APPLICATION TO OPERATE
COMMERCIAL PCB STORAGE FACILITY

Submitted to:

Office of Toxic Substances
US Environmental Protection Agency Region V

by

Spring Grove Resource Recovery, Inc.
4879 Spring Grove Avenue
Cincinnati, OH 45232
EPA ID # OHD000816629

Revised April 17, 2017

CERTIFICATION

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this "Application to Operate a Commercial PCB Storage Facility" document, including Closure Plan and Cost Estimate, is true, accurate, and complete. As to the identified section(s) of this or accompanying documents for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

I also certify that the units designated in this plan as "TSCA storage areas" meet the design requirements of 40 CFR 761.65(b) and (c), as applicable.

4/20/17

Eric Gerstenberg, - President Date

Spring Grove Resource Recovery, Inc.

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INTRODUCTION

This Application to operate a Commercial Polychlorinated Biphenyl (PCB) Storage Facility is submitted to the US Environmental Protection Agency (EPA) by Spring Grove Resource Recovery, Inc. (SGRR), in accordance with the PCB storage facility permitting requirements of 40 CFR 761.65(d) under the Toxic Substances Control Act (TSCA).

SGRR is a hazardous waste storage, treatment and transfer facility operating in accordance with a RCRA Part B permit issued by the Ohio Environmental Protection Agency (OEPA) on March 26, 2013 under the Resource Conservation and Recovery Act (RCRA). SGRR is currently authorized under TSCA interim status to conduct PCB storage/handling activities.

This Application describes the commercial PCB activities to be pursued by SGRR at the consolidated SGRR facility and supersedes the Application for PCB Commercial Storage previously submitted to the Agency.

This Application is structured in accordance with 40 CFR 761. 65 (d) (6). Its purpose is to demonstrate that SGRR meets the design and management standards for PCB commercial storage facilities, and to provide a financial mechanism for its PCB activities. SGRR has prepared a closure plan which includes the removal and disposal of the maximum inventory of PCB waste to be stored at the facility and the decontamination of all designated PCB storage and handling units authorized by this License. SGRR notes that PCB's are not designated as a hazardous waste pursuant to Ohio RCRA regulations. However, PCB wastes will be handled in structures/areas of the facility that are licensed for RCRA activities.

Under this application, SGRR seeks to license one container storage building (High Bay), one storage tank and three vehicle parking areas for PCB storage and transfer activities. However, at the time of initial facility start-up, SGRR intends to only partially utilize the capacity of High Bay. Additional gallonage/capacity would be brought on-line to PCB service as business conditions warrant and with prior written notification to USEPA, including any necessary increase in the facilities closure cost funding mechanism.

SGRR is a wholly-owned subsidiary of Clean Harbors, Inc. of Norwell, MA. Several of SGRR's sister companies are commercial PCB storage and disposal facilities including Clean Harbors of Braintree, Inc., Clean Harbors of Connecticut, Inc., Clean Harbors Eldorado, LLC., Clean Harbors Deer Pack, LLC., Clean Harbors Aragonite, LLC., Clean Harbors Florida, LLC., Clean Harbors Grassy Mountain, LLC., Clean Harbors La Porte, LLC., Clean Harbors Reidsville, LLC., Clean Harbors Los Angeles, LLC., Clean Harbors PPM, LLC facilities in Tucker, GA, Coffeyville, KS, Twinsburg, OH, Astabula, OH, Philadelphia, PA, and Safety-Kleen Systems, Inc. in Smithfield, KY

1.0 Facility Description

1.1 Name, Address, and EPA ID Number

The legal name, mailing address, and telephone number of the owner/operator of the commercial polychlorinated biphenyl (PCB) storage facility is:

Name: Spring Grove Resource Recovery, Inc.
Address: 4879 Spring Grove Avenue
Cincinnati, Ohio 45232

EPA ID No.: OHD000816629
Telephone: (513) 681-6242

1.2 Current Regulatory Status

Spring Grove Resource Recovery, Inc. (SGRR) is a hazardous waste treatment, storage, and transfer facility operating in accordance with a RCRA Part B permit issued by the Ohio Environmental Protection Agency (OEPA) pursuant to the Resource Conservation and Recovery Act (RCRA). A copy of the current Part B Permit signature pages is included in Appendix 1. Under the terms of the Part B Permit, SGRR is authorized to conduct various treatment and storage/transfer operations involving characteristic (D-Code) and listed (F-, K-, P-, U-Code) hazardous wastes.

