG: D14789-08



NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
3	3/16/12	NAME CHANGED TO SIEMENS INDUSTRY, INC.	JBE	KEM	
2	1/18/07	UPDATED FOR PERMIT SUBMITTAL	JBE	KEM	
⚠	6/21/02	REMOVED DUMPSTER PAD	CPG	KEM	

PLOT SCALE: 1"=40'

DO NOT SCALE DRAWING

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CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.

DRAWN:	CPG	3/01/02
CHK'D:	KEM	3/01/02
ENG'R:		

SIEMENS INDUSTRY, INC.. Parker, AZ

TITLE: REACTIVATION FACILITY SITE PLAN

PART No. | DWG No. D14789-08 | REV. 3

PRINT DATE: 4/19/12

ATTACHMENT D – Item 13 – Photographs

SITE PHOTOGRAPHS

SITE AERIAL PHOTOGRAPHS

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

AERIAL PHOTOGRAPHS OF THE FACILTY





US EPA ARCHIVE DOCUMENT

PROCESS CODE S01
(Identified as Line Number 1)

Spent Carbon Warehouse



US EPA ARCHIVE DOCUMENT

PROCESS CODE S02
(Identified as Line Number 2)

Spent Carbon Storage Feed Tanks
(Tank No. T-1 and T-2)



US EPA ARCHIVE DOCUMENT

PROCESS CODE S02
(Identified as Line Number 2)

Spent Carbon Storage Feed Tanks
(Tank No. T-2, T-5 and T-6)



US EPA ARCHIVE DOCUMENT

PROCESS CODE X03
(Identified as Line Number 3)

Carbon Reactivation Furnace RF-2



Appendix O

Appendix II of the Permit Application Reference 5

US EPA ARCHIVE DOCUMENT

APPENDIX II

TOPOGRAPHIC MAP

FLOOD INSURANCE MAP FOR THE COLORADO RIVER INDIAN RESERVATION

PERIPHERAL LAND USE STUDY DIAGRAM FOR THE COLORADO RIVER INDIAN TRIBE LANDS

WIND ROSE

LEGAL BOUNDARIES

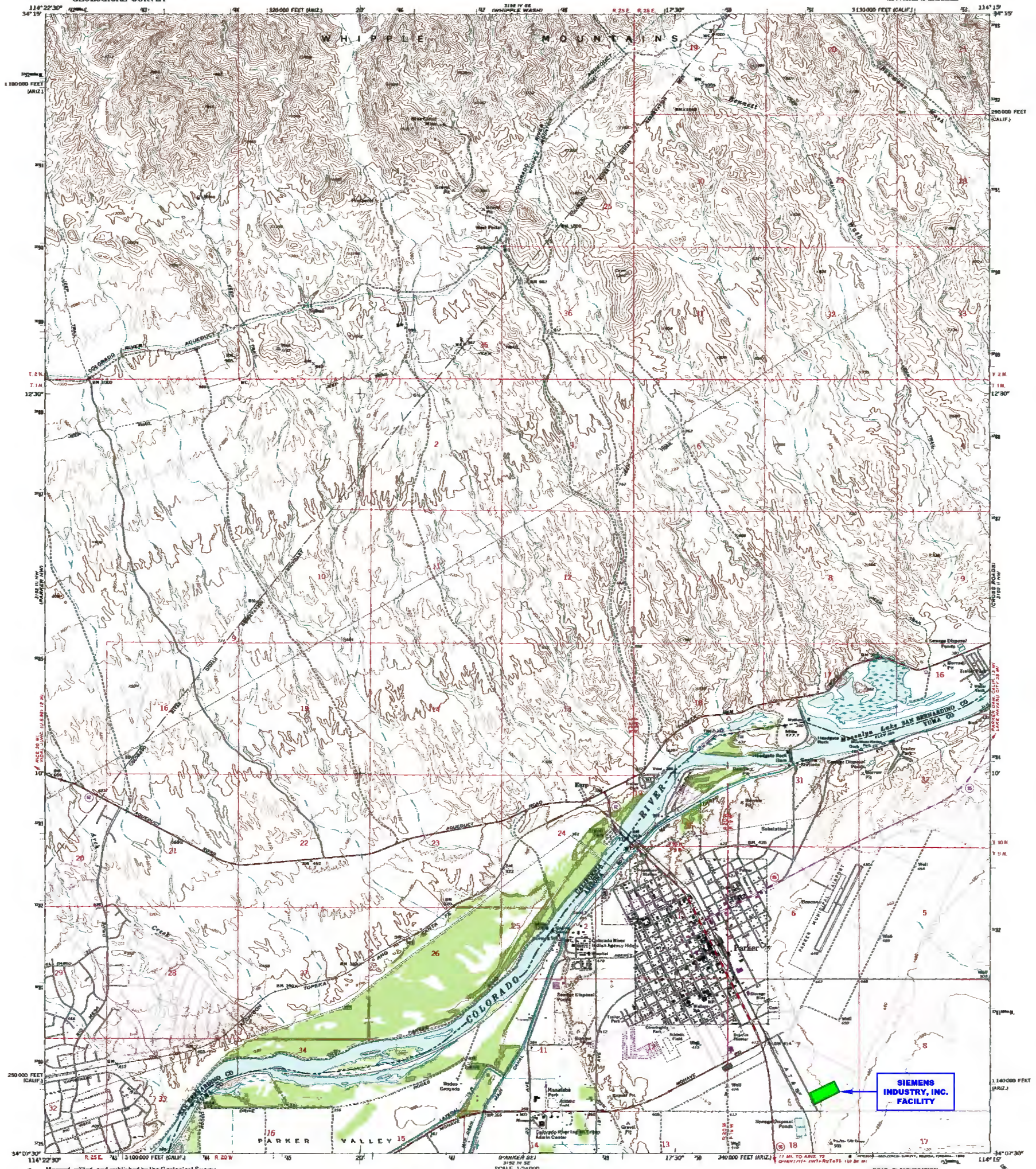
Revision 1
April 2012

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PARKER QUADRANGLE
ARIZONA—CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1968. Field checked 1970

Polyconic projection. 1927 North American datum
10,000-foot grid based on California coordinate system, zone 5, and Arizona coordinate system, west zone
1000-meter Universal Transverse Mercator grid ticks, zone 11, shown in blue

To place on the predicted North American Datum 1983 move the projection lines 72 meters east as shown by dashed corner ticks

Where omitted, land lines have not been established

SCALE 1:24 000

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Revisions shown in purple compiled by the Geological Survey from aerial photographs taken 1975. This information not field checked

ROAD CLASSIFICATION
Primary highway, hard surface — Light-duty road, hard or improved surface
Secondary highway, hard surface — Unimproved road
Interstate Route — U. S. Route — State Route

PARKER, ARIZ.—CALIF.
7.5 MINUTE SERIES (TOPOGRAPHIC)
34114-H3-TF-024
1970
PHOTOREVISED 1975

NOTES:

1. SEE ATTACHED SIEMENS INDUSTRY, INC. DRAWING D-14789-02 FOR DETAILED LOCATION OF S01, S02, AND X03.
2. THERE ARE NO INJECTION WELLS ASSOCIATED WITH THIS FACILITY.
3. THERE ARE NO SPRINGS, DRINKING WATER WELLS, NOR SURFACE WATER BODIES LOCATED WITHIN 1/4 MILE OF THIS FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
1	3/15/12	NAME CHANGED TO SIEMENS INDUSTRY, INC.	JBE	KEM	

PLOT SCALE: AS NOTED

DO NOT SCALE DRAWING

THIS DRAWING IS THE PROPERTY OF SIEMENS AND CANNOT BE REPRODUCED OR DELIVERED TO OTHERS WITHOUT THE EXPRESS WRITTEN PERMISSION OF SIEMENS INDUSTRY, INC.

CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.

DRAWN:	JBE	1/22/07
CHK'D:	KEM	1/22/07
ENG'R:		

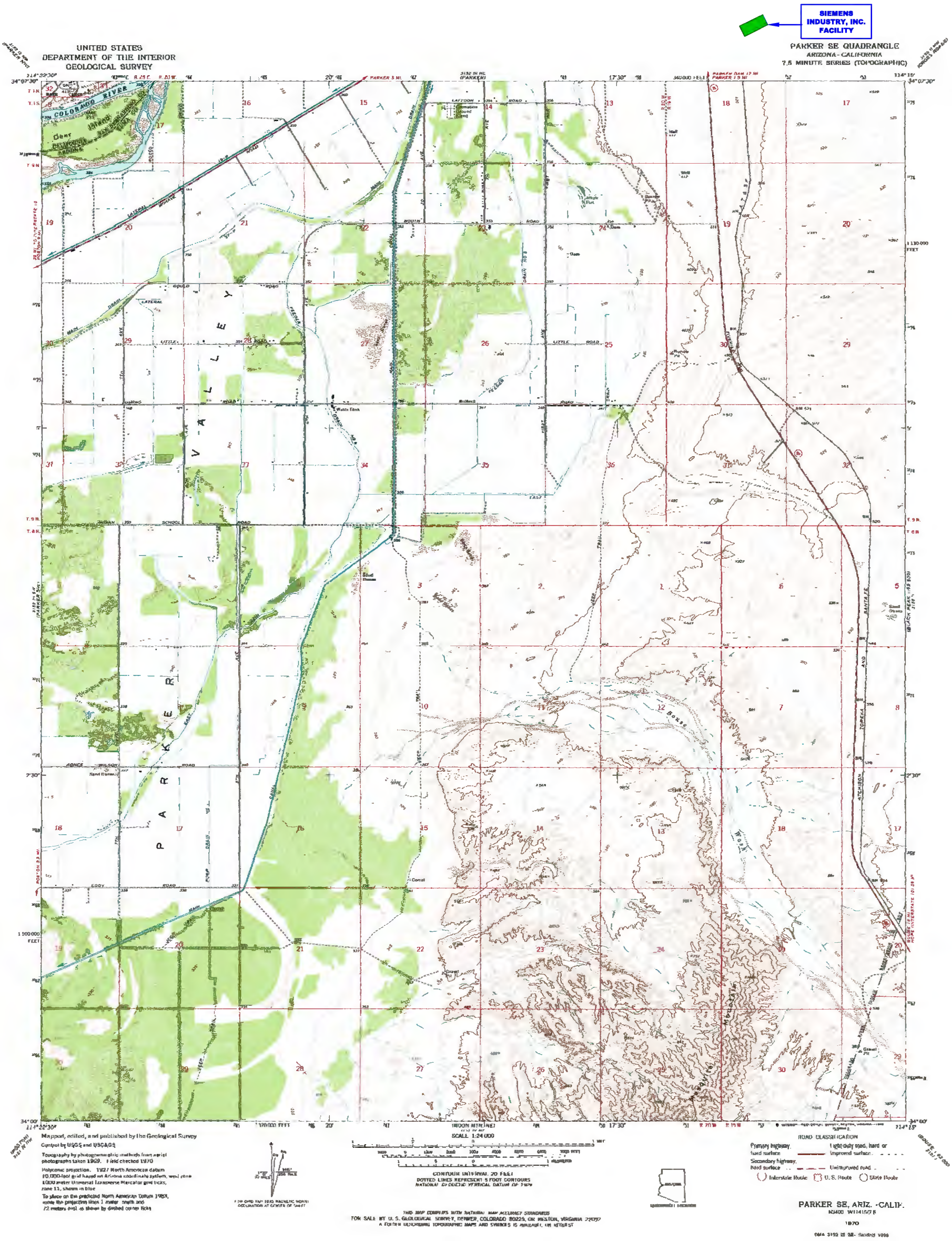
SIEMENS INDUSTRY, INC.
Parker, AZ

TITLE: U.S.G.S. SURVEY – PARKER, AZ
TOPOGRAPHIC MAP

DWG No. C-100604 | SHEET No. 1 of 2 | REV. 1

PRINT DATE: 4/19/12

US EPA ARCHIVE DOCUMENT



NOTES:

1. SEE ATTACHED SIEMENS WATER TECHNOLOGIES CORP. DRAWING D-14789-02 FOR DETAILED LOCATION OF S01, S02, AND X03.
2. THERE ARE NO INJECTION WELLS ASSOCIATED WITH THIS FACILITY.
3. THERE ARE NO SPRINGS, DRINKING WATER WELLS, NOR SURFACE WATER BODIES LOCATED WITHIN 1/4 MILE OF THIS FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
1	3/15/12	NAME CHANGED TO SIEMENS INDUSTRY, INC.	JBE	KEM	

PLOT SCALE: AS NOTED

DO NOT SCALE DRAWING

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CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.

