

US EPA ARCHIVE DOCUMENT

NPDES Permit No. AZ0024619

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

NPDES PERMIT NO. AZ0024619

In compliance with the provisions of the Clean Water Act (“CWA”) (Public Law 92-500, as amended, 33 U.S.C. 1251 et seq.), the following discharger is authorized to discharge from the identified facility at the outfall location(s) specified below, in accordance with the effluent limits, monitoring requirements, and other conditions set forth in this permit. This permit authorizes the discharge of only those pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the permit application process.

Discharger Name	Upper Village of Moenkopi (“UVM”)
Discharger Address	P.O. Box 1229 Tuba City, Arizona 86045
Facility Name	UVM Wastewater Treatment Plant
Facility Location Address	Mile Post 321, Highway 160 Upper Village of Moenkopi, Arizona 86045
Facility Rating	Minor

Outfall Number	General Type of Waste Discharged	Outfall Latitude	Outfall Longitude	Receiving Water
001	Domestic wastewater	36° 06’ 30” N	111° 14’ 01” W	Moenkopi Wash, a tributary to the Little Colorado River
002A-B	Domestic wastewater	36° 06’ 30” N	111° 14’ 01” W	Reuse manholes
003	Domestic wastewater	36° 06’ 30” N	111° 14’ 01” W	Reuse holding tank

This permit was issued on:	December 20, 2017
This permit shall become effective on:	January 1, 2018
This permit shall expire at midnight on:	December 31, 2022

In accordance with 40 CFR 122.21(d), the discharger shall submit a new application for a permit at least 180 days before the expiration date of this permit, unless permission for a date no later than the permit expiration date has been granted by the Director.

Signed this 20th day of December 2017.

For the Regional Administrator

/s/

Tomás Torres, Director
Water Division
U.S. EPA, Region 9

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PART I. EFFLUENT LIMITS AND MONITORING REQUIREMENTS

A. *Effluent Limits and Monitoring Requirements*

1. Effluent Limits – Outfall Numbers 001, 002A, 002B, and 003
The discharger is authorized to discharge treated domestic wastewater in compliance with the final effluent limits and monitoring requirements specified in Tables 1, 2 and 3. Compliance with these requirements is monitored at Monitoring Locations M-001 and M-influent.
2. The discharge of pollutants at any point other than the outfall number 001 to Moenkopi Wash, tributary to the Little Colorado River, and/or to outfalls 002A, 002B for designated reuse for irrigation of food crops, and/or to outfall 003 for designated reuse for dust control as specifically authorized in this permit is prohibited.
3. All waters of the Hopi Tribe, including intermittent and ephemeral streams, as provided in the 2011 Hopi Tribe Water Quality Standards, shall be free from pollutants in amounts or combinations that, for any duration:
 - a. Stream Bottom Deposits: Surface waters shall be free of water contaminants from other natural causes that will settle and have a deleterious effect on the aquatic biota or that will significantly alter the physical or chemical properties of the water of the bottom sediments.
 - b. Floating Solids, Oil and Grease: Surface waters shall be free from objectionable oils, scum, foam, grease, and other floating materials and suspended substances of a persistent nature resulting from other than natural causes (including visible films of oil, globules of oil, grease, or solids in or on the water, or coatings on stream bands.) As a guideline, oil and grease discharged into surface waters shall not exceed 10 mg/l average or 15 mg/l maximum.
 - c. Color: Surface waters shall be free from the true color-producing materials (other than those resulting from natural causes) that create an aesthetically undesirable condition. Color shall not impair the designated and other attainable uses of a water body. Color-producing substances from other than natural sources are limited to concentrations equivalent to 70 color units (CU).
 - d. Odor and Taste: Contaminants from other than natural causes shall be limited to concentrations that do not impart unpalatable flavor to fish, that do not result in offensive odor or taste arising from the water, and that do not otherwise interfere with the designated and other attainable uses of a water body. Taste and odor-producing substances from other than natural origins shall not interfere with the production of a potable water supply by modern treatment methods.
 - e. Nuisance Conditions: Plant nutrients or other substances stimulating algal growth form other than natural causes shall not be present in concentrations that produce objectionable algal densities or nuisance aquatic vegetation, or that result in a dominance of nuisance species in-stream, or that cause nuisance conditions in any

other fashion.

- f. Pathogens: Waters shall be free from pathogens. Waters used for irrigation of table crops (e.g., lettuce) shall be free of Salmonella and Shigella species.
- g. Turbidity: Turbidity attributable to other than natural causes shall not reduce light transmission to the point at which aquatic biota are inhibited or to a point that causes an unaesthetic and substantial visible contrast with the natural appearance of the water. Specifically, turbidity shall not exceed 5 nephelometric turbidity units (NTU, a measure of turbidity in water) over background when background turbidity is 50 NTU or less, with no more than a 10-percent increase when background turbidity is more than 50 NTU.
- h. Mixing Zones: Where effluent is discharged in surface waters, a continuous zone shall be maintained in which the water is of adequate quality to allow the migration of aquatic life with no significant effluent on their population. The cross-sectional area of wastewater mixing zones shall generally be less than one quarter of the cross-sectional area or flow volume of the receiving stream. Mixing zones are prohibited in ephemeral waters or where there is no water for dilution.
- i. Radioactive Materials: Concentrations of radioactive constituents shall not exceed the concentration caused by naturally occurring materials.
- j. Temperature: The introduction of heat by other than natural causes shall not increase the temperature in a stream, outside a mixing zone, by more than 2.7°C (5°F), based upon the monthly average of the maximum daily temperatures measured at mid-depth or 3 feet (whichever is less) outside the mixing zone. The normal daily and seasonal variations that were present before the addition of heat from other than natural sources shall be maintained. In no case shall man-introduced heat be permitted when the maximum temperature specified for the reach (20°C/68°F for cold water fisheries and 32.2°C/90°F for warm water fisheries) would thereby be exceeded. High water temperatures caused by unusually high ambient air temperatures are not violations of these standards.
- k. Salinity/Mineral Quality (total dissolved solids, chlorides, and sulfates): Existing mineral quality shall not be altered by municipal, industrial, and in-stream activities, or other waste discharges, so as to interfere with the designated or attainable uses for a water body. An increase of more than one-third over naturally occurring levels shall not be permitted.
- l. Toxic Substances: Toxic substances shall not be present in receiving waters in quantities that are toxic to human, animal, plant, or aquatic life, or in quantities that interfere with the normal propagation, growth, and survival of the sensitive indigenous aquatic biota.