PCB's are not designated as a hazardous waste pursuant to OEPA RCRA regulations. However, SGRR is currently authorized to conduct Commercial PCB Storage facility storage/handling activities under the Toxic Substance Control Act (TSCA) interim status regulations at 40 CFR 761. A copy of SGRR's "Notification of PCB activities" (EPA Form 7710-53) and acknowledgement by USEPA is included in Appendix 2.

1.3 General Facility Description

1.3.1 Existing Structures and Activities

The location of the facility, topographical features of the site and surrounding area, and floodplain information are shown on the maps included in Appendix 3.

The layout of the facility and the existing structures at the facility are shown on Dwg. No. 5384-C-04. Detailed information concerning the location, design and operation of the structures and areas in which PCBs are to be stored and/or handled is presented in Section 3.0 below and on Dwg. No. 5384-S-03. SGRR notes that each of the PCB management areas is also permitted for RCRA hazardous waste handling activities. PCB activities shall be limited the following areas:

A. TSCA Storage Areas

The following unit designated as "TSCA storage area" shall be designed in accordance with 40 CFR 761.65 (b) standards. The PCB storage area is designed and constructed with adequate roof and walls to prevent entry of rain, in compliance with 40 CFR 761.65 (b).

1. High Bay – A fully-contained building used for the indoor storage and consolidation of PCB wastes in containers (e.g., drums).

B. Tank Storage Areas

One 10, 350 gallon storage tank that complies with 29 CFR 1910.106 and 40 CFR 112.

C. Vehicle Storage Areas

The following units are designated as "vehicle storage areas" where highway transportation vehicles (e.g., box trucks, flat bed trailers, rolloffs, tank trucks) containing PCB wastes may be stored for up to 30 days from the out-of-service date under 40 CFR 765.65(c)(1):

1. Rolloff Pad – Five (5) Vehicles
2. Tanker Loading/Unloading Area – Two (2) Vehicles
3. Truck Loading/Unloading Area (Stabilization Building) – Two (2) Vehicles

If SGRR builds an enclosure around the Rolloff Pad to prevent rain water from reaching the stored PCBs, this area will become a PCB storage area and not subject to the 40 CFR 765.65(c)(1) 30 days from out-of-service date requirement.

D. Shipping/Receiving Areas

The following units are designated as "shipping/receiving areas" for PCB waste in bulk and non-bulk form. Inbound or outbound waste may be "staged" in these areas for up to 10 days without being considered storage:

1. High Bay receiving dock – A roofed dock on the northern side of the High Bay building which is used for receiving, shipping, and staging of RCRA and PCB waste in containers; and
2. Building F receiving dock – A roofed dock on the northern side of building F which is used for receiving, shipping, and staging of RCRA and PCB waste in containers.

SGRR notes that the Truck Loading/Unloading Area (Stabilization Building H), the Rolloff Pad, and the Tanker Loading/Unloading Area identified above function as active loading and offloading area for vehicle transporters hauling PCB wastes. The stabilization building H may be used to solidify PCB sludge's prior to placement in rolloffs for offsite disposal. Sludge's will be solidified in rolloffs and/or a steel mix box (dimensions 20' x 20'x 3'). Inert reagents (clay, sawdust) that do not cause an exothermic reaction, will be used. An excavator will be used to mix the reagents and sludge and transfer the waste into a rolloff box. The mix-tub and/or rolloffs would be considered a PCB container per 40 CFR 761.3 and would be decontaminated per 40 CFR 761.79 (c) (1). The excavator would be decontaminated per 40 CFR 761.79 (c) (2).

E. Other Areas

SGRR has identified several "other areas" of the facility in which PCB's may be present. These "other areas" are assets or structures that provide support services related to SGRR's management of PCB's at the facility (e.g., a laboratory used to test samples to determine PCB concentration, etc.), but are not PCB waste storage, treatment or disposal units or processes which require a USEPA TSCA permit. The "other areas" are identified under this application so they may be included in confirmatory PCB sampling at the time of facility closure. The "other areas" include the following units:

1. Laboratory – An analytical testing laboratory for onsite waste analysis;
2. Transportation/Receiving Building – The security checkpoint and the waste shipment entrance to the facility;
3. Roadway System – An asphalt-paved roadway system on which all highway vehicles carrying PCB and RCRA waste move about the facility; and
4. "Transfer Facility" – All transportation –related areas (e.g., roadways, parking areas) at the facility. These areas are used for stoppage of highway vehicles which are "in-transit" (i.e., carrying TSCA waste that is not manifested to or from SGRR) for a period of time not to exceed 10 days in accordance with the 40 CFR 761.3 definitions for "transfer facility".