DRAWN:	JBE	1/22/07
CHK'D:	KEM	1/22/07
ENG'R:		

SIEMENS INDUSTRY, INC.
Parker, AZ

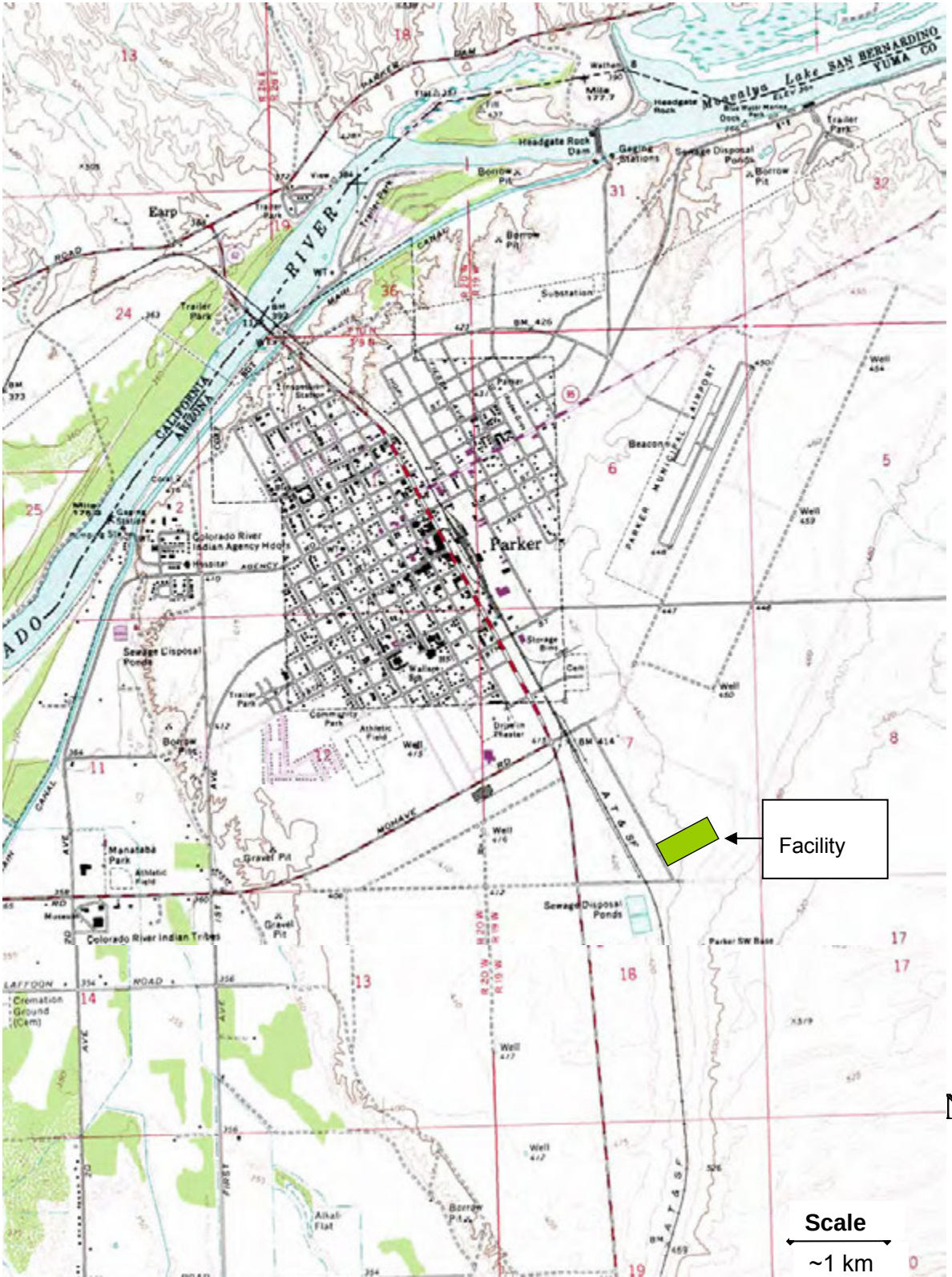
TITLE: U.S.G.S. SURVEY – PARKER SE, AZ TOPOGRAPHIC MAP

DWG No. C-100604 | SHEET No. 2 of 2 | REV. 1

PRINT DATE: 4/19/12

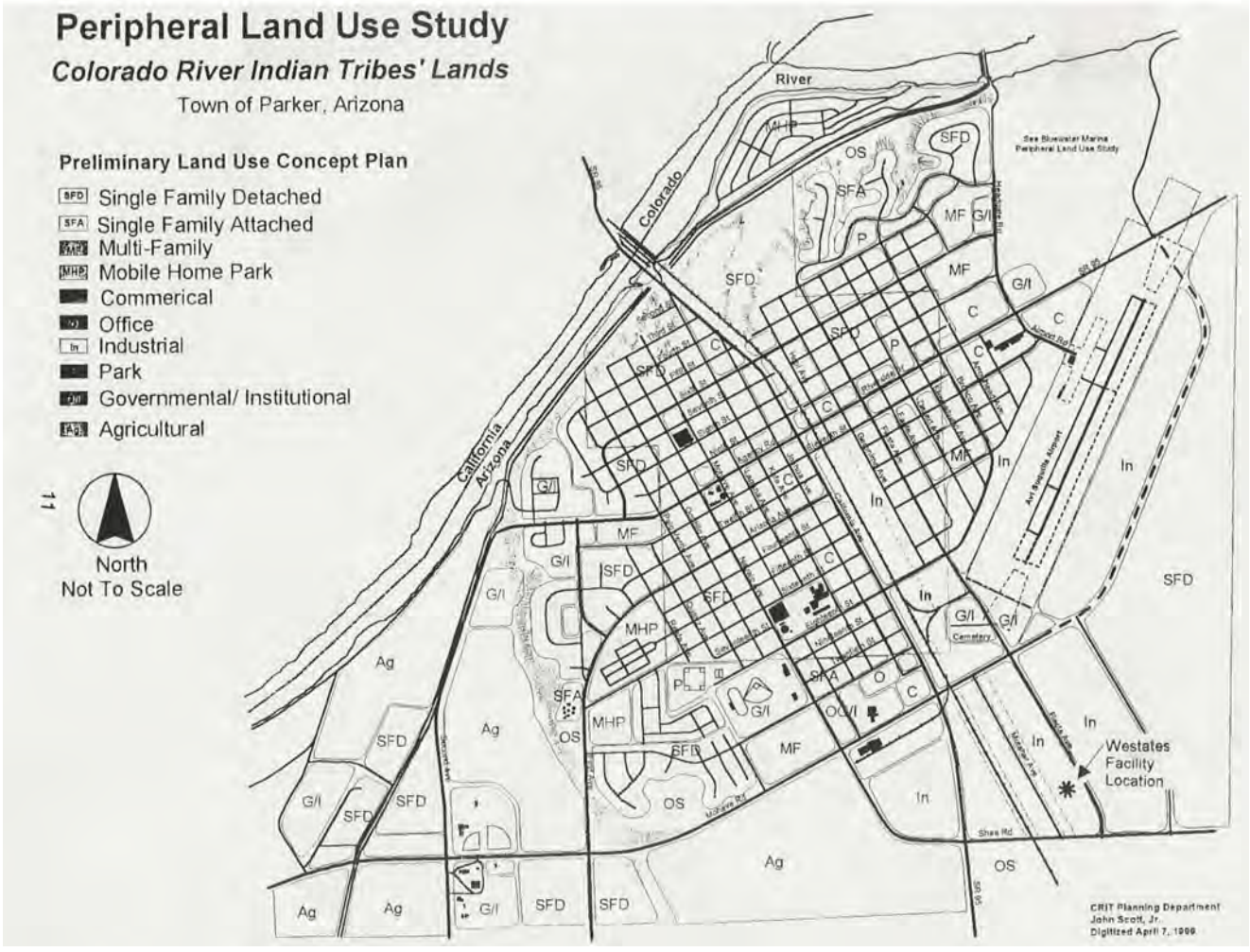
US EPA ARCHIVE DOCUMENT

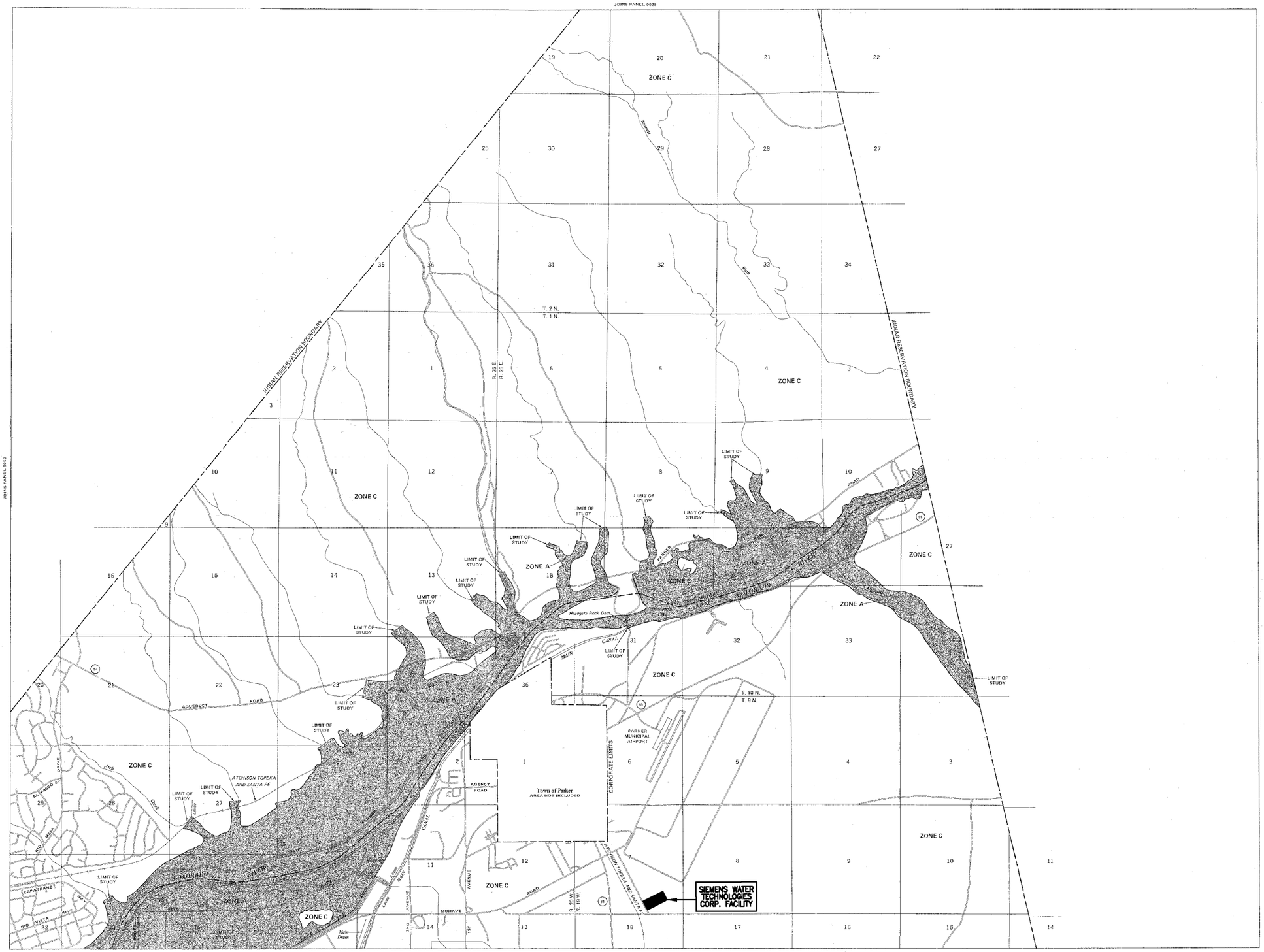
Facility Location



US EPA ARCHIVE DOCUMENT

Peripheral Land Use Study: Colorado River Indian Tribes Lands





KEY TO MAP

Zone Designations*

ZONE C
ZONE A
ZONE C

Base Flood Elevation Line With Elevation In Feet** 513

Base Flood Elevation In Feet Where Uniform Within Zone** (EL 987)

Elevation Reference Mark RM7×

Zone D Boundary

River Mile •M11.5

**Referenced to the National Geodetic Vertical Datum of 1929

EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside special flood hazard areas.