B. Table 1. Effluent Limits and Monitoring Requirements – Outfall Number: 001
 (Based upon the design flow capacity of 0.185 MGD)

Effluent Parameter	Units	Monthly Average	Weekly Average	Daily Maximum	Monitoring Frequency ¹	Sample Type
Flow	MGD	-- ¹	--	-- ¹	Monthly	Instantaneous
BOD ₅ ²	mg/l	10	15	--	Monthly	24-hour Composite
	kg/day	7	10	--		
TSS ²	mg/l	10	15	--	Monthly	24-hour Composite
	kg/day	7	10	--		
<i>Escherichia coli</i>	CFU/100 ml	130 ³	--	580 ⁴	Weekly	Discrete
Dissolved Oxygen ⁵	mg/l	--	--	≥ 5.0	Monthly	24-hour Composite
Ammonia (as N) ⁶	mg/l	--	--	-- ⁶	Monthly	Discrete
Ammonia Impact Ratio (AIR) ⁷	--	1.0	--	--	Monthly	Discrete
pH ^{8,9}	std. units	between 6.5 to 9.0			Monthly	Discrete
Temperature ⁸	deg °C	--	--	≤32.2	Monthly	Discrete
Turbidity ¹⁰	NTU ⁸	--	--	25	Monthly	Discrete
Whole Effluent Toxicity (chronic) ¹¹	--	Pass ¹¹			Semiannual January/July	24-hour Composite
Priority Pollutant Scan ¹²	µg/l	-- ¹	--	-- ¹	Once/1 st Quarter during Year 1	24-hour Composite

‘MGD’ indicates units of Million Gallons per Day; ‘CFU’ is Colony Forming Units.

Footnotes:

- No effluent limits are set at this time, but monitoring and reporting is required. The effluent shall be sampled at the pipe coming out of Outfall Number 001.
- “BOD₅” = Biochemical Oxygen Demand (5-day test). “TSS” = Total Suspended Solids. For BOD₅ and TSS, the arithmetic means of values, by weight, for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of values, by weight, for influent samples collected at approximately the same times during the same period.
- Geometric mean of a minimum of not less than five samples collected over a period of not more than 30 days.
- Single sample maximum.
- Minimum dissolved oxygen limit of 5 mg/l, based on the 2011 Hopi Water Quality Standards for aquatic and wildlife (warm water habitat) for support and propagation of animals, plants, or other organisms.
- For ammonia (in mg N/liter), the 2011 Hopi Water Quality Standards specify ammonia limitations for aquatic and wildlife (warm water habitat) for support and propagation of animals, plants, or other organisms. See Attachment C for the total ammonia table. The criteria for ammonia are pH and temperature dependent; therefore, pH and temperature field measurements must be taken concurrently at the same location as the water samples destined for the laboratory analysis of ammonia.
- The Ammonia Impact Ratio (AIR) is calculated as the ratio of the measured ammonia and the ammonia limit as determined by the concurrent measurement of pH and temperature. See attached Attachment D for sample log to help calculate and record the AIR values. Temperature and pH measurements shall be taken concurrently with measurements for ammonia.
- Temperature and pH measurements shall be taken concurrently with measurements for ammonia.
- Effluent pH units are based on the numeric standards for aquatic, wildlife and livestock, consistent with the 2011 Hopi Water Quality Standards for protection of full body contact and groundwater recharge uses.
- Turbidity limit of 25 NTUs (Nephelometric Turbidity Units) based the 2011 Hopi Water Quality Standards

for protection of full body contact and groundwater recharge uses.

11. No chronic toxicity effluent limit is set for this discharge. All chronic WET tests must be “Pass”, and no test may be “Fail”. “Pass” constitutes a rejection of the null hypothesis. See Section III.C. of the permit for details of the chronic WET test requirement of the permit cycle.
12. Priority pollutants scan: The permittee shall monitor for the full list of priority pollutants as listed in the Code of Federal Regulations (CFR) at 40 CFR Part 423, Appendix A. No limit is set at this time. Should the results reveal levels below the 2011 Hopi Water Quality Standards and EPA’s National Water Quality Criteria for priority pollutants, monitoring will no longer be required for the remainder of the permit cycle.

**C. Table 2. Effluent Limits and Monitoring Requirements for Reclaimed Water –
 Crop irrigation (Class A– Outfall Numbers 002A, 002B)**

Effluent Parameter	Units	24-hour Average	Daily Maximum	Monitoring Frequency	Sample Type
Turbidity ^{1,2}	NTU	2	5	Monthly	Continuous
Fecal coliform ^{1,3}	CFU/100 ml	--	23	Daily ⁴	Discrete
Nitrogen	mg/l	10	10	Monthly	Discrete

Footnotes:

1. Based on EPA’s Best Professional Judgment (BPJ) authority pursuant to 40 CFR 125.3(c)(2)
2. Turbidity limit in NTUs (Nephelometric Turbidity Units) based on Arizona Administrative Code Title 18, Chapter 11 for Class A reclaimed water.
3. Fecal coliform (in CFU/100ml) based on Arizona Administrative Code Title 18, Chapter 11 for Class A reclaimed water. There shall be no detectable levels in four of the last seven daily samples of reclaimed water.
4. The permittee shall monitor daily during the beginning of each irrigation season for one month. Should the results reveal no detectable levels in four of the last seven daily samples, this monitoring requirement is reduced from daily to weekly during the irrigation season.

**D. Table 3. Effluent Limits and Monitoring Requirements for Reclaimed Water –
 Dust control (Class B) – Outfall Number 003**

Effluent Parameter	Units	7-day Mean	Daily Maximum	Monitoring Frequency	Sample Type
Fecal coliform ^{1,2}	CFU/100 ml	200	800	Daily ³	Discrete

Footnotes:

1. Based on EPA’s Best Professional Judgment (BPJ) authority pursuant to 40 CFR 125.3(c)(2).
2. Fecal coliform (in CFU/100ml) based on Arizona Administrative Code Title 18, Chapter 11 for Class B reclaimed water. The concentration shall be less than 200/100ml in four of the last seven daily samples of reclaimed water.
3. The permittee shall monitor daily for this reclaimed use category. Should the results reveal no exceedances of 200 CFU/100ml in four of the last seven daily samples, this requirement will be reduced from daily to weekly.

E. Sampling

1. Samples and measurements shall be representative of the volume and nature of the monitored discharge.
2. Samples shall be taken at the following locations:
 - a. Influent samples shall be taken after the last addition to the collection system and prior to inplant return flow and the first treatment process, where representative

samples can be obtained.

- b. Effluent samples shall be taken after inplant return flows and the last treatment process and prior to mixing with the receiving water, where representative samples can be obtained.
- c. If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the permittee shall monitor and record data for all the parameters listed in the monitoring requirements, after which the frequencies of analysis listed in the monitoring requirements shall apply for the duration of each such intermittent discharge. The permittee is not required to take effluent samples when there is no discharge.

F. General Monitoring and Reporting

1. All monitoring shall be conducted in accordance with 40 CFR 136 test methods, unless otherwise specified in this permit. For effluent analyses required in Table 1 of this permit, the permittee shall utilize 40 CFR 136 test methods with published Method Detection Limit and Minimum Level (“MDL” and “ML”) that are lower than the effluent limits in Table 1 of this permit. For parameters without an effluent limit, the permittee must use an analytical method at or below the level of the applicable water quality criterion for the measured pollutant or the amount of the pollutant is high enough that the method detects and quantifies the level of pollutant in the discharge. If all MDLs or MLs are higher than these effluent limits or criteria concentrations, then the permittee shall utilize the test method with the lowest MDL or ML. In this context, the permittee shall ensure that the laboratory utilizes a standard calibration where the lowest standard point is equal to or less than the ML. Effluent analyses for metals shall measure “total recoverable metal”, except as provided under 40 CFR 122.45(c).
2. As an attachment to the first DMR, the permittee shall submit, for all parameters with monitoring requirements specified in this permit:
 - a. The test method number or title and published MDL or ML,
 - b. The preparation procedure used by the laboratory,
 - c. The laboratory’s MDL for the test method computed in accordance with Appendix B of 40 CFR 136,
 - d. The standard deviation (S) from the laboratory’s MDL study,
 - e. The number of replicate analyses (n) used to compute the laboratory’s MDL, and
 - f. The laboratory’s lowest calibration standard.