1.3.2 Environmental Conditions

SGRR is located on Spring Grove Avenue in Cincinnati, Ohio. The property is approximately five (5) acres in size. Access to the site is via a paved asphalt road leading from Spring Grove Avenue to the waste receiving/shipping gate located west of the High Bay building.

Land use information for the site is shown on the City of Cincinnati zoning/Land Use map provided in Appendix 3. As shown on the map, surrounding land use in the vicinity of the facility is generally medium/heavy industrial. Floodplain information for the site is shown in the floodplain map provided in Appendix 3. The map, taken from the Federal Emergency Management Agency's (FEMA's) National Flood Insurance Program Flood Insurance Rate Map (FIRM) Community Panel No. 3902100010B, shows that the facility is not located within a 100-year floodplain. There are no underground tanks or groundwater drinking water supply wells at the site. Groundwater at the site ranges from three to nine feet below ground surface. Drinking water for SGRR and the surrounding community is provided by the City of Cincinnati municipal supply system. There are no active of closed land disposal units on the property.

2.0 Company Ownership and Qualifications

2.1 Company Ownership

SGRR is a wholly-owned subsidiary of Clean Harbors, Inc. (CHI), is North America's leading provider of environmental and hazardous waste management services. Founded in 1980 by Alan S. McKim, the Company's Chairman and Chief Executive Officer, CHI currently employs over 10,000 professional, technical, and support personnel.

Please refer to the enclosed "Statement of Qualifications and Experience for a detailed description of Clean Harbors, Inc. subsidiaries, company experience and management qualifications in Appendix 4.

2.2 Key Personnel

Company Officers and other key management personnel involved in the oversight of PCB activities at SGRR include:

Eric Gerstenberg – Director and President
James Rutledge – Director and Executive Vice President
Greg Malerbi – Senior Vice President and Treasurer
Michael R. McDonald – Vice President and Assistant Secretary
Michael Battles – Executive Vice President
C. Michael Malm – Secretary

Resumes reflecting the educational and professional experience of these individuals are included in CHI's Qualification Statement presented in Appendix 4.

Key facility personnel responsible for the actual operation of the Commercial PCB storage facility include:

Steve Vasse - General Manager
Steve Bley - Compliance Manager

Resumes reflecting the qualifications and experience of these individuals are included in Appendix 5.

2.3 Environmental Compliance History

2.3.1 Spring Grove Resource Recovery, Inc.

A description of past and current enforcement actions and civil/criminal lawsuits against SGRR can be found in the Clean Harbors Compliance History summary included in Appendix 6.

2.3.2 Other Companies Owned/Operated by Principals or Key Employees

No principals or key employees have been affiliated directly with any waste management companies, other than those owned by CHI, within the five (5) years prior to this submittal.

3.0 Identification and Description of PCB Storage Areas

3.1 Description of PCB Management Activities

SGRR receives PCB wastes in containers, bulk transport vehicles, and in PCB Items such as transformers, drums, and electrical equipment. Flowable PCB liquids will be drained and/or pumped from their original container and consolidated into transport vehicles or other containers such as tote tanks and drums. Oil-based and aqueous-based PCB liquids will be stored in containers such as drums and tote tanks prior to gravity phase separation, sampling to determine PCB concentration, and shipment to offsite disposal/treatment facilities. PCB contaminated solids including soil and debris will be consolidated into rolloff containers and shipped offsite for disposal.

Depending on PCB concentration, original containers may be flushed with an appropriate solvent (e.g., diesel fuel, No. 2 fuel oil, xylene, etc.) and/or shipped to an authorized offsite management facility such as TSCA incinerator, TSCA landfill, or other commercial PCB storage facility. In the case of a PCB contaminated transformer, drained in accordance with 40 CFR 761.60 (b) (4); or a PCB container decontaminated in accordance with 40 CFR 760.79, the drained/decontaminated unit may be shipped for scrap metal reclaim or disposal as a non-TSCA waste.