Coastal base flood elevations apply only landward of the shoreline shown on this map.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
MAY 4, 1987

FLOOD HAZARD BOUNDARY MAP REVISIONS:

FLOOD INSURANCE RATE MAP EFFECTIVE:
MAY 4, 1987

FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE IN FEET
2000 0 2000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

COLORADO RIVER INDIAN RESERVATION, ARIZONA

PANEL 75 OF 275
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
040123 0075 A

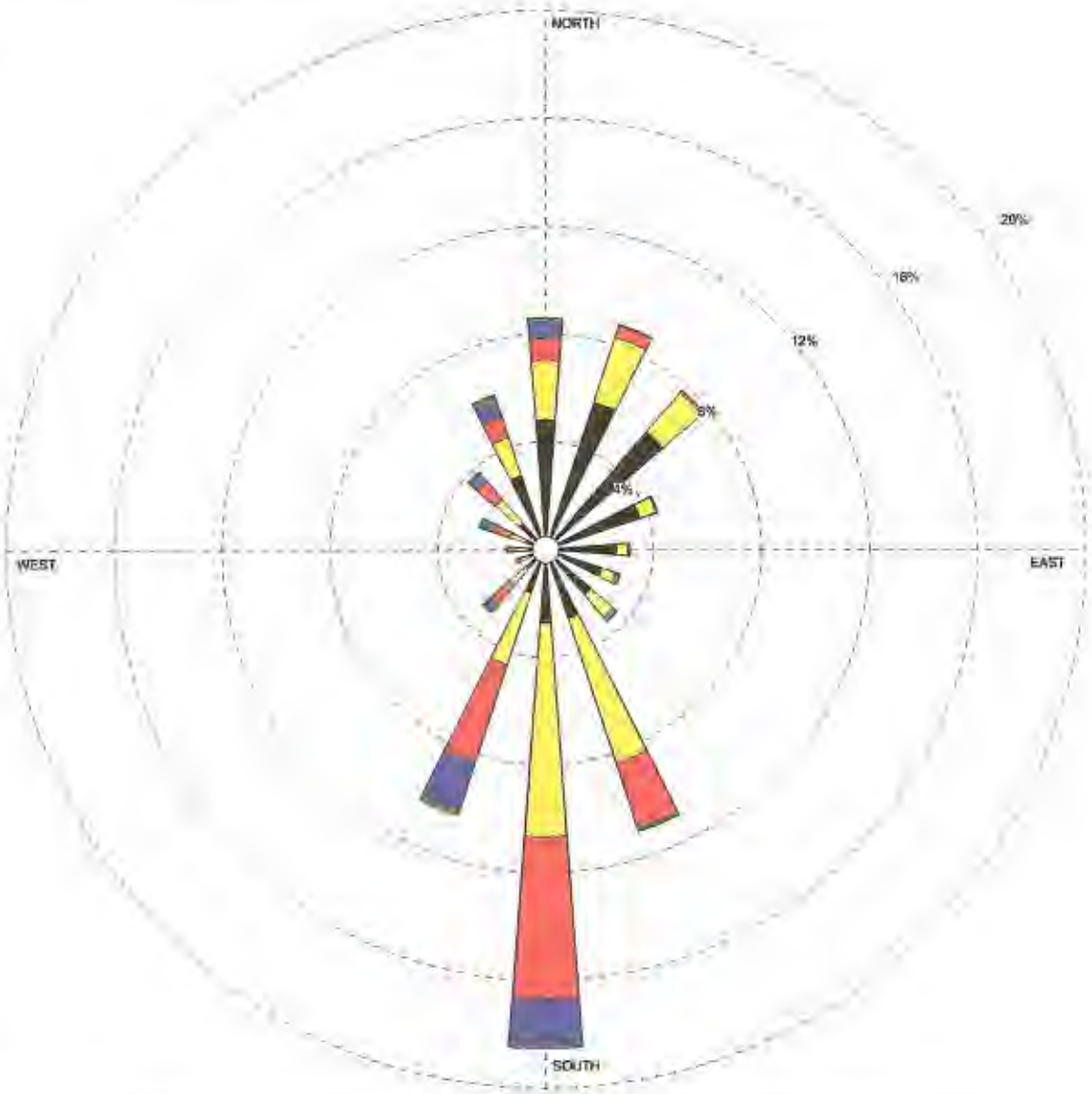
EFFECTIVE DATE:
MAY 4, 1987

Federal Emergency Management Agency

US EPA ARCHIVE DOCUMENT

WIND ROSE PLOT

FIGURE 2. Windrose for Parker, Arizona 1997 - 2001

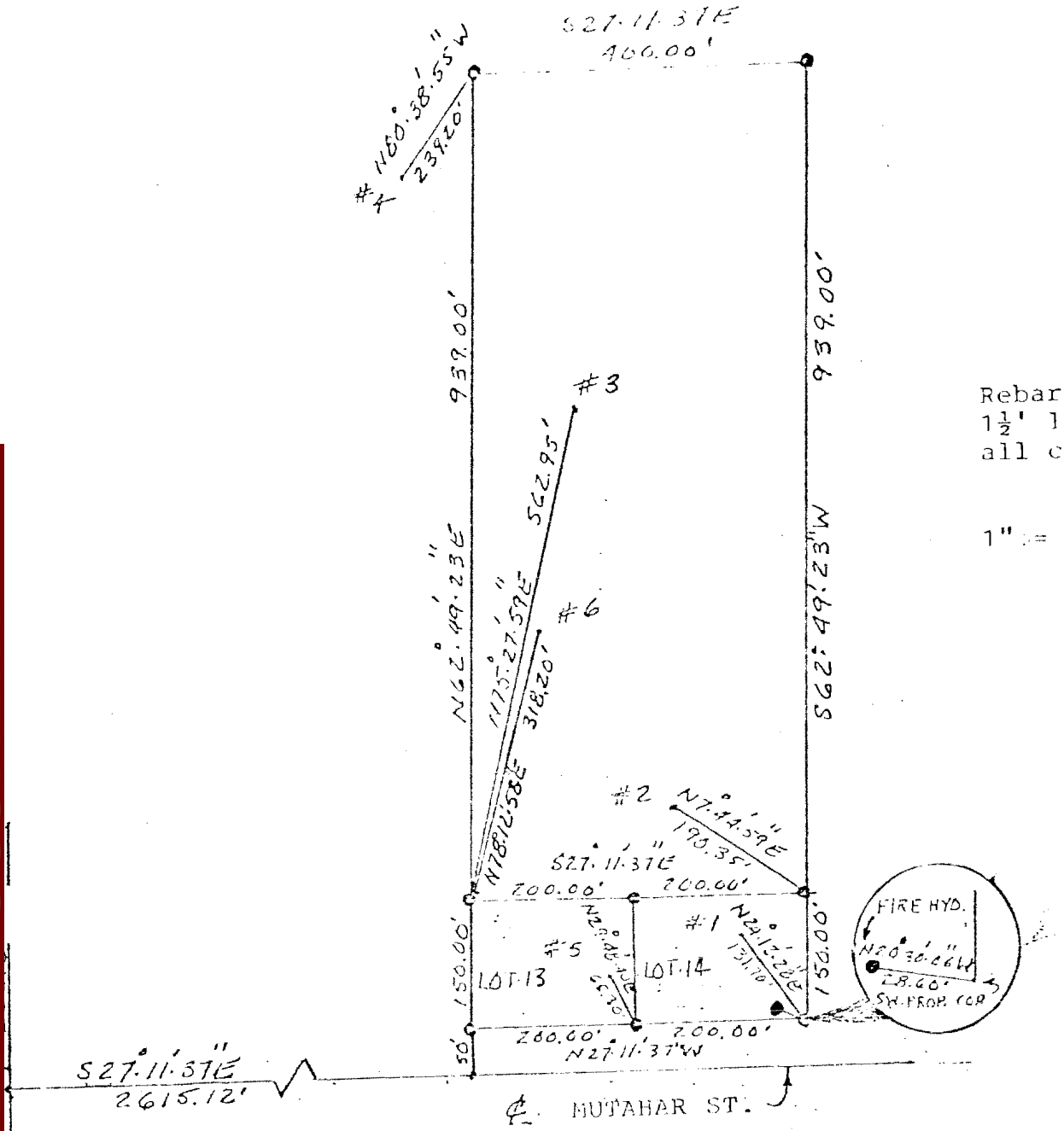


Wind Speed (m/s)

> 10.8
8.8-10.8
7.7- 8.8
3.6- 5.7
2.1- 3.6
0.5- 2.1

MODELER **CHV**		COMPANY NAME **Focus Environmental, Inc.**
DISPLAY **Wind Speed**	UNIT **m/s**	SOURCE **Arizona Meteorological Network (AZMET) - Parker, Arizona**
AVG. WIND SPEED **2.64 m/s**	CALM WINDS **2.01%**	
ORIENTATION **Direction (blowing from)**	PLOT YEAR-DATE-TIME **97 98 99 00 01** **January 1 - December 31** **Midnight - 11 PM**	PROJECT/PLOT NO. **FIGURE 2**

US EPA ARCHIVE DOCUMENT



Rebar, ½" Diameter, 1½' long, set at all corner points.

1" = 200 feet

603-119-91

COLORADO RIVER INDUSTRIAL PARK
BEING PART OF SECTION 7, T9NR19W
GILA, SALT RIVER BASE MERIDIAN
LA PAZ COUNTY, ARIZONA
COLORADO RIVER INDIAN RESERVATION

RECEIVED
1990
Colorado River Agency
Real Estate
Services

3.2.90

March 2, 1990

COLORADO RIVER INDUSTRIAL PARK
BEING PART OF SECTION 7, T9N, R19W
GILA, SALT RIVER BASE MERIDIAN
COLORADO RIVER INDIAN RESERVATION

Starting from the intersection point of Mohave Road and Mutabar Street, existing survey monuments, Thence S27°11'.37"E; 2615.12 feet. Thence N62°49'.23"E, 50.00 feet to the Northwest corner Lot 13, and point of beginning. Thence N62°49'.23"E, 150.00 feet, to the Northeast corner Lot 13. Thence S27°11'.37"E, 200.00 feet to the Southeast corner Lot 13. Thence S27°11'.37"E, 200.00 feet to the Southeast corner Lot 14, Thence S62°49'.23"W, 150.00 feet to the Southwest corner Lot 14. Thence N27°11'.37"W, 200.00 feet, along road right away, to the Northwest corner Lot 14. Thence N27°11'.37"W, 200.00 feet, along right away, to point of beginning. The area contains a calculated area of 1.38 acres.

Thence from the Northeast corner Lot 13, N62°49'.23"E, 939.00 feet, to the Northeast corner, 8.62 acre lot. Thence S27°11'.37"E, 400 feet to the Southeast corner, 8.62 acre lot. Thence S62°49'.23"W, 939.00 feet to the Southeast corner, Lot 14. The area contains a calculated area of 8.62 acres.

Thence from the Northeast corner Lot 13, soil sample number 3, bears N75°27'.59"E, 962.95 feet. Soil sample number 6 bears N78°12'.58"E, 318.20 feet.

Thence from the Northeast corner, 8.62 acre lot, soil sample number 4, bears N80°38'.55"W, 239.20 feet.

Thence from the Southeast corner Lot 14, soil sample number 2, bears N7°44'.59"E, 190.35 feet.

Thence from the Southwest corner Lot 14, soil sample number 1, bears N24°12'.28"E, 131.70 feet. Fire hydrant bears N20°30'.06"W, 28.60 feet.

Thence from the Northwest corner Lot 14, soil sample number 5, bears N29°48'.40"E, 65.30 feet.

ENGINEER"S CERTIFICATE: I certify that I have examined this plot of the Survey and found that it confirms with the data from which it was drawn and that I am satisfied the map is technically correct.

603-119-91

US EPA ARCHIVE DOCUMENT

Appendix P

Data from Monitoring WS-1, WS-2, and WS-3 Before Change-outs

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

4000 lbs

WS-1 (7.8 Days)

Periodic Test Before Changeout	Change Out	Last Change	Days	Day	Carbon Pounds Used
22 ppm	6/27/2011	6/24/2011	3	Mon	4000
	6/29/2011	6/27/2011	2	Wed	4000
	7/1/2011	6/29/2011	2	Fri	4000
	7/4/2011	7/1/2011	3	Mon	4000
	7/6/2011	7/4/2011	2	Wed	4000
	7/8/2011	7/6/2011	2	Fri	4000
	7/11/2011	7/8/2011	3	Mon	4000
	7/13/2011	7/11/2011	2	wed	4000
	7/15/2011	7/13/2011	2	Fri	4000
	7/18/2011	7/15/2011	3	Mon	4000
	7/20/2011	7/18/2011	2	wed	4000
	7/22/2011	7/20/2011	2	Fri	4000
14 ppm	7/25/2011	7/22/2011	3	Mon	4000
	7/27/2011	7/25/2011	2	Wed	4000
	7/29/2011	7/27/2011	2	Fri	4000
	8/1/2011	7/29/2011	3	Mon	4000
	8/3/2011	8/1/2011	2	Wed	4000
	8/5/2011	8/3/2011	2	fri	4000
	8/8/2011	8/5/2011	3	mon	4000
195 ppm	8/10/2011	8/8/2011	2	Wed	4000
	8/12/2011	8/10/2011	2	Fri	4000
	8/15/2011	8/12/2011	3	Mon	4000
	8/17/2011	8/15/2011	2	Wed	4000
	8/19/2011	8/17/2011	2	Fri	4000
	8/22/2011	8/19/2011	3	Mon	4000
	8/24/2011	8/22/2011	2	Wed	4000
	8/26/2011	8/24/2011	2	Fri	4000
	8/29/2011	8/26/2011	3	Mon	4000
	8/31/2011	8/29/2011	2	Wed	4000
	9/2/2011	8/31/2011	2	Fri	4000
	9/5/2011	9/2/2011	3	Mon	4000
	9/7/2011	9/5/2011	2	Wed	4000
	9/9/2011	9/7/2011	2	Fri	4000
	9/12/2011	9/9/2011	3	Mon	4000
	9/14/2011	9/12/2011	2	Wed	4000
	9/16/2011	9/14/2011	2	Fri	4000
	9/19/2011	9/16/2011	3	Mon	4000
26 ppm	9/21/2011	9/19/2011	2	Wed	4000
	9/23/2011	9/21/2011	2	Fri	4000
	9/26/2011	9/23/2011	3	Mon	4000
	9/28/2011	9/26/2011	2	Wed	4000
	9/30/2011	9/28/2011	2	Fri	4000
	10/3/2011	9/30/2011	3	Mon	4000
	10/5/2011	10/3/2011	2	Wed	4000
6 ppm	10/7/2011	10/5/2011	2	Fri	4000
	10/10/2011	10/7/2011	3	Mon	4000
	10/11/2011	10/12/2011	1	Tue	2000 (Replaced Internal)
	10/12/2011	10/10/2011	2	Wed	4000
14 ppm	10/14/2011	10/12/2011	2	Fri	4000
	10/17/2011	10/14/2011	3	Mon	4000
24 ppm	10/19/2011	10/17/2011	2	Wed	4000
	10/21/2011	10/19/2011	2	Fri	4000
35 ppm	10/24/2011	10/21/2011	3	Mon	4000
23 ppm	10/26/2011	10/24/2011	2	Wed	4000
201 ppm	10/28/2011	10/26/2011	2	Fri	4000
45 ppm	10/31/2011	10/28/2011	3	Mon	4000
45 ppm	11/2/2011	10/31/2011	2	Wed	4000
67 ppm	11/4/2011	11/2/2011	2	Fri	4000
	11/7/2011	11/4/2011	3	Mon	4000
27 ppm	11/9/2011	11/7/2011	2	Wed	4000