As part of each DMR submittal, the permittee shall certify that there are no changes to the laboratory’s test methods, MDLs, MLs, or calibration standards. If there are any changes to the laboratory’s test methods, MDLs, MLs, or calibration standards, these changes shall be summarized in an attachment to the subsequent DMR submittal.

3. The permittee shall develop a Quality Assurance (“QA”) Manual for the field collection and laboratory analysis of samples. The purpose of the QA Manual is to assist in

planning for the collection and analysis of samples and explaining data anomalies if they occur. At a minimum, the QA Manual shall include the following:

- a. Identification of project management and a description of the roles and responsibilities of the participants; purpose of sample collection; matrix to be sampled; the analytes or compounds being measured; applicable technical, regulatory, or program-specific action criteria; personnel qualification requirements for collecting samples;
 - b. Description of sample collection procedures; equipment used; the type and number of samples to be collected including QA/Quality Control (“QC”) samples; preservatives and holding times for the samples (see 40 CFR 136.3); and chain of custody procedures;
 - c. Identification of the laboratory used to analyze the samples; provisions for any proficiency demonstration that will be required by the laboratory before or after contract award such as passing a performance evaluation sample; analytical method to be used; MDL and ML to be reported; required QC results to be reported (e.g., matrix spike recoveries, duplicate relative percent differences, blank contamination, laboratory control sample recoveries, surrogate spike recoveries, etc.) and acceptance criteria; and corrective actions to be taken in response to problems identified during QC checks; and,
 - d. Discussion of how the permittee will perform data review, report results, and resolve data quality issues and identify limits on the use of data.
4. Throughout all field collection and laboratory analyses of samples, the permittee shall use the QA/QC procedures documented in their QA Manual. If samples are tested by a contract laboratory, the permittee shall ensure that the laboratory has a QA Manual on file. A copy of the permittee’s QA Manual shall be retained on the permittee’s premises and available for review by regulatory authorities upon request. The permittee shall review its QA Manual annually and revise it, as appropriate.
 5. Samples collected during each month of the reporting period must be reported on Discharge Monitoring Report forms, as follows:
 - a. For a *maximum daily* permit limit or monitoring requirement when one or more samples are collected during the month, report either:

The *maximum value*, if the maximum value of all analytical results is greater than or equal to the ML; or

NODI (Q), if the maximum value of all analytical results is greater than or equal to the laboratory’s MDL, but less than the ML; or

NODI (B), if the maximum value of all analytical results is less than the laboratory’s MDL.

- b. For an *average weekly* or *average monthly* permit limit or monitoring requirement when only one sample is collected during the week or month, report either:

The *maximum value*, if the maximum value of all analytical results is greater than or equal to the ML; or

NODI (Q), if the maximum value of all analytical results is greater than or equal to the laboratory's MDL, but less than the ML; or

NODI (B), if the maximum value of all analytical results is less than the laboratory's MDL.

- c. For an *average weekly* or *average monthly* permit limit or monitoring requirement when more than one sample is collected during the week or month, report:

The *average value* of all analytical results where 0 (zero) is substituted for *NODI (B)* and the laboratory's MDL is substituted for *NODI (Q)*.

6. In addition to information requirements specified under 40 CFR 122.41(j)(3), records of monitoring information shall include: the laboratory which performed the analyses and any comment, case narrative, or summary of results produced by the laboratory. The records should identify and discuss QA/QC analyses performed concurrently during sample analyses and whether project and 40 CFR 136 requirements were met. The summary of results must include information on initial and continuing calibration, surrogate analyses, blanks, duplicates, laboratory control samples, matrix spike and matrix spike duplicate results, and sample condition upon receipt, holding time, and preservation.

G. Reporting of Monitoring Results

1. All monitoring results shall be submitted in such a format as to allow direct comparison with effluent limitations, monitoring requirements and conditions of this permit. Monthly Discharge Monitoring Reports ("DMRs") for the previous three (3) months shall be submitted quarterly no later than the 28th day of the month following the previous quarterly reporting period. For example, the three (3) monthly DMR forms for the reporting period January through March shall be submitted by April 28th. A DMR shall be submitted for the reporting period even if there was not any discharge. If there is no discharge from the facility during the reporting period, the permittee shall submit a DMR indicating "No discharge" as required.

2. Submittal of DMRs and the Use of NetDMR

The permittee shall electronically submit compliance monitoring data and reports using the electronic reporting tools provided by EPA Region 9 (NetDMR and NeT) and may cease mailing paper DMRs. NetDMR is a web-based tool that allows permittees to electronically submit DMRs and other required reports via a secure internet connection. NetDMR can be accessed at: <http://www.epa.gov/netdmr>. By using NetDMR, the permittee will no longer be required to submit hard copies of DMRs to EPA under 40 CFR 122.41 and 403.12.

3. Submittal of Reports as NetDMR Attachments

After the permittee begins submitting electronic DMRs, the permittee shall electronically submit all reports as NetDMR attachments rather than as hard copies, unless otherwise specified in this permit. A report submitted electronically as a NetDMR attachment shall be submitted to U.S. EPA by the 28th day of the month following the calendar quarter it was due.

4. Submittal of sewage sludge reports and the Use of NeT

The requirement for submitting annual sewage sludge reports using EPA's NPDES Electronic Reporting Tool ("NeT") goes into effect December 21, 2016. NeT is a web-based tool that allows permittees to electronically submit sewage sludge reports via a secure internet connection. Beginning with the annual report for calendar year 2016, which is due by February 19, 2017, the permittee shall submit sewage sludge reports using NeT and cease paper mailing. NeT can be accessed at <http://www.epa.gov/compliance/national-pollutant-discharge-elimination-system-npdes-electronic-reporting-tool-net-fact>.

5. Electronic reporting waiver

The permittee may seek an electronic reporting waiver from U.S. EPA. To obtain an electronic reporting waiver, a permittee must first submit an electronic reporting waiver request to U.S. EPA (see address below). The waiver request shall contain the following details:

- Facility name;
- NPDES permit number (if applicable);
- Facility address;
- Name, address and contact information for the owner, operator, or duly authorized facility representative; and
- Brief written statement regarding the basis for claiming such a temporary waiver.

U.S. EPA will either approve or deny this electronic reporting waiver request within 120 days. The duration of a temporary waiver may not exceed 5 years, which is the normal period for an NPDES permit term. The permittee must re-apply for a new temporary waiver after the temporary waiver expires. Approved electronic reporting waivers are not transferrable. Only permittees with an approved reporting waiver request may submit monitoring data and reports on paper to U.S. EPA for the period that the approved reporting waiver request is effective.