PCB transformers are drained by one of two methods to ensure all free flowing liquid is removed. If the transformer has a bottom drain valve, a pump and hose is connected, and all free flowing liquid is pumped into drums and/or bulk containers. A second method involves opening the top access cover and placing a dipleg on the suction side of a pump into the transformer and pumping all free flowing liquid into drums and/or containers. Whichever method is used, the empty transformer will be visually inspected to ensure all free flowing liquid has been removed.

All PCB waste will be stored only in containers that meet DOT requirements per 49 CFR parts 171-180.

Forklifts will be used to move PCG waste. As the wastes are packaged in DOT containers, the forklifts are not exposed to the waste and are not expected to require and cleaning/decontamination. If the equipment becomes contaminated, decontamination methods per 40 CFR 761.79 (C) (2) will be used.

3.1.1 Recordkeeping And Reporting Protocols To Ensure Compliance With 40 CFR 761.180 (b)

Spring Grove Resource Recovery has developed a waste information network (WIN) to track waste material profiles, manifests, analytical results, and other information associated with generator waste streams in order to ensure that each waste stream received at the facility is managed in a compliant manner. The WIN system is essentially a relational database that stores information on waste streams and waste shipments. And which has been programmed to allow SGRR to store certain information regarding waste streams containing PCB's so that SGRR can generate a PCB annual document log and PCB annual report. SGRR shall prepare and retain annual document logs and annual reports in accordance with the requirements of 40 CFR 761.180 (b)

For ease of understanding, the specific recordkeeping and reporting requirements of 40 CFR 761.180 (b) has been listed below, with an explanation of how SGRR will comply with the regulation.

40 CFR 761.180 (b) (1) (i)

SGRR retains all manifests received at, and shipped from its facility. All manifests are available for inspection at any time.

40 CFR 761.180 (b) (1) (ii)

SGRR retains all certificates of disposal received from disposal facilities for PCB waste shipments shipped to those disposal facilities.

40 CFR 761.180 (b) (1) (iii)

SGRR retains all inspection records on-site at its facility, including those records required by 40 CFR 761.65 (c). In the event a container is found to be leaking, it will be cleaned up in accordance with 761.65 (c) (5), and a record of the incident will be recorded on the inspection form.

40 CFR 761.180 (b) (2) (i) through 40 CFR 761.180 (b) (2) (ii) (d)

SGRR utilizes the Clean Harbors WIN system to electronically generate an annual document log as required by 40 CFR 761.180 (b) (2).

The annual document log shows the name, address, and EPA ID number for SGRR; as well as the calendar year covered by the log. The Clean Harbors WIN system utilized by SGRR manages unique waste category codes to identify PCB wastes, and numbering system to categorize specific PCB waste types. For example, the Clean Harbors waste category code for solid PCB waste intended for landfill is CHSL. This code is assigned to each generator specific waste material profile that consists of this category of PCB waste. SGRR also assigns a number to each PCB waste stream, upon receipt at its facility. They are as follows:

1. Bulk Liquid or Solid
2. Transformer
3. Capacitor
4. PCB Article Container

5. PCB Container

This numbering system allows SGRR to identify the specific types of PCB waste received each year, in accordance with the requirements of 40 CFR 761.180 (b) (2) (ii) (a) through (d). The information is entered into the WIN system, and the annual document log is generated base on this information.

40 CFR 761.180 (b) (2) (ii) (e)

SGRR is not a disposer, so this requirement is not applicable.

40 CFR 761.180 (b) (2) (iii)

SGRR shall utilize the information in the WIN system to provide information required by this regulation.

40 CFR 761.180 (b) (3) (i) through 40 CFR 761.180 (b) (3) (vii)

SGRR will use the information in the PCB annual document log to generate the PCB annual report, due on July 15th of every year.

40 CFR 761.180 (b) (4)

SGRR uses a manifest for every shipment of PCB waste that it receives from off-site customers, and in turn ships to another facility for storage or disposal.

40 CFR 761.180 (b) (5)

SGRR shall report PCB voltage regulators as PCB transformers. This is accomplished by use of the 1-5 numbering system discussed above.

3.2 Identification PCB Storage Areas

PCB Storage and handling activities at SGRR shall be limited to the areas and timeframes identified below. The location of each of the PCB management areas is shown on Dwg. No. 5384-C-04. A detailed description of each area presented in Section 3.3 below. SGRR notes that areas identified for the handling of PCB wastes are also designated for the handling of RCRA hazardous waste.