4000 lbs WS-1 (7.8 Days)

Periodic Test Before Changeout	Change Out	Last Change	Days	Day	Carbon Pounds Used
	11/11/2011	11/9/2011	2	Fri	4000
	11/14/2011	11/11/2011	3	Mon	4000
	11/16/2011	11/14/2011	2	Wed	4000
34 ppm	11/18/2011	11/16/2011	2	Fri	4000
	11/21/2011	11/18/2011	3	Mon	4000
	11/23/2011	11/21/2011	2	Wed	4000
16 ppm	11/25/2011	11/23/2011	2	Fri	4000
	11/28/2011	11/25/2011	3	Mon	4000
22 ppm	11/30/2011	11/28/2011	2	Wed	4000
	12/2/2011	11/30/2011	2	Fri	4000
	12/5/2011	12/2/2011	3	Mon	4000
	12/7/2011	12/5/2011	2	Wed	4000
38 ppm	12/9/2011	12/7/2011	2	Fri	4000
	12/12/2011	12/9/2011	3	Mon	4000
	12/14/2011	12/12/2011	2	Wed	4000
	12/16/2011	12/14/2011	2	Fri	4000
	12/19/2011	12/16/2011	3	Mon	4000
	12/21/2011	12/19/2011	2	Wed	4000
	12/23/2011	12/21/2011	2	Fri	4000
	12/26/2011	12/23/2011	3	Mon	4000
78 ppm	12/28/2011	12/26/2011	2	Wed	4000
	12/30/2011	12/28/2011	2	Fri	4000
	1/2/2012	12/30/2011	3	Mon	4000
25 ppm	1/4/2012	1/2/2012	2	Wed	4000
	1/6/2012	1/4/2012	2	Fri	4000
	1/9/2012	1/6/2012	3	Mon	4000
52 ppm	1/11/2012	1/9/2012	2	Wed	4000
	1/13/2012	1/11/2012	2	Fri	4000
25 ppm	1/16/2012	1/13/2012	3	Mon	4000
	1/18/2012	1/16/2012	2	Wed	4000
	1/20/2012	1/18/2012	2	Fri	4000
45 ppm	1/23/2012	1/20/2012	3	Mon	4000
	1/25/2012	1/23/2012	2	Wed	4000
	1/27/2012	1/25/2012	2	Fri	4000
	1/30/2012	1/27/2012	3	Mon	4000
	2/1/2012	1/30/2012	2	Wed	4000
	2/3/2012	2/1/2012	2	Fri	4000
	2/6/2012	2/3/2012	3	Mon	4000
	2/8/2012	2/6/2012	2	Wed	4000
	2/10/2012	2/8/2012	2	Fri	4000
	2/13/2012	2/10/2012	3	Mon	4000
	2/15/2012	2/13/2012	2	Wed	4000
13 ppm	2/17/2012	2/15/2012	2	Fri	4000
	2/20/2012	2/17/2012	3	Mon	NA
	2/22/2012	2/20/2012	2	Wed	NA
	2/24/2012	2/22/2012	2	Fri	NA
	2/27/2012	2/24/2012	3	Mon	NA
	2/29/2012	2/27/2012	2	Wed	4000
	3/2/2012	2/29/2012	2	Fri	4000
5 ppm	3/5/2012	3/2/2012	3	Mon	4000
	3/7/2012	3/5/2012	2	Wed	4000
	3/9/2012	3/7/2012	2	Fri	4000
	3/12/2012	3/9/2012	3	Mon	4000
	3/14/2012	3/12/2012	2	Wed	4000
20 ppm	3/16/2012	3/14/2012	2	Fri	4000
	3/19/2012	3/16/2012	3	Mon	4000
	3/21/2012	3/19/2012	2	Wed	4000
	3/23/2012	3/21/2012	2	Fri	5000
	3/26/2012	3/23/2012	3	Mon	4000
	3/28/2012	3/26/2012	2	Wed	4000

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4000 lbs WS-1 (7.8 Days)

Periodic Test Before Changeout	Change Out	Last Change	Days	Day	Carbon Pounds Used
	3/30/2012	3/28/2012	2	Fri	4000
11 ppm	4/2/2012	3/30/2012	3	Mon	4000
	4/4/2012	4/2/2012	2	Wed	4000
	4/6/2012	4/4/2012	2	Fri	4000
	4/9/2012	4/6/2012	3	Mon	4000
	4/11/2012	4/9/2012	2	Wed	4000
	4/13/2012	4/11/2012	2	Fri	4000
	4/16/2012	4/13/2012	3	Mon	4000
13 ppm	4/18/2012	4/16/2012	2	Wed	4000
	4/20/2012	4/18/2012	2	Fri	4000
9 ppm	4/23/2012	4/20/2012	3	Mon	4000
63 ppm	4/25/2012	4/23/2012	2	Wed	4000
	4/27/2012	4/25/2012	2	Fri	4000
	4/30/2012	4/27/2012	3	Mon	4000
	5/2/2012	4/30/2012	2	Wed	4000
25 ppm	5/4/2012	5/2/2012	2	Fri	4000
	5/7/2012	5/4/2012	3	Mon	4000
16 ppm	5/9/2012	5/7/2012	2	Wed	4000
	5/11/2012	5/9/2012	2	Fri	4000
	5/14/2012	5/11/2012	3	Mon	4000
	5/16/2012	5/14/2012	2	Wed	4000
	5/18/2012	5/16/2012	2	Fri	4000
	5/21/2012	5/18/2012	3	Mon	4000
	5/23/2012	5/21/2012	2	Wed	4000
	5/25/2012	5/23/2012	2	Fri	4000
	5/28/2012	5/25/2012	3	Mon	4000
	5/30/2012	5/28/2012	2	Wed	4000
15 ppm	6/1/2012	5/30/2012	2	Fri	4000
	6/4/2012	6/1/2012	3	Mon	4000
10 ppm	6/6/2012	6/4/2012	2	Wed	4000
	6/8/2012	6/6/2012	2	Fri	4000
	6/11/2012	6/8/2012	3	Mon	4000
	6/13/2012	6/11/2012	2	Wed	4000
	6/15/2012	6/13/2012	2	Fri	4000
	6/18/2012	6/15/2012	3	Mon	4000
	6/20/2012	6/18/2012	2	Wed	4000
	6/22/2012	6/20/2012	2	Fri	4000
	6/25/2012	6/22/2012	3	Mon	4000
	6/27/2012	6/25/2012	2	Wed	4000
2 ppm	6/29/2012	6/27/2012	2	Fri	4000
	7/2/2012	6/29/2012	3	Mon	4000
	7/4/2012	7/2/2012	2	Wed	4000
	7/6/2012	7/4/2012	2	Fri	4000
14 ppm	7/9/2012	7/6/2012	3	Mon	4000
	7/11/2012	7/9/2012	2	Wed	4000
	7/13/2012	7/11/2012	2	Fri	4000
	7/16/2012	7/13/2012	3	Mon	4000
	7/18/2012	7/16/2012	2	Wed	4000
	7/20/2012	7/18/2012	2	Fri	4000
	7/23/2012	7/20/2012	3	Mon	4000
	7/25/2012	7/23/2012	2	Wed	4000
	7/27/2012	7/25/2012	2	Fri	4000
	7/30/2012	7/27/2012	3	Mon	4000
5 ppm	8/1/2012	7/30/2012	2	Wed	4000
	8/3/2012	8/1/2012	2	Fri	4000
	8/6/2012	8/3/2012	3	Mon	4000
	8/8/2012	8/6/2012	2	Wed	4000
	8/10/2012	8/8/2012	2	Fri	4000
	8/13/2012	8/10/2012	3	Mon	4000
	8/15/2012	8/13/2012	2	Wed	4000

US EPA ARCHIVE DOCUMENT

4000 lbs WS-1 (7.8 Days)

Periodic Test Before Changeout	Change Out	Last Change	Days	Day	Carbon Pounds Used
	8/17/2012	8/15/2012	2	Fri	4000
115 ppm	8/20/2012	8/17/2012	3	Mon	4000
	8/22/2012	8/20/2012	2	Wed	4000
	8/24/2012	8/22/2012	2	Fri	4000
	8/27/2012	8/24/2012	3	Mon	4000
	8/29/2012	8/27/2012	2	Wed	4000
	8/31/2012	8/29/2012	2	Fri	4000
	9/3/2012	8/31/2012	3	Mon	4000
	9/5/2012	9/3/2012	2	Wed	4000
	9/7/2012	9/5/2012	2	Fri	4000
25 ppm	9/10/2012	9/7/2012	3	Mon	4000
	9/12/2012	9/10/2012	2	Wed	4000
	9/14/2012	9/12/2012	2	Fri	4000
	9/17/2012	9/14/2012	3	Mon	4000
	9/19/2012	9/17/2012	2	Wed	4000
10 ppm	9/21/2012	9/19/2012	2	Fri	4000
	9/24/2012	9/21/2012	3	Mon	4000
	9/26/2012	9/24/2012	2	Wed	4000
	9/28/2012	9/26/2012	2	Fri	4000
	10/1/2012	9/28/2012	3	Mon	4000
	10/3/2012	10/1/2012	2	Wed	4000
	10/5/2012	10/3/2012	2	Fri	4000
	10/8/2012	10/5/2012	3	Mon	4000
12 ppm	10/10/2012	10/8/2012	2	Wed	4000
	10/12/2012	10/10/2012	2	Fri	4000
	10/15/2012	10/12/2012	3	Mon	4000
	10/17/2012	10/15/2012	2	Wed	4000
	10/19/2012	10/17/2012	2	Fri	4000
	10/22/2012	10/19/2012	3	Mon	4000
	10/24/2012	10/22/2012	2	Wed	4000
	10/26/2012	10/24/2012	2	Fri	4000
	10/29/2012	10/26/2012	3	Mon	4000
	10/31/2012	10/29/2012	2	Wed	4000
	11/2/2012	10/31/2012	2	Fri	4000
45 ppm	11/5/2012	11/2/2012	3	Mon	4000
	11/7/2012	11/5/2012	2	Wed	4000
	11/9/2012	11/7/2012	2	Fri	4000
	11/12/2012	11/9/2012	3	Mon	4000
	11/14/2012	11/12/2012	2	Wed	4000
	11/16/2012	11/14/2012	2	Fri	4000
	11/19/2012	11/16/2012	3	Mon	4000
	11/21/2012	11/19/2012	2	Wed	4000
	11/23/2012	11/21/2012	2	Fri	4000
	11/26/2012	11/23/2012	3	Mon	4000
223 ppm	11/28/2012	11/26/2012	2	Wed	4000
	11/30/2012	11/28/2012	2	Fri	4000
	12/3/2012	11/30/2012	3	Mon	4000
	12/5/2012	12/3/2012	2	Wed	4000
	12/7/2012	12/5/2012	2	Fri	4000
	12/10/2012	12/7/2012	3	Mon	4000
<2 ppm	12/12/2012	12/10/2012	2	Wed	4000
	12/14/2012	12/12/2012	2	Fri	4000
	12/17/2012	12/14/2012	3	Mon	4000
	12/19/2012	12/17/2012	2	Wed	4000
	12/21/2012	12/19/2012	2	Fri	4000
	12/24/2012	12/21/2012	3	Mon	4000
	12/26/2012	12/24/2012	2	Wed	4000
	12/28/2012	12/26/2012	2	Fri	4000
	12/31/2012	12/28/2012	3	Mon	4000
19 ppm	1/2/2013	12/31/2012	2	Wed	4000

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

4000 lbs

WS-1 (7.8 Days)