Permittees with an approved and effective electronic reporting waiver shall submit monitoring data and reports to U.S. EPA using the address below. These submissions shall use the forms provided by U.S. EPA and shall be submitted by the 28th day of the month following the completed reporting period. The permittee shall sign and certify all submissions in accordance with the signatory requirement (see Part A.k. of EPA's "*Standard Federal NPDES Permit Conditions*"). The permittee shall submit the legible originals of these documents to the following addresses:

NPDES Data Team (ENF 4-1)
Information Management Section
Enforcement Division
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

Lionel Puhuyesva, Director
Hopi Water Resources Program
PO Box 123
Kykotsmovi, AZ 86039

Part II. STANDARD CONDITIONS

The permittee shall comply with all EPA Region 9 “*Standard Federal NPDES Permit Conditions*,” included in Attachment A of this permit.

Part III. SPECIAL CONDITIONS

A. Permit Reopeners

1. At this time, there is no reasonable potential to establish any other water quality-based limits. Should any monitoring indicate that the discharge cause, has the reasonable potential to cause, or contributes to excursion above a water quality criteria, the permit may be reopened for the imposition of water quality-based limits and/or whole effluent toxicity limits. In accordance with 40 CFR 122 and 124, this permit may be modified to include appropriate conditions or effluent limits, monitoring, or other conditions to implement new regulations, including U.S. EPA-approved new Tribal 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 exceedences of water quality standards.
2. In accordance with 40 CFR 122.44(c), EPA may promptly modify or revoke and reissue any permit issued to a treatment works treating domestic sewage (including “sludge only facilities”) to incorporate any applicable standard for sewage sludge use or disposal promulgated under section 405(d) of the CWA, if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or controls a pollutant or practice not limited in the permit.

B. Twenty Four-Hour Reporting of Noncompliance

In accordance with 40 CFR 122.41(l)(6)(i), (ii) and (iii), the following condition is expressly incorporated into this permit. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances to the following persons or their offices:

Manager	Lionel Puhuyesva, Director
Wastewater Enforcement Office (ENF 3-1)	Hopi Water Resources Program
U.S. EPA Region 9	T (928) 734-3711
(415) 972-3577	F (928)734-3609

1. If the permittee is unsuccessful in contacting the person above, the permittee shall report by 9 a.m. on the first business day following the noncompliance. A written submission shall also be provided within five (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 dates and times, and, if the noncompliance has not been corrected, the date and/or time it is expected to be corrected; and, steps and/or plans to reduce, eliminate, and prevent reoccurrence of the noncompliance.
2. The following information shall be included as information which must be reported within 24 hours under this paragraph.
 - (a) Any unanticipated bypass which exceeds any effluent limit in the permit (see 40 CFR 122.44(g)).
 - (b) Any upset which exceeds any effluent limit in the permit.
 - (c) Violation of a maximum daily discharge limit for any of the pollutants listed by the Director in the permit to be reported within 24 hours [see 40 CFR 122.44(g).]
3. The Director may waive the written report on a case-by-case basis for reports required under paragraph B.2, if the oral report has been received within 24 hours.

C. Chronic Whole Effluent Toxicity (WET) Requirements

1. Monitoring Frequency

The permittee shall conduct ***semiannual***, in January and July, chronic toxicity tests on 24-hour composite effluent samples. Once each calendar year, at a different time of year from the previous years, the permittee shall split a 24-hour composite effluent sample and concurrently conduct three toxicity tests using a fish, an invertebrate, and an alga species; the permittee shall continue to conduct routine ***semiannual*** toxicity testing using the single, most sensitive species.

Chronic toxicity test samples shall be collected for each point of discharge at the designated NPDES sampling station for the effluent (i.e., downstream from the last treatment process and any in-plant return flows where a representative effluent sample can be obtained). During years ***1, 2, 3, 4, and 5*** of the permit, a split of each sample shall be analyzed for all other monitored parameters at the minimum frequency of analysis specified by the effluent monitoring program.

2. Freshwater Species and EPA WET Test Methods

Species and short-term EPA WET test methods for estimating the chronic toxicity of NPDES effluents are in the fourth edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136). The permittee shall conduct static renewal toxicity tests with the following:

- Fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0)
- Daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0);
- Green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

3. Chronic WET Permit Triggers

There are no chronic toxicity effluent limits for this discharge. The chronic WET permit trigger is any one WET test (either biological endpoint of survival or sublethal) where a test result is “Fail” (during the monthly reporting period) at the chronic in-stream waste concentration (IWC). For this discharge, the IWC is determined to be 100 percent effluent. To calculate either “Pass” or “Fail”, the permittee shall follow the instructions in Appendix A in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA/833-R-10-003, 2010). A “Pass” result indicates no toxicity at the IWC, and a “Fail” result indicates toxicity at the IWC.

The permittee shall report either a “Pass” or a “Fail” on the DMR form. If a result is reported as “Fail”, the permittee shall follow Section 7 (Reporting of Chronic Toxicity Monitoring Results) of this permit.

4. Quality Assurance – EPA WET Test Methods

- a. Quality assurance measures, instructions, and other recommendations and requirements are in the EPA WET test methods manual previously referenced in this permit.
- b. This permit is subject to a determination of Pass or Fail from a multiple-effluent concentration chronic toxicity test at the IWC (for statistical flowchart and procedures, see *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*, Appendix A, Figure A-1). The chronic in-stream waste concentration (IWC) for this discharge is **100** percent effluent.
- c. Effluent dilution water and control water should be standard synthetic dilution water as described in the EPA WET test methods manual, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002). If the dilution water is different from test organism culture water, then a second control using culture water shall also be used.

- d. If organisms are not cultured in-house, then concurrent testing with a reference toxicant shall be conducted. If organisms are cultured in-house, then monthly reference toxicant testing is sufficient. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration).
- e. If either the reference toxicant or effluent toxicity tests do not meet all test acceptability criteria in the EPA WET test methods manual, then the permittee shall resample and retest within 14 days.
- f. Following Paragraph 10.2.6.2 of the freshwater EPA WET test methods manual, all chronic toxicity test results from the multi-concentration tests required by this permit shall be reviewed and reported according to EPA guidance on the evaluation of concentration-response relationships in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)* (EPA/821/B-00-004, 2000).
- g. If the discharged effluent is chlorinated, then chlorine shall not be removed from the effluent sample before toxicity testing without written approval by the permitting authority.

5. Initial Investigation TRE Work Plan

Within 90 days of the permit effective date, the permittee shall prepare and submit to the U.S. EPA Director a copy of its Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan (1–2 pages) for review. This plan shall contain steps the permittee intends to follow if toxicity is measured above a chronic WET permit limit or trigger and should include the following, at minimum:

- a. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
- b. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.
- c. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., an in-house expert or outside contractor).

5. Accelerated Toxicity Testing and TRE/TIE Process

- a. If a chronic WET permit limit or trigger is exceeded and the source of toxicity is known (e.g., a temporary plant upset), then the permittee shall conduct one additional toxicity test using the same species and EPA WET test method. This WET test shall begin within 14 days of receipt of WET test results exceeding a chronic WET permit limit or trigger. If the additional toxicity test does not

exceed a chronic WET permit limit or trigger, then the permittee may return to their regular testing frequency.