A. TSCA Storage Areas
   The following unit is designated as "TSCA storage areas" that shall be designed in accordance with 40 CFR 761.65 (b) standards:

   1. High Bay – A fully contained building used for the indoor storage and consolidation for RCRA and PCB wastes in containers (e.g., drums), including PCB waste which exhibits the RCRA characteristic of ignitability

(i.e., flash point less than or equal to 140° F);

B. Tank Storage Area

One 10,350 gallon tank which is located in concrete lined secondary containment will be used for liquid PCB wastes.

C. Vehicle Storage Areas

The following units are concrete lined and secondary contained "vehicle storage areas" where highway transportation vehicles (e.g., box trucks, flat bed trailers, rolloffs, tank trucks) containing PCB wastes may be stored for up to 30 days from the out-of-service date under 40 CFR 765.65(c)(1):

1. Rolloff Pad – Five (5) vehicles
2. Tanker loading/unloading area – Two (2) vehicles
3. Truck loading/unloading area (stabilization building) – Two (2) vehicles

If SGRR builds an enclosure around the Rolloff Pad to prevent rain water from reaching the stored PCBs, this area will become a PCB storage area and not subject to the 40 CFR 765.65(c)(1) 30 days from out-of-service date requirement.

D. Shipping/Receiving Areas

The following units are "shipping/receiving areas". They shall be utilized for the shipping and receiving PCB waste in bulk and non-bulk form. Inbound or outbound waste may be "staged" in these areas for up to 10 days without being considered in "TSCA storage" or "vehicle storage" area:

1. High By Receiving Dock – A roofed dock on the northern side of the High Bay building which used for receiving, shipping, and staging of RCRA and PCB wastes in containers; and
2. Building F Receiving Dock – A roofed dock on the northern side of Building F which used for receiving, shipping, and staging of RCRA and PCB wastes in containers.

SGRR notes that the Truck Loading/Unloading area (Stabilization Building H), the rolloff Pad, and the Tanker Loading/Unloading Area identified above function as active loading and offloading areas for vehicle transporters hauling PCB wastes.

E. Other Areas

The "other areas" are assets or structures that provide support services related to SGRR's management of PCB's at the facility (e.g., a laboratory used to test samples to determine PCB concentration, etc.), but which are not PCB waste storage, treatment or disposal units or processes requiring a USEPA TCA permit. The "other areas" are identified under this application so that they may be included in confirmatory PCB sampling at the time of facility closure.

1. Laboratory – An analytical testing laboratory for onsite waste analysis
2. Transportation/Receiving Building – The security checkpoint and the waste shipment entrance to the facility.
3. Roadway System – An asphalt paved roadway system on which all highway vehicles carrying PCB and RCRA waste move about the facility.
4. "Transfer Facility" – All transportation – related areas (e.g., roadways, parking areas) at the facility. These areas are used for stoppage of highway vehicles which are "in-transit" (i.e., carrying TSCA waste that is not manifested to or from SGRR) for a period of time not to exceed 10 days in accordance with 40 CFR 761.3 definitions for "transfer facility".

3.3 Detailed Description of PCB Handling Areas

3.3.1 TSCA Storage Areas

The "TSCA storage area" at SGRR is designed and shall be managed in accordance with 40 CFR 761.65 (b) (1) criteria. This PCB storage area is located indoors to prevent rainwater from reaching the stored PCB's and PCB items per 40 CFR 761.65 (b) (1) (i). The area is located above the 100-year floodplain elevation per 40 CFR 761.65 (b) (1) (v). Additional design details for the unit are presented in Sections 3.3.1.1 and 3.3.1.2 below.

3.3.1.1 Container Management Building (High Bay)

The container management building (High Bay) is an existing hazardous waste container storage building identified as High Bay on SGRR Dwg. No. 5384-C-04. Under this application, only a portion along the northeast side of the building shall be designated for combined RCRA/TSCA activities. PCB management activities will include the storage and consolidation of PCB items (e.g., transformers, electrical equipment, drums, tote tanks), and the decontamination (draining and/or flushing) of transformers and other PCB items containing PCB liquids. Storage area(s) will maintain two (2) feet aisles between rows to facilitate movement, fire protection, and spill control.