Periodic Test Before Changeout	Change Out	Last Change	Days	Day	Carbon Pounds Used
	1/4/2013	1/2/2013	2	Fri	4000
	1/7/2013	1/4/2013	3	Mon	4000
	1/9/2013	1/7/2013	2	Wed	4000
	1/11/2013	1/9/2013	2	Fri	4000
	1/14/2013	1/11/2013	3	Mon	4000
	1/16/2013	1/14/2013	2	Wed	4000
	1/18/2013	1/16/2013	2	Fri	4000
	1/21/2013	1/18/2013	3	Mon	4000
	1/23/2013	1/21/2013	2	Wed	4000
	1/25/2013	1/23/2013	2	Fri	4000
	1/28/2013	1/25/2013	3	Mon	4000
	1/30/2013	1/28/2013	2	Wed	4000
5 ppm	2/1/2013	1/30/2013	2	Fri	4000
	2/4/2013	2/1/2013	3	Mon	4000
	2/6/2013	2/4/2013	2	Wed	4000
	2/8/2013	2/6/2013	2	Fri	4000
	2/11/2013	2/8/2013	3	Mon	4000
	2/13/2013	2/11/2013	2	Wed	4000
	2/15/2013	2/13/2013	2	Fri	4000
	2/18/2013	2/15/2013	3	Mon	4000
	2/20/2013	2/18/2013	2	Wed	4000
	2/22/2013	2/20/2013	2	Fri	4000
	2/25/2013	2/22/2013	3	Mon	4000
	2/27/2013	2/25/2013	2	Wed	4000
2 ppm	3/1/2013	2/27/2013	2	Fri	4000
	3/4/2013	3/1/2013	3	Mon	4000
	3/6/2013	3/4/2013	2	Wed	4000
	3/8/2013	3/6/2013	2	Fri	4000
	3/11/2013	3/8/2013	3	Mon	4000
	3/13/2013	3/11/2013	2	Wed	4000
	3/15/2013	3/13/2013	2	Fri	4000
	3/18/2013	3/15/2013	3	Mon	4000
	3/20/2013	3/18/2013	2	Wed	4000
	3/22/2013	3/20/2013	2	Fri	4000
	3/25/2013	3/22/2013	3	Mon	4000
	3/27/2013	3/25/2013	2	Wed	4000
	3/29/2013	3/27/2013	2	Fri	4000
	4/1/2013	3/29/2013	3	Mon	4000
	4/3/2013	4/1/2013	2	Wed	4000
	4/5/2013	4/3/2013	2	Fri	4000
	4/8/2013	4/5/2013	3	Mon	4000
	4/10/2013	4/8/2013	2	Wed	4000
	4/12/2013	4/10/2013	2	Fri	4000
	4/15/2013	4/12/2013	3	Mon	4000
	4/17/2013	4/15/2013	2	Wed	4000
	4/19/2013	4/17/2013	2	Fri	4000
9 ppm	4/22/2013	4/19/2013	3	Mon	4000
	4/24/2013	4/22/2013	2	Wed	4000
	4/26/2013	4/24/2013	2	Fri	4000
	4/29/2013	4/26/2013	3	Mon	4000
	5/1/2013	4/29/2013	2	Wed	4000
	5/3/2013	5/1/2013	2	Fri	4000
25 ppm	5/6/2013	5/3/2013	3	Mon	4000
	5/8/2013	5/6/2013	2	Wed	4000
	5/10/2013	5/8/2013	2	Fri	4000
	5/13/2013	5/10/2013	3	Mon	4000
	5/15/2013	5/13/2013	2	Wed	4000
	5/17/2013	5/15/2013	2	Fri	4000
	5/20/2013	5/17/2013	3	Mon	4000
	5/22/2013	5/20/2013	2	Wed	4000

4000 lbs

WS-1 (7.8 Days)

Periodic Test Before Changeout	Change Out	Last Change	Days	Day	Carbon Pounds Used
	5/24/2013	5/22/2013	2	Fri	4000
	5/27/2013	5/24/2013	**3**	Mon	4000
	5/29/2013	5/27/2013	2	Wed	4000
	5/31/2013	5/29/2013	2	Fri	4000
12 ppm	6/3/2013	5/31/2013	**3**	Mon	4000
	6/5/2013	6/3/2013	2	Wed	4000
	6/7/2013	6/5/2013	2	Fri	4000
	6/10/2013	6/7/2013	**3**	Mon	4000
	6/12/2013	6/10/2013	2	Wed	4000
	6/14/2013	6/12/2013	2	Fri	4000
	6/17/2013	6/14/2013	**3**	Mon	4000
	6/19/2013	6/17/2013	2	Wed	4000
	6/21/2013	6/19/2013	2	Fri	4000
	6/24/2013	6/21/2013	**3**	Mon	4000
	6/26/2013	6/24/2013	2	Wed	4000
	6/28/2013	6/26/2013	2	Fri	4000
	7/1/2013	6/28/2013	**3**	Mon	4000
	7/3/2013	7/1/2013	2	Wed	
	7/5/2013	7/3/2013	2	Fri	
	7/8/2013	7/5/2013	**3**	Mon	
	7/10/2013	7/8/2013	2	Wed	
	7/12/2013	7/10/2013	2	Fri	
	7/15/2013	7/12/2013	**3**	Mon	
	7/17/2013	7/15/2013	2	Wed	
	7/19/2013	7/17/2013	2	Fri	
	7/22/2013	7/19/2013	**3**	Mon	
	7/24/2013	7/22/2013	2	Wed	
	7/26/2013	7/24/2013	2	Fri	
	7/29/2013	7/26/2013	**3**	Mon	
	7/31/2013	7/29/2013	2	Wed	
	8/2/2013	7/31/2013	2	Fri	

US EPA ARCHIVE DOCUMENT

5000 lbs

WS-2 (100 days)

Periodic Test Before Changeout	Change Out	Last Change	Days	Carbon Pounds Used
<2 ppm	7/1/2011	4/11/2011	81	5000
<2 ppm	10/1/2011	7/1/2011	92	5000
<2 ppm	12/6/2011	10/1/2011	66	5000
<2 ppm	2/2/2012	12/6/2011	58	5000
<2 ppm	5/3/2012	2/2/2012	91	5000
<2 ppm	8/1/2012	5/3/2012	90	5000
<2 ppm	9/18/2012	8/1/2012	48	5000
<2 ppm	12/10/2012	9/18/2012	83	5000
<2 ppm	3/7/2013	12/10/2012	87	5000
<2 ppm	6/6/2013	3/7/2013	91	5000

US EPA ARCHIVE DOCUMENT

1000 lbs

WS-3 (38 days)

Periodic Test Before Changeout	Change Out	Last Change	Days	Carbon Pounds Used
<2 ppm	7/1/2011	6/1/2011	30	1000
<2 ppm	8/1/2011	7/1/2011	31	1000
<2 ppm	9/1/2011	8/1/2011	31	1000
<2 ppm	10/1/2011	9/1/2011	30	1000
<2 ppm	11/2/2011	10/1/2011	32	1000
<2 ppm	12/2/2011	11/2/2011	30	1000
<2 ppm	1/1/2012	12/2/2011	30	1000
<2 ppm	2/1/2012	1/1/2012	31	1000
<2 ppm	2/29/2012	2/1/2012	28	1000
<2 ppm	4/3/2012	2/29/2012	34	1000
<2 ppm	5/1/2012	4/3/2012	28	1000
<2 ppm	6/1/2012	5/1/2012	31	1000
<2 ppm	7/1/2012	6/1/2012	30	1000
<2 ppm	8/1/2012	7/1/2012	31	1000
<2 ppm	8/31/2012	8/1/2012	30	1000
<2 ppm	10/2/2012	8/31/2012	32	1000
<2 ppm	11/2/2012	10/2/2012	31	1000
<2 ppm	12/2/2012	11/2/2012	30	1000
<2 ppm	1/2/2013	12/2/2012	31	1000
<2 ppm	1/30/2013	1/2/2013	28	1000
<2 ppm	3/1/2013	1/30/2013	30	1000
<2 ppm	4/1/2013	3/1/2013	31	1000
<2 ppm	5/2/2013	4/1/2013	31	1000
<2 ppm	5/31/2013	5/2/2013	29	1000
	7/1/2013	5/31/2013	31	1000
		7/1/2013	####	

US EPA ARCHIVE DOCUMENT

Appendix Q

Sample of Stack Plume Hourly Visual Observations

US EPA ARCHIVE DOCUMENT

STACK PLUME HOURLY VISUAL OBSERVATIONS

TIME	NORMAL	UNSATISFACTORY
0700	X	
0800	X	
0900	X	
1000	X	
1100	X	
1200	X	
1300	X	
1400	X	
1500	X	
1600	X	
1700	X	
1800	X	
1900	✓	
2000	✓	
2100	✓	
2200	✓	
2300	✓	
0000	✓	
0100	✓	
0200	✓	
0300	✓	
0400	✓	
0500	✓	
0600	✓	

7/2/15

LP GAS LEVEL	29%
OPERATING HOURS	24HRS
STANDBY HOURS - NO SPENT CARBON	0
GAS	155177
WATER	120.661
POTW DISCHARGE	117,105

STACK PLUME HOURLY VISUAL OBSERVATIONS

TIME	NORMAL	UNSATISFACTORY
0700	✓	
0800	✓	
0900	✓	
1000	✓	
1100	✓	
1200	✓	
1300	✓	
1400	✓	
1500	✓	
1600	✓	
1700	✓	
1800	✓	
1900	✓	
2000	✓	
2100	✓	
2200	✓	
2300	✓	
0000	✓	
0100	✓	
0200	✓	
0300	✓	
0400	✓	
0500	✓	
0600	✓	

7/3/15

LP GAS LEVEL	25%
OPERATING HOURS	24 HRS
STANDBY HOURS - NO SPENT CARBON	⊘
GAS	155577
WATER	119,070
POTW DISCHARGE	116,683

STACK PLUME HOURLY VISUAL OBSERVATIONS

TIME	NORMAL	UNSATISFACTORY
0700	✓	
0800	✓	
0900	✓	
1000	✓	
1100	✓	
1200	✓	
1300	✓	
1400	✓	
1500	✓	
1600	✓	
1700	✓	
1800	✓	
1900	✓	
2000	✓	
2100	✓	
2200	✓	
2300	✓	
0000	✓	
0100	✓	
0200	✓	
0300	✓	
0400	✓	
0500	✓	
0600	✓	

7/4/15

LP GAS LEVEL	25%
OPERATING HOURS	24 HRS
STANDBY HOURS - NO SPENT CARBON	—
GAS	155728
WATER	119,463
POTW DISCHARGE	120,732

STACK PLUME HOURLY VISUAL OBSERVATIONS

TIME	NORMAL	UNSATISFACTORY
0700	✓	
0800	✓	
0900	✓	
1000	✓	
1100	✓	
1200	✓	
1300	✓	
1400	✓	
1500	✓	
1600	✓	
1700	✓	
1800	✓	
1900	✓	
2000	✓	
2100	✓	
2200	✓	
2300	✓	
0000	✓	
0100	✓	
0200	✓	
0300	✓	
0400	✓	
0500	✓	
0600	✓	

7/5/15

LP GAS LEVEL	29%
OPERATING HOURS	24 HRS
STANDBY HOURS - NO SPENT CARBON	0
GAS	155367
WATER	117,586
POTW DISCHARGE	115,672

STACK PLUME HOURLY VISUAL OBSERVATIONS

TIME	NORMAL	UNSATISFACTORY
0700	✓	
0800	✓	
0900	✓	
1000	✓	
1100	✓	
1200	✓	
1300	✓	
1400	✓	
1500	✓	
1600	✓	
1700	✓	
1800	✓	
1900	X	
2000	X	
2100	X	
2200	X	
2300	X	
0000	X	
0100	X	
0200	X	
0300	X	
0400	X	
0500	X	
0600	X	

7/6/15

LP GAS LEVEL	22%
OPERATING HOURS	24
STANDBY HOURS - NO SPENT CARBON	
GAS	155944
WATER	123594
POTW DISCHARGE	117766

STACK PLUME HOURLY VISUAL OBSERVATIONS

TIME	NORMAL	UNSATISFACTORY
0700	✓	
0800	✓	
0900	✓	
1000	✓	
1100	✓	
1200	✓	
1300	✓	
1400	✓	
1500	✓	
1600	✓	
1700	✓	
1800	✓	
1900	✓	
2000	✓	
2100	✓	
2200	✓	
2300	✓	
0000	✓	
0100	✓	
0200	✓	
0300	✓	
0400	✓	
0500	✓	
0600	✓	

7/7/15

LP GAS LEVEL	21%
OPERATING HOURS	24
STANDBY HOURS - NO SPENT CARBON	
GAS	156149
WATER	123638
POTW DISCHARGE	119412

STACK PLUME HOURLY VISUAL OBSERVATIONS

TIME	NORMAL	UNSATISFACTORY
0700	✓	
0800	✓	
0900	✓	
1000	✓	
1100	✓	
1200	✓	
1300	✓	
1400	✓	
1500	✓	
1600	✓	
1700	✓	
1800	✓	
1900	✓	
2000	✓	
2100	✓	
2200	✓	
2300	✓	
0000	✓	
0100	✓	
0200	✓	
0300	✓	
0400	✓	
0500	✓	
0600	✓	

7/8/15

LP GAS LEVEL	20%
OPERATING HOURS	21:40
STANDBY HOURS - NO SPENT CARBON	2:20
GAS	156324
WATER	122427
POTW DISCHARGE	112848

STACK PLUME HOURLY VISUAL OBSERVATIONS

TIME	NORMAL	UNSATISFACTORY
0700	✓	
0800	✓	
0900	✓	
1000	✓	
1100	✓	
1200	✓	
1300	✓	
1400	✓	
1500	✓	
1600	✓	
1700	✓	
1800	✓	
1900	✓	
2000	✓	
2100	✓	
2200	✓	
2300	✓	
0000	✓	
0100	✓	
0200	✓	
0300	✓	
0400	✓	
0500	✓	
0600	✓	