- b. If a chronic WET permit limit or trigger is exceeded and the source of toxicity is not known, then the permittee shall conduct six additional toxicity tests using the same species and EPA WET test method, approximately every two weeks, over a 12-week period. This testing shall begin within 14 days of receipt of WET test results exceeding a chronic WET permit limit or trigger. If none of the additional toxicity tests exceed a chronic WET permit limit or trigger, then the permittee may return to their regular testing frequency.
 - c. If one of the additional toxicity tests (in paragraphs 6.a or 6.b) exceeds a chronic WET permit limit or trigger, then, within 14 days of receipt of this WET test result, the permittee shall initiate a TRE using as guidance, according to the type of treatment facility, the EPA TRE manual, *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/ 833/B-99/002, 1999) or EPA TRE manual, *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989). In conjunction, the permittee shall develop and implement a Detailed TRE Work Plan which shall contain the following: further actions undertaken by the permittee to investigate, identify, and correct the causes of toxicity; actions the permittee will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for such actions.
 - d. The permittee may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and EPA WET test method and, as guidance, EPA WET TIE/TRE method manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993).
6. Reporting of Chronic Toxicity Monitoring Results
- a. The permittee shall submit a full laboratory report as an attachment to the DMR for all toxicity testing for the month in which the toxicity test was conducted; the laboratory report shall contain the following: the toxicity test results, the dates of sample collection and initiation of each toxicity test; all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TIE/TRE investigations.
 - b. The permittee shall provide the actual test endpoint responses for the control (i.e., control mean) and IWC concentration (i.e., IWC mean) for each WET test conducted to make it easier for permit writers to find the necessary WET test results when determining WET RP.

- c. The permittee shall notify the U.S. EPA Director in writing within 14 days of exceedance of a chronic WET permit limit or trigger. The notification shall describe actions the permittee has taken or will take to investigate, identify, and correct the causes of toxicity; the status of actions required by this permit; and schedule for actions not yet completed; or reason(s) that no action has been taken.

7. Permit Reopener for Chronic Toxicity

In accordance with 40 CFR Parts 122 and 124, this permit may be modified to include effluent limitations or permit conditions to address chronic toxicity in the effluent or receiving waterbody, as a result of the discharge; or to implement new, revised, or newly interpreted water quality standards applicable to chronic toxicity.

D. Biosolids Requirements

“Biosolids” means non-hazardous sewage sludge, as defined in 40 CFR 503.9. Sewage sludge that is hazardous, as defined in 40 CFR 261, must be disposed of in accordance with the Resources Conservation and Recovery Act.

1. General Requirements

- a. All biosolids generated by the permittee shall be used or disposed of in compliance with the applicable portions of:
 - (i) 40 CFR 503 - for biosolids that are land applied, placed in a surface disposal site (dedicated land disposal site, monofill, or sludge-only parcel at a municipal landfill), or incinerated;
 - (ii) 40 CFR 258 - for biosolids disposed of in a municipal solid waste landfill (with other material);
 - (iii) 40 CFR 257 - for all biosolids use and disposal practices not covered under 40 CFR 258 or 503.

40 CFR 503, Subpart B (land application) sets requirements for biosolids that are applied for the purpose of enhancing plant growth or for land reclamation. 40 CFR 503, Subpart C (surface disposal) sets requirements for biosolids that are placed on the land for the purpose of disposal.

The permittee is responsible for assuring that all biosolids produced at its facility are used or disposed of in accordance with these rules, whether the permittee uses or disposes of the biosolids, itself, or transfers the biosolids to another party for further treatment, use, or disposal. The permittee is responsible for informing subsequent preparers, applicators, and disposers of the requirements that they must meet under these rules.

- b. Duty to mitigate: The permittee shall take all reasonable steps to prevent or minimize any biosolids use or disposal which has a likelihood of adversely affecting human health or the environment.
- c. No biosolids shall be allowed to enter wetlands or other waters of the United States.
- d. Biosolids treatment, storage, use, or disposal shall not contaminate groundwater.
- e. Biosolids treatment, storage, use, or disposal shall not create a nuisance such as objectionable odors or flies.
- f. The permittee shall assure that haulers transporting biosolids off site for treatment, storage, use, or disposal take all necessary measures to keep the biosolids contained. All haulers must have spill clean-up procedures. Trucks hauling biosolids that are not classified as Class A, as defined at 40 CFR 503.32(a), shall be cleaned as necessary after loading and after unloading so as to have no biosolids on the exterior of the truck body or wheels. Trucks hauling biosolids that are not Class A shall be tarped. Trucks hauling biosolids that are not Class A may not be used for hauling food or feed crops after unloading the biosolids, unless the permittee submits, for EPA approval, a hauling description of how trucks will be thoroughly cleaned prior to adding food or feed.
- g. If biosolids are stored over two years from the time they are generated, then the permittee must ensure compliance with all surface disposal requirements under 40 CFR 503, Subpart C, or must submit a written notification to EPA with the information under 40 CFR 503.20(b) demonstrating the need for longer temporary storage. During temporary storage (of any length of time) for biosolids that are not Class A, whether on the facility site or off-site, adequate procedures must be taken to restrict public access and access by domestic animals.
- h. Any biosolids treatment, disposal, or storage site shall have facilities adequate to: divert surface runoff from adjacent areas, protect the site boundaries from erosion, and prevent any conditions that would cause drainage from the materials at the site to escape from the site. Adequate protection is defined as protection from at least a 100-year storm event and from the highest tidal stage that may occur.
- i. There shall be adequate screening at the treatment plant headworks and/or at the biosolids treatment units to ensure that all pieces of metal, plastic, glass, and other inert objects with a diameter greater than 3/8" are removed.

2. Landfill Disposal

Biosolids shall be disposed of in a landfill that meets the requirements in 40 CFR 258. Biosolids disposed in a municipal landfill must pass the Paint Filter Liquids Test (Method Number 9095 in SW-846).

3. Notification and Reporting

- a. Notification of noncompliance: The permittee shall notify EPA of any noncompliance within 24 hours, if the noncompliance may seriously endanger health or the environment. For other instances of noncompliance, the permittee shall notify EPA, in writing, within five working days of becoming aware of the circumstances. The permittee shall require their biosolids management contractors to notify EPA of any noncompliance within these same timeframes.
- b. Interstate notification: If biosolids are shipped to another State, Tribal Lands, or Territory, then the permittee shall send a 60-day prior notice of the shipment to permitting authorities in the receiving State, Tribal Lands, or Territory, and EPA Regional Office.
- c. Notification of change in use or disposal practice: The permittee shall notify EPA 60 days prior to switching to a use or disposal practice other than landfill disposal.

4. Biosolids reports shall be submitted to:

Regional Biosolids Coordinator (WTR 2-3)
U.S. Environmental Protection Agency
Water Division
NPDES Permits Section
75 Hawthorne Street
San Francisco, CA 94105-3901

Lionel Puhuyesva, Director
Hopi Water Resources Program
P.O. Box 123
Kykotsmovi, AZ 86039

E. Asset Management

The permittee shall develop an asset management program (AMP) to cover the treatment plant and collection system.