The High Bay PCB storage area is designed to meet TSCA secondary containment requirements for container storage units. The floor is constructed with a minimum 10 inch thick poured concrete that is coated with an epoxy sealant and is free of any drain valves, floor drains, cracks, or gaps. A minimum 6 inch high concrete containment curb runs along the perimeter of the storage unit and conforms with 40 CFR 761.65 (b) (1) standards. The berm is poured on top of the concrete floor with connecting rebar. A water stop was placed at the berm/floor interface. The epoxy sealant provides an impermeable seal at the interface. Design details and secondary containment calculations for High Bay are shown on Dwg. No. 5384-S-03.

Drums are placed on 48"x48" pallets. If double or triple stacked, the base pallet(s) will have a stable container configuration (i.e., four 55 gallon drums) before another pallet is stacked on top. This area can hold seventeen pallets on the floor base level. If PCB containers (55 gallon drums) are stacked three (3) high, the containers of each layer must be secured by banding (shrink-wrapping) them together and a pallet shall be used between the layers. If the containers are also placed on a pallet, they must be within the pallet edges.

As shown on SGRR Dwg. No. 5384-S-03, the secondary containment volume for High Bay is 3,374 gallons. Per 40 CFR 761.65 (b) (1) (ii), the secondary containment volume of any PCB storage unit must exceed the larger of; (a) two times the largest PCB container, or (b) 25% of the total of all containers. Secondary displacement from pallets and containers is as follows; each pallet has a displacement volume of 1.34 ft3. The pallet is built of six 1"x4"x48" boards and three 2″x4″x48″ boards. Pallet heights vary slightly but will be no less than 4" and no more than 5.95″. A 55 gallon drum displaces 1.047 ft3 for the bottom 4″.

- 55 gallon drum has a diameter of 24″
- Volume = Π(r) 2h = 3.14 x 1' x 1' x 0.33333' = 1.047 ft3

The berm is 8″ high (see drawing 5384-S-03), so we consider the 4″ pallet and 4″ of the drum. A maximum of 17 pallets can be put in the bermed area. Therefore, the pallet and drum displacement is 703 gallons. (17 pallets x 1.34/pallet; 68 drums x 1.047 ft3/drum.) Available containment excluding pallet and container displacement is 3374-703 = 2671 gallons.

Given these design restrictions: (a) the maximum allowable container size is 1335 gallons [2671/(2) = 1335 gal] and (b)the maximum allowable storage volume is 10,684 gallons [2671 gal/(0.25) = 10,684 gal] of PCB waste. On a 55 gallon drum basis, the storage bay is capable of providing adequate capacity for up to 194 drums [10,684 gal/55 gal/drum = 194.25 drums].

The maximum number of PCB items which are to be stored in this area will vary with the type, size, and contents of the drum, transformer, capacitor, or other item(s) actually received from offsite generators. However, in no case will the total amount of PCB's stored in High Bay exceed 10,670 gallons.

Under this PCB Commercial Storage application, SGRR seeks to license High Bay for the storage of up to 10,670 gallons of PCB waste. Any additional PCB waste shall be brought on-line to PCB services as business conditions warrant; and with prior written notification to USEPA, including any necessary increase in the facilities closure cost funding mechanism.

3.3.1.2 Tank Storage Area

SGRR intends to utilize a 10,350 gallon tank (TK-2) to store PCB liquids.
Tank specifications are:

- 10,350 gallon
- 16' sidewall and 10.5' diameter
- Pressure/Vacuum vent: OPW 95ut, 3″. Pressure setting 2 oz/in2, Vacuum setting 0.5 oz/in2.

- Emergency vent: OPW 202-f-0600

The tank must comply with 40 CFR 761.65 (c) (7) which references meeting the standards of 29 CFR 1910.106 and 40 CFR 112. This section discusses compliance with 40 CFR 112.

Per 1910.106 (b) Tank Storage (1) design and construction of tanks:

(i) Materials (b): The tank is constructed of steel and is UL rated for flammable and combustible liquids.

(i) Materials (f):The specific gravity of product stored will be that of water (1.0) and will be stored at ambient temperature (mean is 53° f)

(ii) Fabrication (b): The tank has welded seams

(iii) The tank is UL rated for flammable and combustible liquids.

(iv) Atmospheric tanks

(3) (b): Not applicable

(3) (d): Liquid is stored at a temperature below the boiling point.