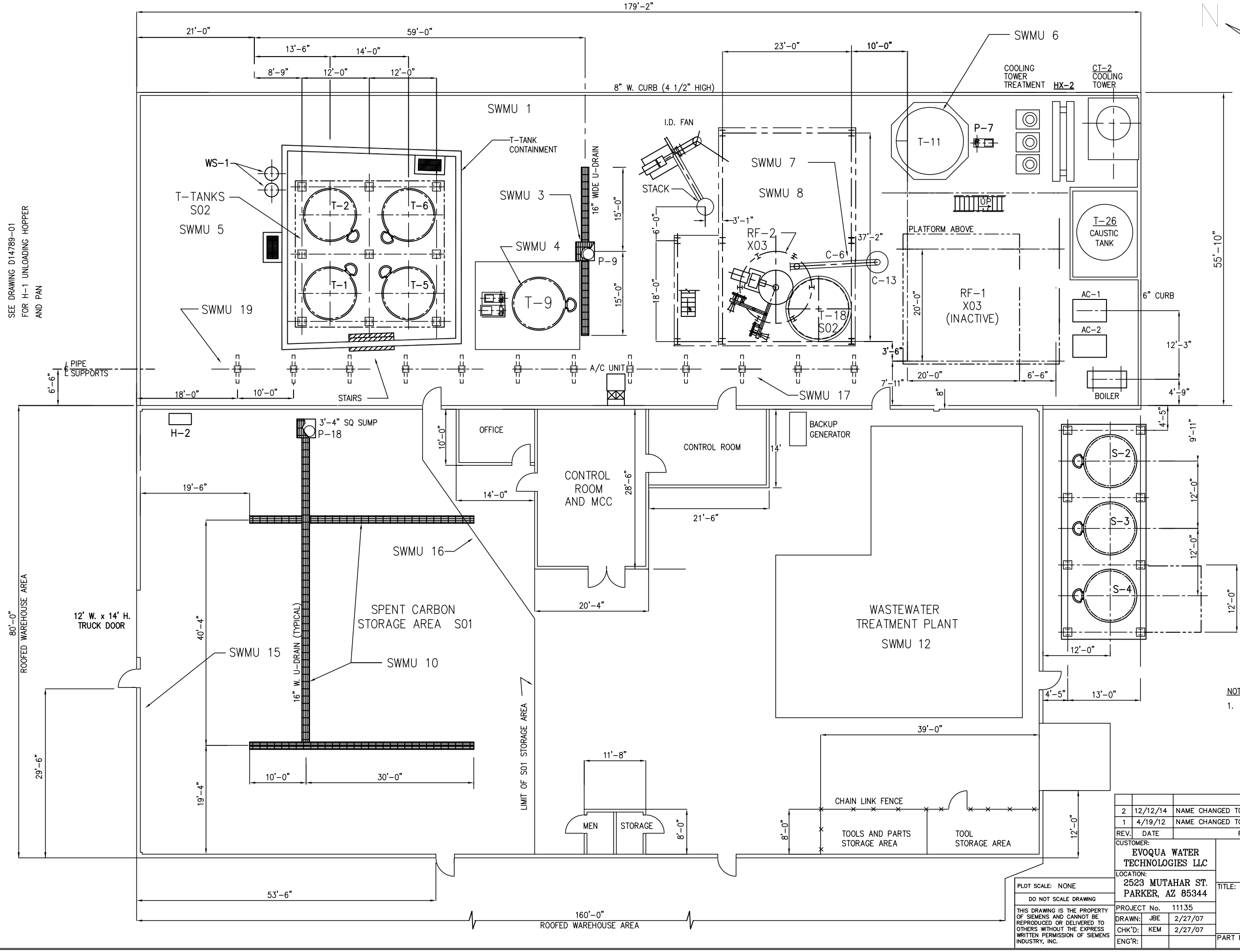
7/9/15

LP GAS LEVEL	20%
OPERATING HOURS	24
STANDBY HOURS - NO SPENT CARBON	0
GAS	156502
WATER	115961
POTW DISCHARGE	113048

Appendix H
Evoqua Facility Unit Maps
(Figures J-1 through J-7)

US EPA ARCHIVE DOCUMENT

DWG: D14789-10



Solid Waste Management Units

1. Bermed containment in process area.
2. Sump by H-1.
3. Sump by storage tank, T-9.
4. Recycle water tank, T-9.
5. Rainwater/Recycle water tank, T-12.
6. Wastewater tank, T-11 system.
7. Sump by cooling screw.
8. RF-2 Scrubber water equalization tank, T-19.
9. Hazardous waste debris bin.
10. Spent carbon storage warehouse grated trenches and sump.
11. Hopper containment pad
12. WWTP.
13. Wastewater lift station and piping ayatem (old).
14. Spent carbon unloading area containment pad.
15. Satellite Accumulation Area
16. Satellite Accumulation Area
17. Satellite Accumulation Area
18. Satellite Accumulation Area
19. Satellite Accumulation Area

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
2	12/12/14	NAME CHANGED TO EVOQUA WATER TECH., UPDATE SWMUs	JBE		
1	4/19/12	NAME CHANGED TO SIEMENS INDUSTRY, INC., UPDATE SWMUs	JBE	KEM	

CUSTOMER: EVOQUA WATER TECHNOLOGIES LLC

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PLOT SCALE: NONE

DO NOT SCALE DRAWING

THIS DRAWING IS THE PROPERTY OF SIEMENS AND CANNOT BE REPRODUCED OR DELIVERED TO OTHERS WITHOUT THE EXPRESS WRITTEN PERMISSION OF SIEMENS INDUSTRY, INC.

PROJECT No.	11135	
DRAWN:	JBE	2/27/07
CHK'D:	KEM	2/27/07
ENG'R:		

EVOQUA WATER TECHNOLOGIES LLC
Parker, AZ

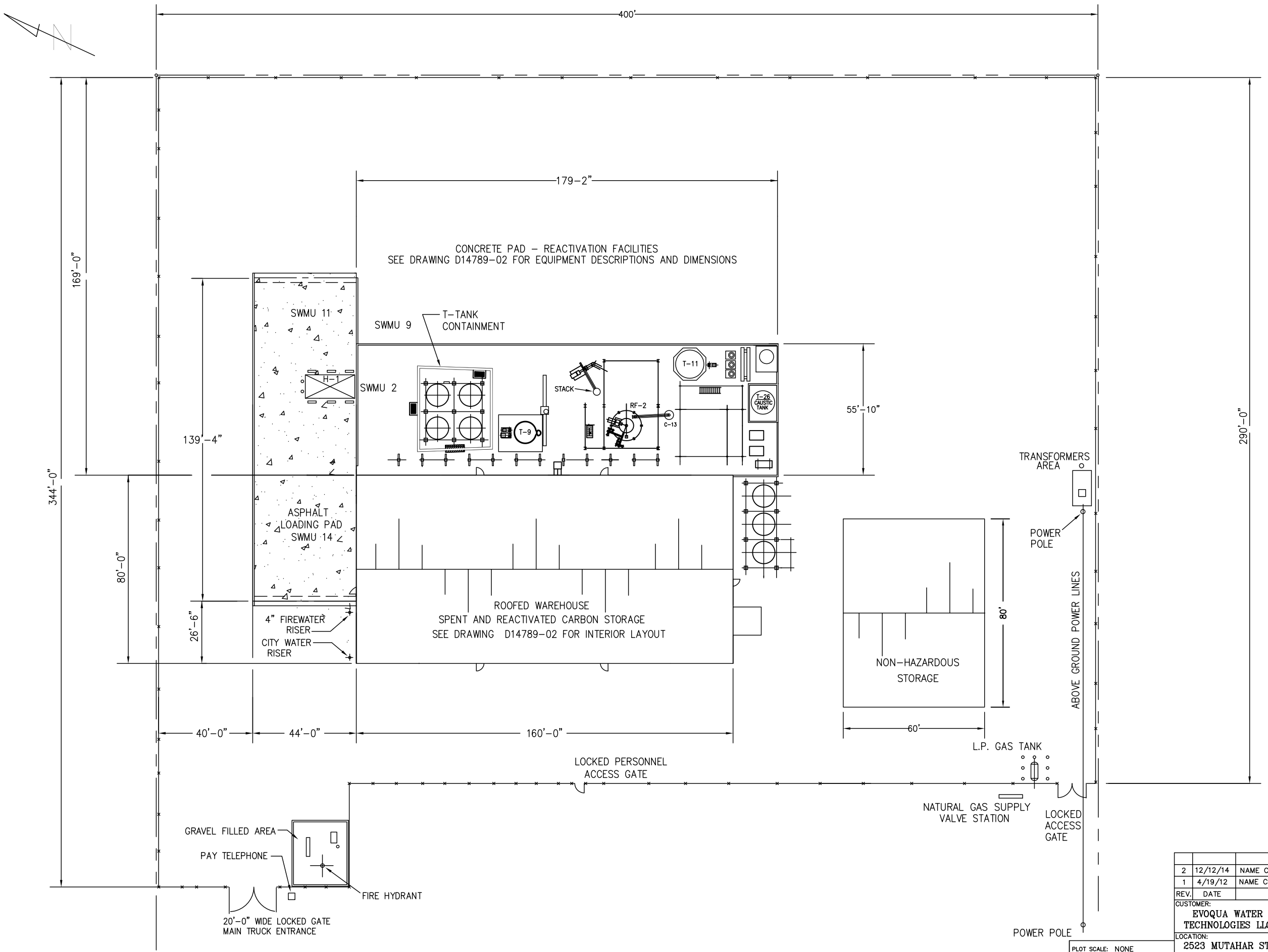
TITLE:

REACTIVATION FACILITY
SWMU LOCATION – FIGURE J-1

PART No. | DWG No. D14789-10 | REV. 2

PRINT DATE: 12/15/14

DWG: D14789-11



SEE SITE PLAN
DRAWING D14789-08

Solid Waste Management Units

1. Bermed containment in process area.
2. Sump by H-1.
3. Sump by storage tank, T-9.
4. Recycle water tank, T-9.
5. Rainwater/Recycle water tank, T-12.
6. Wastewater tank, T-11 system.
7. Sump by cooling screw.
8. RF-2 Scrubber water equalization tank, T-19.
9. Hazardous waste debris bin.
10. Spent carbon storage warehouse grated trenches and sump.
11. Hopper containment pad
12. WWTP.
13. Wastewater lift station and piping ayatem (old).
14. Spent carbon unloading area containment pad.
15. Satellite Accumulation Area
16. Satellite Accumulation Area
17. Satellite Accumulation Area
18. Satellite Accumulation Area
19. Satellite Accumulation Area

NOTES:

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REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R
2	12/12/14	NAME CHANGED TO EVOQUA WATER TECH., UPDATE SWMUs	JBE		
1	4/19/12	NAME CHANGED TO SIEMENS INDUSTRY, INC., UPDATE SWMUs	JBE	KEM	

CUSTOMER: EVOQUA WATER TECHNOLOGIES LLC

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PLOT SCALE: NONE

DO NOT SCALE DRAWING

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PROJECT No.		
DRAWN:	JBE	2/27/07
CHK'D:	KEM	2/27/07
ENG'R:		

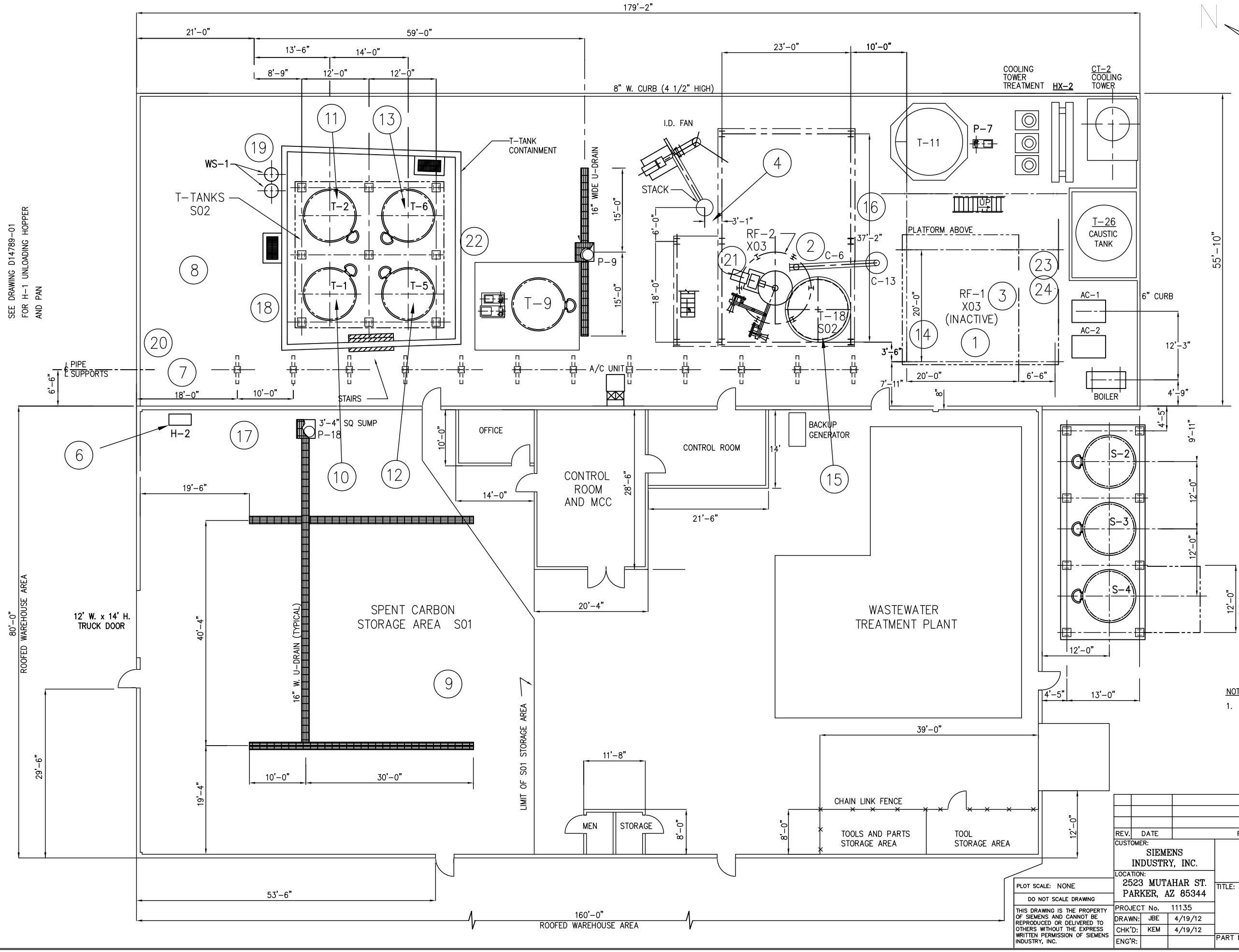
EVOQUA WATER TECHNOLOGIES LLC
Parker, AZ