1. The permittee shall procure, populate, and utilize asset management and/or work order management software within two years of permit issuance. The software shall:
 - a. Inventory all critical assets and assets valued over \$5,000 into a single database. Assets may include, but are not limited to, sewer lines, manholes, outfalls, pump stations, force mains, catch basins, and wastewater treatment facility assets. Each entry shall include:
 - (1) Name and identification number.
 - (2) Location (GPS coordinate or equivalent identifier).
 - (3) Current performance/condition.
 - (4) Purchase and installation date.
 - (5) Purchase price.
 - (6) Replacement cost.
 - b. Automate work order production and tracking.

- c. Catalogue all daily, weekly, monthly, annual and other regular maintenance tasks.
2. The permittee shall submit to EPA a description of its selected AMP system and status of its implementation by within two years of permit issuance.
3. The permittee may be deemed in compliance with the above asset management provisions by fully implementing EPA's Check Up Program for Small Systems ("CUPPS") Asset Management Tool (<https://www.epa.gov/dwcapacity/information-check-program-small-systems-cupss-asset-management-tool>).

Part IV. ATTACHMENTS

Attachment A: Standard Permit Conditions

A. All NPDES Permits

In accordance with 40 CFR 122.41, the following conditions apply to all NPDES permits and are expressly incorporated into this permit.

- a. Duty to comply; at 40 CFR 122.41(a).

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the CWA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

- (1) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under 405(d) of the CWA within the time provided in the regulations that established these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
- (2) The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be

subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, such as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

- (3) Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.

- b. Duty to reapply; at 40 CFR 122.41(b).

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.

- c. Need to halt or reduce activity not a defense; at 40 CFR 122.41(c).

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.

- d. Duty to mitigate; at 40 CFR 122.41(d).

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

- e. Proper operation and maintenance; at 40 CFR 122.41(e).

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 also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

- f. Permit actions; at 40 CFR 122.41(f).

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.

- g. Property rights; at 40 CFR 122.41(g).

This permit does not convey any property rights of any sort, or any exclusive privilege.

- h. Duty to provide information; at 40 CFR 122.41(h).

The permittee shall furnish to the Director, within a reasonable time, any 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. Inspection and entry; at 40 CFR 122.41(i).

The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- (1) Enter 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 the CWA, any substances or parameters at any location.

- j. Monitoring and records; at 40 CFR 122.41(j).

- (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (2) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), 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, 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 or application. This period may be extended by request of the Director at any time.
- (3) Records of monitoring information shall include:

- (i) The date, exact place, and time of sampling or measurements;
 - (ii) The individual(s) who performed the sampling or measurements;
 - (iii) The date(s) analyses were performed
 - (iv) The individuals(s) who performed the analyses;
 - (v) The analytical techniques or methods used; and
 - (vi) The results of such analyses.
- (4) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR part 503, unless other test procedures have been specified in the permit.
- (5) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.
- k. Signatory requirement; at 40 CFR 122.41(k).
- (1) All applications, reports, or information submitted to the Director shall be signed and certified. (See 40 CFR 122.22.)
 - (2) The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.
- l. Reporting requirements; at 40 CFR 122.41(l).
- (1) Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alternations or additions to the permitted facility. Notice is required only when:
 - (i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - (ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

- (iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
- (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.
- (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 the CWA. (See 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory.)
- (4) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
 - (i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
 - (ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or, in the case of sludge use or disposal, approved under 40 CFR part 503, or as specified in the permit, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
 - (iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the 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. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. 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 the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

- (ii) The following shall be included as information which must be reported within 24 hours under this paragraph.
 - (A) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR 122.41(g).)
 - (B) Any upset which exceeds any effluent limitation in the permit.
 - (C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See 40 CFR 122.44(g).)
 - (iii) The Director may waive the written report on a case-by-case basis for reports under 40 CFR 122.41(l)(6)(ii) of this section if the oral report has been received within 24 hours.
- (7) Other noncompliance. The permittee shall report all instances of noncompliance not reported under 40 CFR 122.41(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.
 - (8) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.
 - (9) Identification of the initial recipient for NPDES electronic reporting data. The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in Appendix A to 40 CFR 127) to the appropriate initial recipient, as determined by EPA, and as defined in 40 CFR 127.2(b) of this chapter. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 127.2(c) of this chapter]. EPA will update and maintain this listing.
- m. Bypass; at 40 CFR 122.41(m).
- (1) Definitions.
 - (i) “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility.
 - (ii) “Severe property damage” means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - (2) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 40 CFR 122.41(m)(3) and (m)(4) of this section.

- (3) Notice.
 - (i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
 - (ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (l)(6) of this section (24-hour notice).
- (4) Prohibition of bypass.
 - (i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
 - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
 - (C) The permittee submitted notices as required under paragraph (m)(3) of this section.
 - (ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (m)(4)(i) of this section.

n. Upset; at 40 CFR 122.41(n).

- (1) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
- (2) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (n)(3) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- (3) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (i) An upset occurred and that the permittee can identify the cause(s) of the upset;

- (ii) The permitted facility was at the time being properly operated; and
 - (iii) The permittee submitted notice of the upset as required in paragraph (l)(6)(ii)(B) of this section (24 hour notice).
 - (iv) The permittee complied with any remedial measures required under paragraph (d) of this section.
- (4) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

B. Specific Categories of NPDES Permits

In accordance with 40 CFR 122.42, the following conditions, in addition to those set forth at 40 CFR 122.41, apply to all NPDES permits within the category specified below and are expressly incorporated into this permit

- a. Existing manufacturing, commercial, mining, and silviculture dischargers; at 40 CFR 122.42 (a).

All existing manufacturing, commercial, mining, and silviculture dischargers must notify the Director as soon as they know or have reason to believe:

- (1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (i) One hundred micrograms per liter (100 µg/l);
 - (ii) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (iv) The level established by the Director in accordance with 40 CFR 122.44(f).
 - (2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (i) Five hundred micrograms per liter (500 µg/l);
 - (ii) One milligram per liter (1 mg/l) for antimony;
 - (iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
 - (iv) The level established by the Director in accordance with 40 CFR 122.44(f).
- b. Publicly owned treatment works; at 40 CFR 122.42(b).

All POTWs must provide adequate notice to the Director of the following:

- (1) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 and 306 of the CWA if it were directly discharging those pollutants; and
- (2) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- (3) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

The following condition has been established by EPA Region 9 to enforce applicable requirements of the Resource Conservation and Recovery Act:

- (1) Publicly owned treatment works may not receive hazardous waste by truck, rail, or dedicated pipe except as provided under 40 CFR 270. Hazardous wastes are defined at 40 CFR 261 and include any mixture containing any waste listed under 40 CFR 261.31 through 261-33. The Domestic Sewage Exclusion (40 CFR 261.4) applies only to wastes mixed with domestic sewage in a sewer leading to a publicly owned treatment works and not to mixtures of hazardous wastes and sewage or septage delivered to the treatment plant by truck.

c. Municipal Separate Storm Sewer Systems; at 40 CFR 122.42(c).

The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

- (1) The status of implementing the components of the storm water management program that are established as permit conditions;
- (2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes shall be consistent with 40 CFR 122.26(d)(2)(iii); and
- (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and (d)(2)(v);
- (4) A summary of the data, including monitoring data, that is accumulated throughout the reporting year;
- (5) Annual expenditures and budget for year following each annual report;
- (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs;
- (7) Identification of water quality improvements or degradation.