Per 1910.106 (b) Tank Storage (2) Installation of Outside Aboveground Tanks:

(ii) Spacing (shell to shell) between aboveground tanks. Shell to shell spacing is three (3) feet. Adjacent tanks are the same size (10.5' diameter)

(iv) Normal venting for aboveground tanks
The tank has OPW 202-F8" emergency vent

(v) Emergency relief venting for fire exposure for aboveground tanks

(vi) Vent piping for aboveground tanks

The tank is vented through activated carbon canister for volatile organic control.

(vii) Drainage, dikes, and walls for aboveground tanks

Containment is found in the SPCC plan. In summation, containment is greater than the largest tank. Walls are reinforced concrete sealed with an epoxy coating.

(viii) Tank openings other than vents for aboveground tanks

Filling and emptying connections are submerged fill, equipped with ball valves. The tank is outside within secondary containment. Gauging openings have vapor tight caps. The tank is not connected to any piping systems. All liquid transfer will be by dedicated hoses and pump. This is to ensure no cross contamination of piping systems and/or other tanks.

(3) Installation of Underground Tanks

Not applicable

(4) Installation of Tanks Inside Buildings

Not Applicable

(5) Supports, Foundations, and Anchorage for all Tank Locations

The tank pedestal is concrete. No steel support or exposing piling exists. The tank foundation is approximately 14″ reinforced concrete and has been in continual service for greater than ten (10) years with no evidence of cracks or any failure. The tank is not subject to flooding.

(6) Sources of Ignition

Smoking in the facility is prohibited. Electrical systems in the tank containment system are class 1, division 1.

(7) Testing

The tank is UL rated and has been in operation greater than ten (10) years.

Per 1910.106 (c) Piping, valves and fittings

The tank has the following welded steel connections on the sidewall:

- One 3″ ~ 6″ from the tank bottom
- One 3″ ~ 6″ from the tank top
- Three 3″ spaced along the sidewall
- Eight 1″ Spaced along the sidewall
- One 1.5″ ~ 6″ from the tank bottom

All welded connections have steel ball valves within 6″ of the tank shell via flange connections (threaded connections for the 1″). The tank and piping are painted for external corrosion control.

(2) Materials for Piping, Valves and Fittings

All fittings, piping and carbon steel construction.

(3) Pipe Joints

All flange connections have Teflon gaskets.

(4) Supports

Not Applicable

(5) Protection Against Corrosion

All exposed steel is painted

(6) Valves

Check valves are not used as the pumps utilized are air driven and only can be operated with flow in one direction.

(7) Testing

The tank has been in service greater than ten (10) years with no failures.

3.3.2 Vehicle Storage Areas

SGRR shall utilize three (3) concrete-lined and contained truck pads for the storage of highway transportation vehicles (e.g., box trucks, flat bed trailers, rolloffs, tank trucks) containing PCB wastes. Such vehicles may be stored for up to 30 days from the out-of-service date under 40 CFR 765.65. The vehicle storage areas include:

1. Rolloff Pad – Five (5) vehicles
2. Tanker Loading/Unloading Area – Two (2) vehicles.
3. Truck Loading/Unloading Area (Stabilization Building) – Two (2) Vehicles.

If SGRR builds an enclosure around the Rolloff Pad to prevent rain water from reaching the stored PCBs, this area will become a PCB storage area and not subject to the 40 CFR 765.65(c)(1) 30 days from out-of-service date requirement.

Other PCB handling activities conducted in the vehicle storage areas may include: (i) Storage and decontamination (draining/flushing) of transformers; (ii) Consolidation and storage of PCB liquids in bulk transport vehicles; and (iii) Consolidation and storage of PCB solids in rolloff containers.

The tanker loading/unloading and truck loading/unloading (stabilization building) areas are RCRA permitted vehicle storage areas which meet the 40 CFR 264.175 secondary containment requirements for containers. The floors are constructed of minimum 8 inch thick poured concrete, are coated with an epoxy sealant, and are free of any drain valves, floor drains, cracks, or gaps. Sloped concrete curbing along the perimeter of the pads control liquid run-on/run-off to the area. Construction details and secondary containment volumes for these units are shown in Dwg. No. 5384-S-03.

Only solid PCB wastes as defined by the paint filter test will be stored on both the rolloff pad and the truck loading/unloading areas.

The number/volume of PCB's stored in the vehicle storage areas will vary with the actual type, size, and contents of the transport vehicles being used and the waste which they are loaded with. The maximum PCB waste inventory is based on a "worst-case" scenario in which each pad filled with transportation units have the highest designed unit capacity.