TITLE:
REACTIVATION FACILITY
SWMU LOCATION - FIGURE J-2

PART No. | DWG No. D14789-11 | REV. 2

PRINT DATE: 12/15/14

DWG: D14789-12



Hazardous Waste Management Units

1. Spent carbon reactivation furnace – RF-1 and Associated Equipment (Dewater screw).
2. Spent carbon reactivation furnace RF-2 and Associated Equipment (Dewater Screw, Weigh Belt).
3. Afterburner, Venturi scrubber, Packed bed scrubber, Emissions stack.
4. Afterburner, Venturi scrubber, Packed bed scrubber,Wet electrostatic precipitator, Induced draft fan, Emissions stack.
5. Spent carbon unloading hopper H-1.
6. Spent carbon unloading hopper H-2.
7. Hopper air pollution control equipment piping and baghouse.
8. Spent carbon slurry and recycle water transfer system.
9. Spent carbon storage warehouse.
10. Spent carbon slurry storage tank, T-1.
11. Spent carbon slurry storage tank, T-2.
12. Spent carbon slurry storage tank, T-5.
13. Spent carbon slurry storage tank, T-6.
14. Furnace Feed System Tank T-8, and Ancillary Equipment
15. T-18 and Ancillary Equipment.
16. Wastewater conveyance piping to wastewater treatment tank.
17. Spent carbon storage warehouse barrel washer.
18. Carbon adsorber – PV1000.
19. Carbon adsorber WS-1.
20. Carbon adsorber WS-2.
21. Carbon adsorber WS-3.
22. Slurry transfer inclined plate settler tank.
23. Scrubber recycle tank T-17
24. Filter press.
25. New Facility Discharge Piping System.

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R

PLOT SCALE: NONE

DO NOT SCALE DRAWING

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CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.	11135	
DRAWN:	JBE	4/19/12
CHK'D:	KEM	4/19/12
ENG'R:		

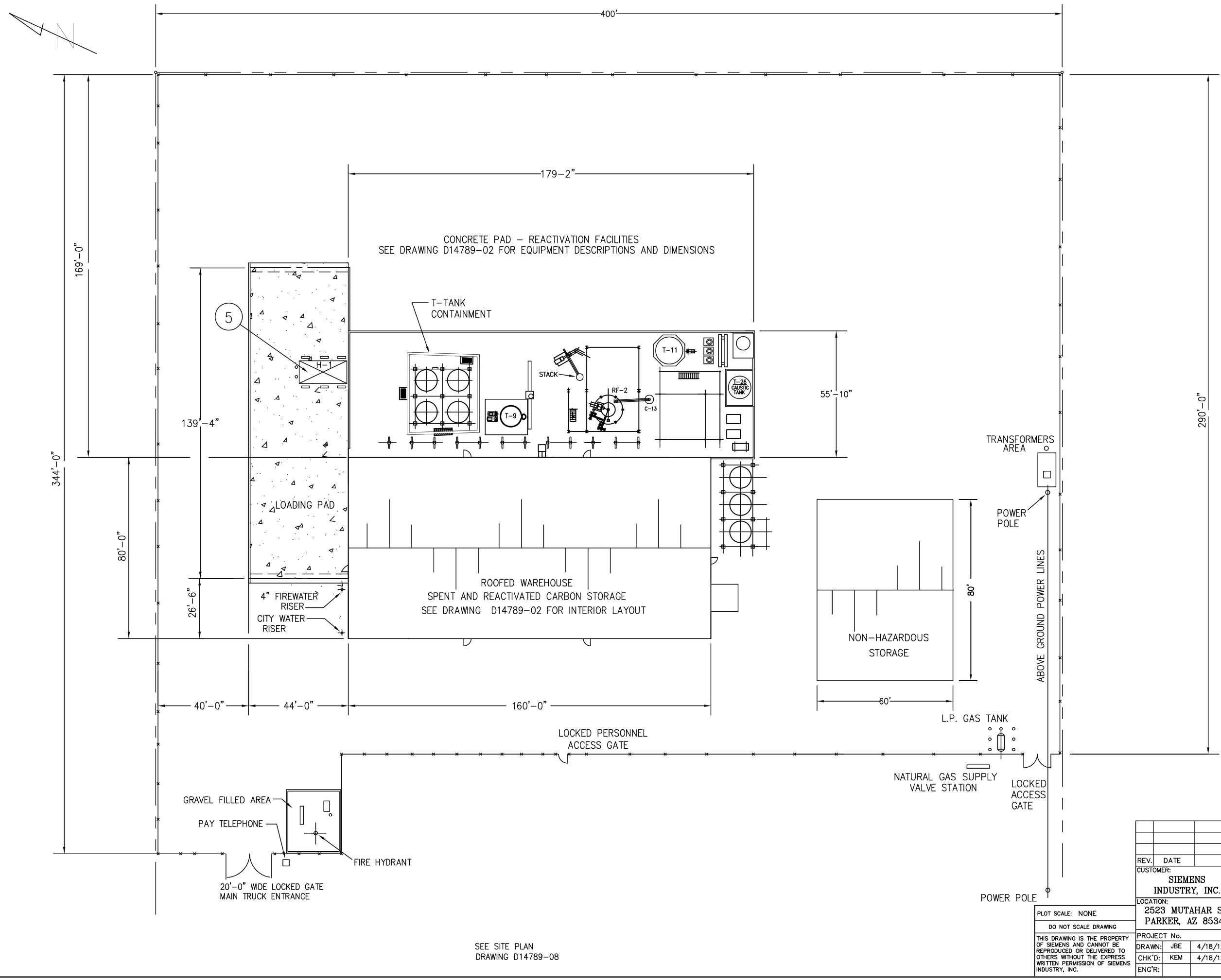
SIEMENS INDUSTRY, INC.
Parker, AZ

TITLE:
REACTIVATION FACILITY
HWMU LOCATION – FIGURE J-3

PART No. | DWG No. D14789-12 | REV. 0

PRINT DATE: 4/19/12

DWG: D14789-13



SEE SITE PLAN
DRAWING D14789-08

Hazardous Waste Management Units

1. Spent carbon reactivation furnace - RF-1 and Associated Equipment (Dewater screw).
2. Spent carbon reactivation furnace RF-2 and Associated Equipment (Dewater Screw, Weigh Belt).
3. Afterburner, Venturi scrubber, Packed bed scrubber, Emissions stack.
4. Afterburner, Venturi scrubber, Packed bed scrubber,Wet electrostatic precipitator, Induced draft fan, Emissions stack.
5. Spent carbon unloading hopper H-1.
6. Spent carbon unloading hopper H-2.
7. Hopper air pollution control equipment piping and baghouse.
8. Spent carbon slurry and recycle water transfer system.
9. Spent carbon storage warehouse.
10. Spent carbon slurry storage tank, T-1.
11. Spent carbon slurry storage tank, T-2.
12. Spent carbon slurry storage tank, T-5.
13. Spent carbon slurry storage tank, T-6.
14. Furnace Feed System Tank T-8, and Ancillary Equipment
15. T-18 and Ancillary Equipment.
16. Wastewater conveyance piping to wastewater treatment tank.
17. Spent carbon storage warehouse barrel washer.
18. Carbon adsorber - PV1000.
19. Carbon adsorber WS-1.
20. Carbon adsorber WS-2.
21. Carbon adsorber WS-3.
22. Slurry transfer inclined plate settler tank.
23. Scrubber recycle tank T-17
24. Filter press.
25. New Facility Discharge Piping System.

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R

CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.

DRAWN:	JBE	4/18/12
CHK'D:	KEM	4/18/12
ENG'R:		

PLOT SCALE: NONE

DO NOT SCALE DRAWING

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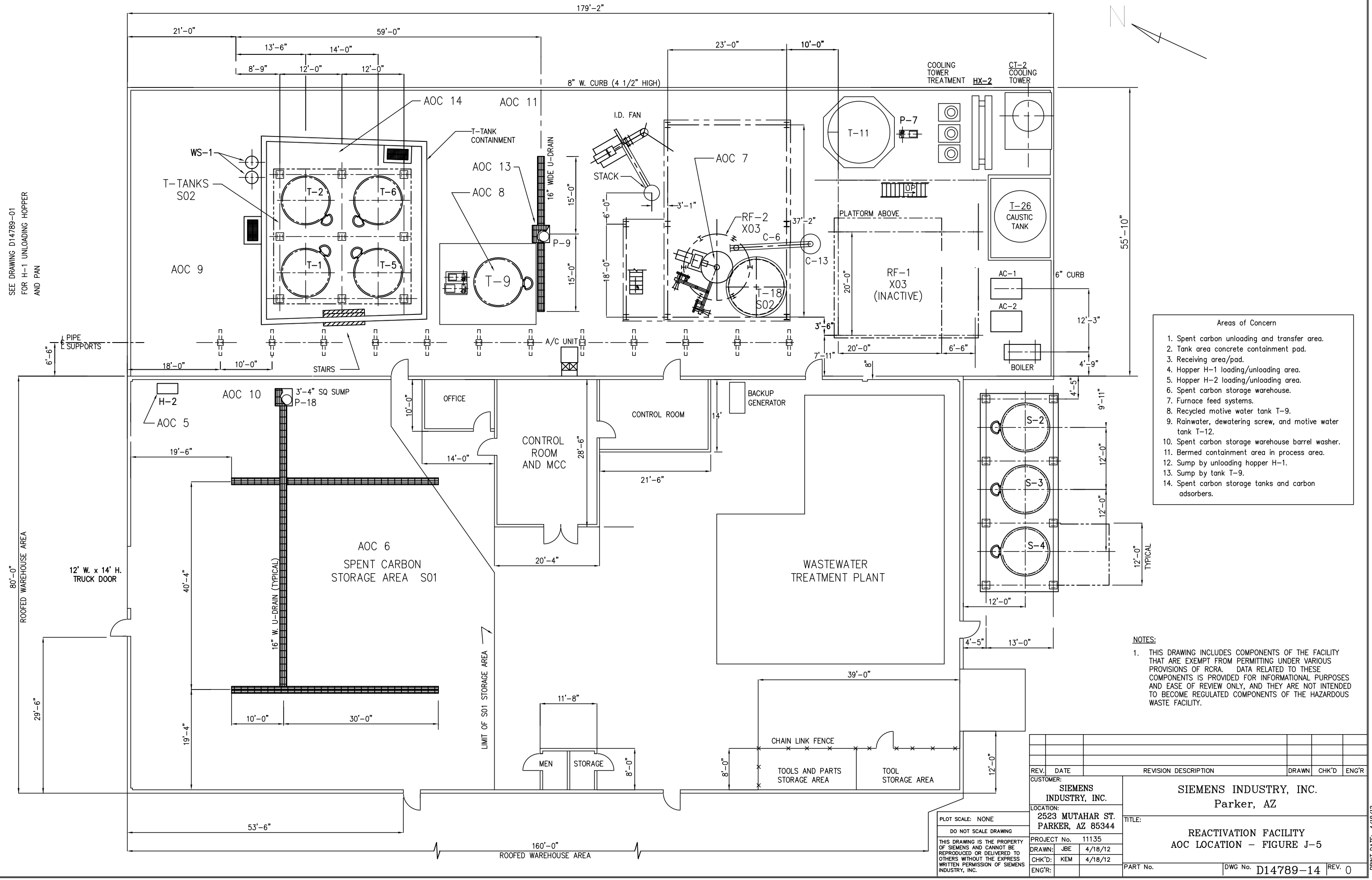
SIEMENS INDUSTRY, INC..
Parker, AZ

TITLE:
REACTIVATION FACILITY
HWMU LOCATION - FIGURE J-4

PART No. | DWG No. D14789-13 | REV. 0

PRINT DATE: 4/18/12

DWG: D14789-14



Areas of Concern

1. Spent carbon unloading and transfer area.
2. Tank area concrete containment pad.
3. Receiving area/pad.
4. Hopper H-1 loading/unloading area.
5. Hopper H-2 loading/unloading area.
6. Spent carbon storage warehouse.
7. Furnace feed systems.
8. Recycled motive water tank T-9.
9. Rainwater, dewatering screw, and motive water tank T-12.
10. Spent carbon storage warehouse barrel washer.
11. Bermed containment area in process area.
12. Sump by unloading hopper H-1.
13. Sump by tank T-9.
14. Spent carbon storage tanks and carbon adsorbers.