- d. Storm Water Discharges; at 40 CFR 122.42(d).

The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) shall require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the issuance of the permit.

- e. Privately Owned Treatment Works; at 40 CFR 122.44(m).

For a privately owned treatment works, any conditions expressly applicable to any user, as a limited co-permittee, that may be necessary in the permit issued to the treatment works to insure compliance with applicable requirements under this part. Alternatively, the Director may issue separate permits to the treatment works and to its users, or may require a separate permit application from any user. The Director's decision to issue a permit with no conditions applicable to any user, to impose conditions on one or more users, to issue separate permits, or to require separate applications, and the basis for that decision, shall be stated in the fact sheet for the draft permit for the treatment works.

The following conditions are established to enforce applicable requirements of the Resource Conservation and Recovery Act and 40 CFR 122.44(m). Privately owned treatment works are defined at 40 CFR 122.2. "Privately owned treatment works" means any device or system which is (a) used to treat wastes from any facility whose operator is not the operator of the treatment works and (b) not a POTW, as defined at 40 CFR 403.3.

- (1) Materials authorized to be disposed of into the privately owned treatment works and collection system are typical of domestic sewage. Unauthorized materials are hazardous waste (as defined at 40 CFR 261), motor oil, gasoline, paints, varnishes, solvents, pesticides, fertilizers, industrial wastes, or other materials not generally associated with toilet flushing or personal hygiene, laundry, or food preparation, unless specifically listed under "Authorized Non-domestic Sewer Dischargers" elsewhere in this permit.
- (2) It is the permittee's responsibility to inform users of the privately owned treatment works and collection system of the prohibition against unauthorized materials and to ensure compliance with the prohibition. The permittee must have the authority and capacity to sample all discharges to the collection system, including any from septic haulers or other un-sewered dischargers, and shall take and analyze such samples for conventional, toxic, or hazardous pollutants when instructed by the permitting authority or by an EPA, State, or Tribal inspector. The permittee must provide adequate security to prevent unauthorized discharges to the collection system.
- (3) Should a user of the privately owned treatment works desire authorization to discharge non-domestic wastes, the permittee shall submit a request for permit modification and an application, pursuant to 40 CFR 122.44(m), describing the proposed discharge. The application shall, to the extent possible, be submitted using EPA Forms 1 and 2C, unless another format is requested by the permitting authority. If the privately owned treatment works or collection system user is different from the permittee, and the permittee agrees to allow the non-domestic discharge, the user shall submit the application and the permittee shall submit the permit modification upon request. The application and request for modification shall be submitted at least six months before authorization to discharge non-domestic wastes to the privately owned treatment works or collection system is desired.

C. Standard Conditions Established by EPA Region 9 for All NPDES Permits

1. Duty to reapply; at 40 CFR 122.21(d).

- a. Any POTW with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
 - b. All other permittees with currently effective permits shall submit a new application 180 days before the existing permit expires, except that:
 - (1) the Regional Administrator may grant permission to submit an application later than the deadline for submission otherwise applicable, but no later than the permit expiration date.
2. Signatories to permit applications and reports; at 40 CFR 122.22.
- a. Applications. All permit applications shall be signed as follows:
 - (1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR 122.22(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under 40 CFR 122.22(a)(1)(ii) rather than to specific individuals.
 - (2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or
 - (3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
 - b. 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:

- (1) The authorization is made in writing by a person described in paragraph (a) of this section;
 - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters of the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,
 - (3) The written authorization is submitted to the Director.
- c. Changes to authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
 - d. Certification. Any person signing a document under paragraph (a) or (b) of this section shall make the following 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.”

3. Reopener Clause; at 40 CFR 122.44(c).

For any permit issued to a treatment works treating domestic sewage (including “sludge-only facilities”), the Director shall include a reopener clause to incorporate any applicable standard for sewage sludge use or disposal promulgated under section 405(d) of the CWA. The Director may promptly modify or revoke and reissue any permit containing the reopener clause required by this paragraph if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or controls a pollutant or practice not limited in the permit.

4. Transfer of permits; at 40 CFR 122.61.

- a. Transfers by modification. Except as provided in paragraph (b) of this section, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under 40 CFR 122.62(b)(2)), or a minor modification made (under 40 CFR 122.63(d)), to identify the new permittee and incorporate such other requirements as may be necessary under CWA.
- b. Automatic transfers. As an alternative to transfers under paragraph (a) of this section, any NPDES permit may be automatically transferred to a new permittee if:
 - (1) The current permittee notifies the Director at least 30 days in advance of the proposed transfer date in paragraph (b)(2) of this section;

- (2) The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
- (3) The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify or revoke and reissue the permit. A modification under this subparagraph may also be a minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph (b)(2) of this section.

5. Minor modifications of permits; at 40 CFR 122.63.

Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without following the procedures of 40 CFR 124. Any permit modification not processed as a minor modification under this section must be made for cause and with 40 CFR 124 draft permit and public notice as required in 40 CFR 122.62. Minor modifications may only:

- a. Correct typographical errors;
- b. Require more frequent monitoring or reporting by the permittee;
- c. Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement; or
- d. Allow for a change in ownership or operational control of a facility where the Director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the Director.
- e. (1) Change the construction schedule for a discharger which is a new source. No such change shall affect a discharger's obligation to have all pollution control equipment installed and in operation prior to discharge under 40 CFR 122.29.

(2) Delete a point source outfall when the discharge from that outfall is terminated and does not result in discharge of pollutants from other outfalls except in accordance with permit limits.
- f. [Reserved]
- g. Incorporate conditions of a POTW pretreatment program that has been approved in accordance with the procedures in 40 CFR 403.11 (or a modification thereto that has been approved in accordance with the procedures in 40 CFR 403.18) as enforceable conditions of the POTW's permits.

6. Termination of permits; at 40 CFR 122.64.

- a. The following are causes for terminating a permit during its term, or for denying a permit renewal application:
 - (1) Noncompliance by the permittee with any conditions of the permit;

- (2) The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time;
- (3) A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or
- (4) A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit (for example, plant closure or termination of discharge by connection to a POTW).

- b. The Director shall follow the applicable procedures in 40 CFR 124 or 40 CFR 122.22, as appropriate (or State procedures equivalent to 40 CFR 124) in terminating any NPDES permit under this section, except that if the entire discharge is permanently terminated by elimination of the flow or by connection to a POTW (but not by land application or disposal into a well), the Director may terminate the permit by notice to the permittee. Termination by notice shall be effective 30 days after notice is sent, unless the permittee objects within that time. If the permittee objects during that period, the Director shall follow 40 CFR 124 or applicable State procedures for termination. Expedited permit termination procedures are not available to permittees that are subject to pending State and/or Federal enforcement actions including citizen suits brought under State or Federal law. If requesting expedited permit termination procedures, a permittee must certify that it is not subject to any pending State or Federal enforcement actions including citizen suits brought under State or Federal law. State-authorized NPDES programs are not required to use part 22 of this chapter's procedures for NPDES permit terminations.