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R

PLOT SCALE: NONE

DO NOT SCALE DRAWING

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CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.	11135	
DRAWN:	JBE	4/18/12
CHK'D:	KEM	4/18/12
ENG'R:		

SIEMENS INDUSTRY, INC.
Parker, AZ

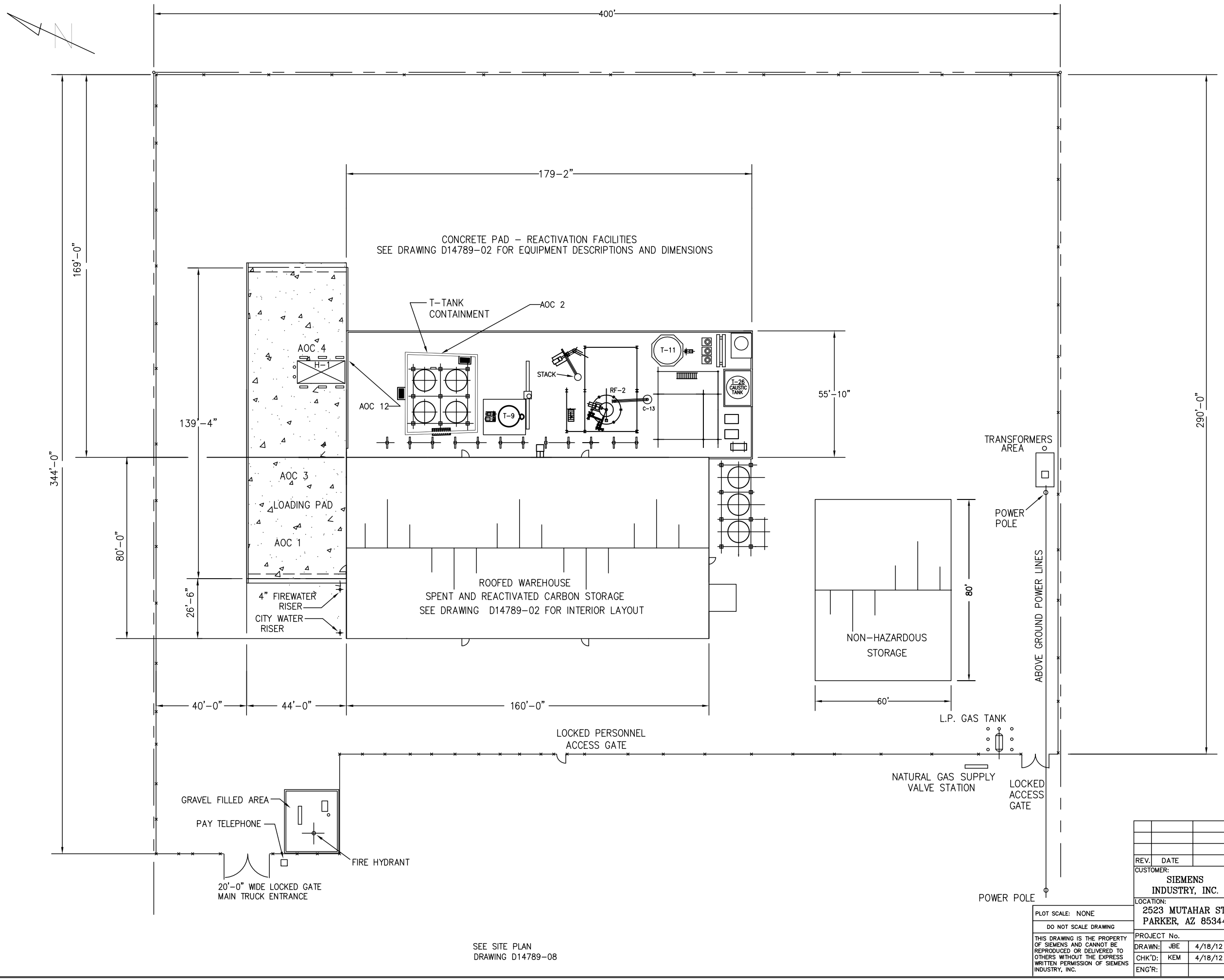
TITLE:

REACTIVATION FACILITY
AOC LOCATION – FIGURE J-5

PART No. | DWG No. D14789-14 | REV. 0

PRINT DATE: 4/18/12

DWG: D14789-15



Areas of Concern

1. Spent carbon unloading and transfer area.
2. Tank area concrete containment pad.
3. Receiving area/pad.
4. Hopper H-1 loading/unloading area.
5. Hopper H-2 loading/unloading area.
6. Spent carbon storage warehouse.
7. Furnace feed systems.
8. Recycled motive water tank T-9.
9. Rainwater, dewatering screw, and motive water tank T-12.
10. Spent carbon storage warehouse barrel washer.
11. Bermed containment area in process area.
12. Sump by unloading hopper H-1.
13. Sump by tank T-9.
14. Spent carbon storage tanks and carbon adsorbers.

NOTES:

1. THIS DRAWING INCLUDES COMPONENTS OF THE FACILITY THAT ARE EXEMPT FROM PERMITTING UNDER VARIOUS PROVISIONS OF RCRA. DATA RELATED TO THESE COMPONENTS IS PROVIDED FOR INFORMATIONAL PURPOSES AND EASE OF REVIEW ONLY, AND THEY ARE NOT INTENDED TO BECOME REGULATED COMPONENTS OF THE HAZARDOUS WASTE FACILITY.

SEE SITE PLAN
DRAWING D14789-08

REV.	DATE	REVISION DESCRIPTION	DRAWN	CHK'D	ENG'R

CUSTOMER: SIEMENS INDUSTRY, INC.

LOCATION: 2523 MUTAHAR ST. PARKER, AZ 85344

PROJECT No.

DRAWN:	JBE	4/18/12
CHK'D:	KEM	4/18/12
ENG'R:		

PLOT SCALE: NONE

DO NOT SCALE DRAWING

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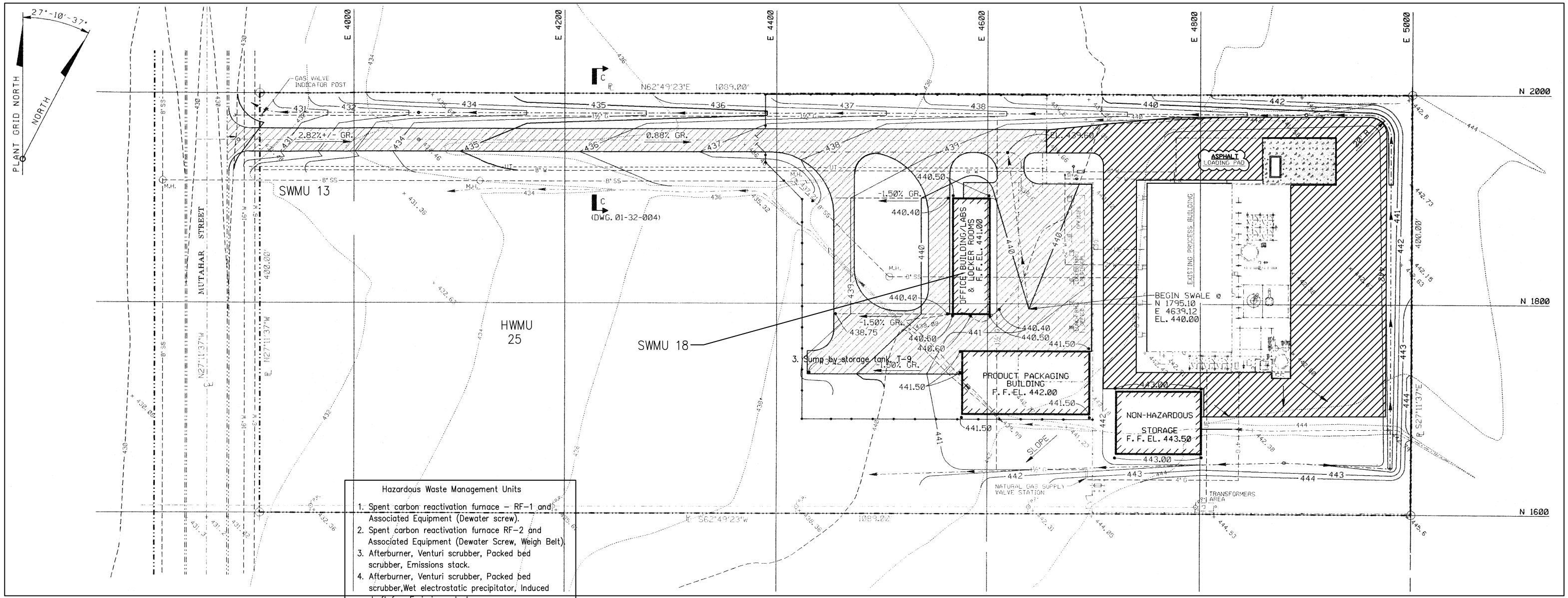
SIEMENS INDUSTRY, INC..
Parker, AZ

TITLE:
REACTIVATION FACILITY
AOC LOCATION - FIGURE J-6

PART No. | DWG No. D14789-15 | REV. 0

PRINT DATE: 4/18/12

DWG: D14789-16



Hazardous Waste Management Units

1. Spent carbon reactivation furnace – RF-1 and Associated Equipment (Dewater screw).
2. Spent carbon reactivation furnace RF-2 and Associated Equipment (Dewater Screw, Weigh Belt).
3. Afterburner, Venturi scrubber, Packed bed scrubber, Emissions stack.
4. Afterburner, Venturi scrubber, Packed bed scrubber,Wet electrostatic precipitator, Induced draft fan, Emissions stack.
5. Spent carbon unloading hopper H-1.
6. Spent carbon unloading hopper H-2.
7. Hopper air pollution control equipment piping and baghouse.
8. Spent carbon slurry and recycle water transfer system.
9. Spent carbon storage warehouse.
10. Spent carbon slurry storage tank, T-1.
11. Spent carbon slurry storage tank, T-2.
12. Spent carbon slurry storage tank, T-5.
13. Spent carbon slurry storage tank, T-6.
14. Furnace Feed System Tank T-8, and Ancillary Equipment
15. T-18 and Ancillary Equipment.
16. Wastewater conveyance piping to wastewater treatment tank.
17. Spent carbon storage warehouse barrel washer.
18. Carbon adsorber – PV1000.
19. Carbon adsorber WS-1.
20. Carbon adsorber WS-2.
21. Carbon adsorber WS-3.
22. Slurry transfer inclined plate settler tank.
23. Scrubber recycle tank T-17
24. Filter press.
25. New Facility Discharge Piping System.

Solid Waste Management Units

1. Bermed containment in process area.
2. Sump by H-1.
3. Sump by storage tank, T-9.
4. Recycle water tank, T-9.
5. Rainwater/Recycle water tank, T-12.
6. Wastewater tank, T-11 system.
7. Sump by cooling screw.
8. RF-2 Scrubber water equalization tank, T-19.
9. Hazardous waste debris bin.
10. Spent carbon storage warehouse grated trenches and sump.
11. Hopper containment pad
12. WWTP.
13. Wastewater lift station and piping system (old).
14. Spent carbon unloading area containment pad.
15. Satellite Accumulation Area
16. Satellite Accumulation Area
17. Satellite Accumulation Area
18. Satellite Accumulation Area
19. Satellite Accumulation Area

Areas of Concern

1. Spent carbon unloading and transfer area.
2. Tank area concrete containment pad.
3. Receiving area/pad.
4. Hopper H-1 loading/unloading area.
5. Hopper H-2 loading/unloading area.
6. Spent carbon storage warehouse.
7. Furnace feed systems.
8. Recycled motive water tank T-9.
9. Rainwater, dewatering screw, and motive water tank T-12.
10. Spent carbon storage warehouse barrel washer.
11. Bermed containment area in process area.
12. Sump by unloading hopper H-1.
13. Sump by tank T-9.
14. Spent carbon storage tanks and carbon adsorbers.

NOTES:

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2. THIS DRAWING IS BASED ON PARKER FACILITY DRAWING 01-32-002P

100'
SCALE

NO	DWN	CK'D	APP	REVISIONS	DATE
1	JBE			CHANGE TO EVOQUA, UPDATE SWMUs	12/12/14

CBE CHAVOND-BARRY ENGINEERING CORP.
400 Route 518 • P.O. Box 205 • Blawenburg, New Jersey 08504

EVOQUA WATER TECHNOLOGIES LLC
PARKER, AZ

REACTIVATION FACILITY
SWMU, HWMU, AND AOC LOCATION
FIGURE J-7

DRAWN	DATE	CHECKED	DATE	APPROVED	DATE
JBE	4/18/12	KEM	4/18/12		

SCALE	DWG. NO.	REV.
AS SHOWN	D14789-16	1

PRINT DATE: 12/15/14

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