7. Availability of Reports; pursuant to CWA section 308

Except for data determined to be confidential under 40 CFR 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Regional Administrator. As required by the CWA, permit applications, permits, and effluent data shall not be considered confidential.

8. Removed Substances; pursuant to CWA section 301

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials entering waters of the U.S.

9. Severability; pursuant to CWA section 512

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 remainder of this permit, shall not be affected thereby.

10. Civil and Criminal Liability; pursuant to CWA section 309

Except as provided in permit conditions on "Bypass" and "Upset", nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

11. Oil and Hazardous Substances Liability; pursuant to CWA section 311

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the CWA.

12. State, Tribe, or Territory Law; pursuant to CWA section 510

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State, Tribe, or Territory law or regulation under authorities preserved by CWA section 510.

Attachment B: Definitions

The following definitions shall apply unless otherwise specified in this permit:

1. A “composite sample” means a time-proportional mixture of not less than eight discrete aliquots obtained at equal time intervals (e.g., 24-hour composite means a minimum of eight samples collected every three hours.) The volume of each aliquot shall be directly proportional to the discharge flow rate at the time of sampling, but not less than 100 ml. Sample collection, preservation, and handling shall be performed as described in the most recent edition of 40 CFR 136.3, Table II. Where collection, preservation, and handling procedures are not outlined in 40 CFR 136.3, procedures outlined in the 18th edition of “*Standard Methods for the Examination of Water and Wastewater*” shall be used.
2. A “daily discharge” means the “discharge of a pollutant” measured during a calendar day or any 24-hour period that reasonably represents the calendar for purposes of sampling. For pollutants with limitations expressed in terms of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the “daily discharge” is calculated as the average measurement of the pollutant over the sampling day.
3. A “daily discharge determination of concentration” made using a composite sample shall be the concentration of the composite sample. When the grab sample technique is used, the “daily discharge” determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that sampling day.
4. A “daily maximum discharge effluent limitation” means the highest allowable “daily discharge” during the calendar month.
5. A “daily average discharge limitation” means the highest allowable average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month.
6. A “discrete sample” means any individual sample collected in less than 15 minutes.
7. The “EPA” means the United States Environmental Protection Agency.

8. A “grab” sample, for monitoring requirements, is defined as a single “dip and take” sample collected at a representative point in the discharge stream.
9. An “instantaneous” measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.
10. The “method detection limit” or “MDL” is the minimum concentration of an analyte that can be detected with 99% confidence that the analyte concentration is greater than zero, as defined by the specific laboratory method listed in 40 CFR Part 136. The procedure for determination of a laboratory MDL is in 40 CFR Part 136, Appendix B.
11. The “minimum level” or “ML” is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all of the method-specified sample weights, volumes, and processing steps have been followed (as defined in EPA’s draft National Guidance for the Permitting, Monitoring, and Enforcement of Water Quality-Based Effluent Limitations Set Below Analytical Detection/Quantitative Levels, March 22, 1994). Published method-specific MLs are contained in 40 CFR Part 136, Appendix A, and must be utilized if available. If a published method-specific ML is not available, then an interim ML shall be calculated. The interim ML is equal to 3.18 times the published method-specific MDL rounded to the nearest multiple of 1, 2, 5, 10, 20, 50, etc. (When neither an ML nor an MDL are available under 40 CFR Part 136, an interim ML should be calculated by multiplying the best estimate of detection by a factor of 3.18; when a range of detection is given, the lower end value of the range of detection should be used to calculate the ML.) At this point in the calculation, a different procedure is used for metals, than for non-metals:
 - a. For metals, due to laboratory calibration practices, calculated MLs may be rounded to the nearest whole number.
 - b. For non-metals, because analytical instruments are generally calibrated using the ML as the lowest calibration standard, the calculated ML is then rounded to the nearest multiple of $(1, 2, \text{ or } 5) \times 10^n$, where n is zero or an integer. (For example, if an MDL is $2.5 \mu\text{g/l}$, then the calculated ML is: $2.5 \mu\text{g/l} \times 3.18 = 7.95 \mu\text{g/l}$. The multiple of $(1, 2, \text{ or } 5) \times 10^n$ nearest to 7.95 is $1 \times 10^1 = 10 \mu\text{g/l}$, so the calculated ML, rounded to the nearest whole number, is $10 \mu\text{g/l}$.)
12. A “monthly average” concentration for *E. coli* means the geometric mean of measurements made during a month. The geometric mean is the n th root of the product of n numbers.
13. A “monthly average” limitation means the highest allowable discharge of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measure during that month.
14. The “Regional Administrator” means EPA Region 9’s Regional Administrator.

15. A “weekly average” (or 7-day average) is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains month that contains the Saturday.

**Attachment C: Total Ammonia Limit
 2011 Hopi Tribe WQS**

Table A-3a of Hopi WQS Acute Criteria for Total Ammonia (in mg/l as N)	
pH	Salmonids Absent
6.5	48.8
6.6	46.8
6.7	44.6
6.8	42.0
6.9	39.2
7.0	36.1
7.1	32.9
7.2	29.5
7.3	26.2
7.4	23.0
7.5	19.9
7.6	17.0
7.7	14.4
7.8	12.1
7.9	10.1
8.0	8.41
8.1	6.95
8.2	5.73
8.3	4.71
8.4	3.88
8.5	3.20
8.6	2.65
8.7	2.20
8.8	1.84
8.9	1.56
9.0	1.32

Attachment C: Total Ammonia Limit (continued)
2011 Hopi Tribe WQS

Table A-3b. Chronic Criteria for Total Ammonia (in mg/L), Early Life Stages Present										
pH	Temperature, °C									
	0	14	16	18	20	22	24	26	28	30
6.5	6.67	6.67	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	6.57	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	6.44	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	6.29	6.29	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	6.12	6.12	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.91	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.67	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	5.39	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	5.08	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.73	4.30	3.78	3.33	2.92	2.57	2.26	1.98	1.74
7.5	4.36	4.36	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.98	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.58	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.18	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.80	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.43	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	2.10	2.10	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	1.79	1.79	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	1.52	1.52	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	1.29	1.29	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	1.09	1.09	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.920	0.920	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	0.778	0.778	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.661	0.661	0.601	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	0.565	0.565	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0	0.486	0.486	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

Notes:

1. pH and temperature are field measurements taken at the same time and location as the water samples destined for the laboratory analysis of ammonia.
2. If field measured pH and/or temperature values fall between the A & W_w acute total ammonia tabular values, round field-measured values according to standard scientific rounding procedures to nearest tabular value to determine the ammonia standard.

US EPA ARCHIVE DOCUMENT

Attachment D: Ammonia Impact Ratio (AIR)

Sample AIR Data Log

AIR = $\frac{\text{Ratio of Measured Ammonia Value over Ammonia Limit}}{\text{Effluent Ammonia} \div \text{Ammonia Limit}}$

A	B	C	D	E	F
Date of Sample	Ammonia Value In Effluent (mg/L N)	Effluent pH	Effluent Temperature (Celsius)	Ammonia Limit as Determined from Appendix A	AIR Value (Column B/Column E)

Please copy and complete for each month of each year for permit term. Attach any additional pages as necessary.

Signature of Authorized Representative: _____