Based on operating experience, the possible units include: (a) Flat bed trailers, each loaded with 100 transformers with an internal fluid volume of ten (10) gallons per unit and having an effective PCB volume of 1,000 gallons per unit; (b) Rolloff containers, each loaded with 30 cubic yards of PCB solids, having an effective capacity of 6,059 gallons per unit [(30CY) (7.48 gal/CF) (27 CF/CY) = 6,059 gal]; and (c) Bulk liquid transporters, each having a capacity of 7,200 gallons. Based on the above design specifications and assumptions, bulk liquid transporters have the highest PCB capacity per unit and represent the purposes, up to two (2) bulk liquid transporters (tanker loading/unloading pad) will be stored in the vehicle storage areas and seven (7) rolloffs of PCB solids will be stored on both the rolloff pad and truck loading/unloading area (stabilization building).

3.3.3 Shipping/Receiving Areas

There are two (2) designated "shipping/receiving areas" for PCB wastes, including the High Bay Receiving Dock and the Building F Receiving Dock.

PCB Management activities in the shipping/receiving areas include the staging (up to 10 days) of inbound/outbound containers, pre-acceptance and pre-transport paperwork review (e.g., labels, manifests, etc.), container sampling, consolidation of PCB items (e.g., transformers, electrical equipment, drums, tote tanks), and decontamination (draining/flushing) of transformers and other PCB items containing PCB liquids.

3.3.4 Other Areas

The "other areas" designated for PCB support activities are not subject to any specific TSCA design or management standards.

3.4 Future PCB Storage

As of the date of this application, SGRR intends to only partially utilize the capacity of High Bay, by limiting its initial operational practice closure funding to just 216 drums (55-gallon equivalents) stored within a designated area inside High Bay (see section 3.3.1.1 above). Additional capacity shall be brought on-line to PCB service as business conditions warrant and with prior written notification to USEPA, including any necessary increase in the facility's closure cost funding mechanism.

High Bay is an indoor waste storage building that is designed to meet TSCA secondary containment requirements for container storage units. The floors are constructed of a minimum 10 inch thick poured concrete that is coated with an epoxy sealant and is free of any drain valves, floor drains, cracks, or gaps. A minimum of 6 inch high concrete containment curb runs along the perimeter of het storage unit and conforms with 40 CFR 761.65 (b) (1) standards.

4.0 PCB Closure Plan

4.1 Maximum PCB Inventory at Closure

For the purpose of closure, the maximum PCB inventory at the facility will be the sum of the maximum operating capacities of the "TSCA storage areas" and "vehicle storage areas" described in section 3.3.1 and 3.3.2 above the capacity of each unit is summarized in Table 1. This includes PCB wastes that may be at the temporary storage facility areas.

SGRR notes that the PCB waste inventory associated with "future" PCB storage activities in High Bay is not included in the determination of maximum PCB inventory. The "maximum inventory" will be adjusted as SGRR seeks approval to increase storage activities in those units as discussed in Section 3.4 above.

4.2 TSCA Closure Plan

SGRR has developed a separate TSCA Closure Plan which accounts for all PCB waste managed at the facility. The TSCA Closure Plan also incorporates specific TSCA references and standards (e.g., notification timelines, PCB spill cleanup and decontamination standards, etc.). The TSCA Closure Plan is presented in Appendix 8.

4.3 Closure Cost Estimate

SGRR has prepared a TSCA Closure Cost Estimate based on the TSCA Closure Plan. The TSCA Closure Cost Estimate is presented in Appendix 9. The cost estimate reflects the full cost of a third-party decontamination and closure of the PCB activities at the site. The estimate included the cost of waste preparation, transportation, and disposal at TSCA licensed facilities or other suitable disposal sites.

SGRR notes that while the closure cost estimate does not include the removal of PCB waste inventory associated with "future" PCB storage activities in High Bay, the cost estimate does include the cost associated with decontamination of the secondary containment structures within those buildings. In recognition of the fact, that both buildings have been used for past PCB storage activities.

Per 40 CFR 761.65 (f) (2), the TSCA Closure Cost Estimate will be revised annually to account for inflation. The closure cost estimate will also be adjusted following any modification to the closure plan which increases the cost for closure.

4.4 Financial Assurance

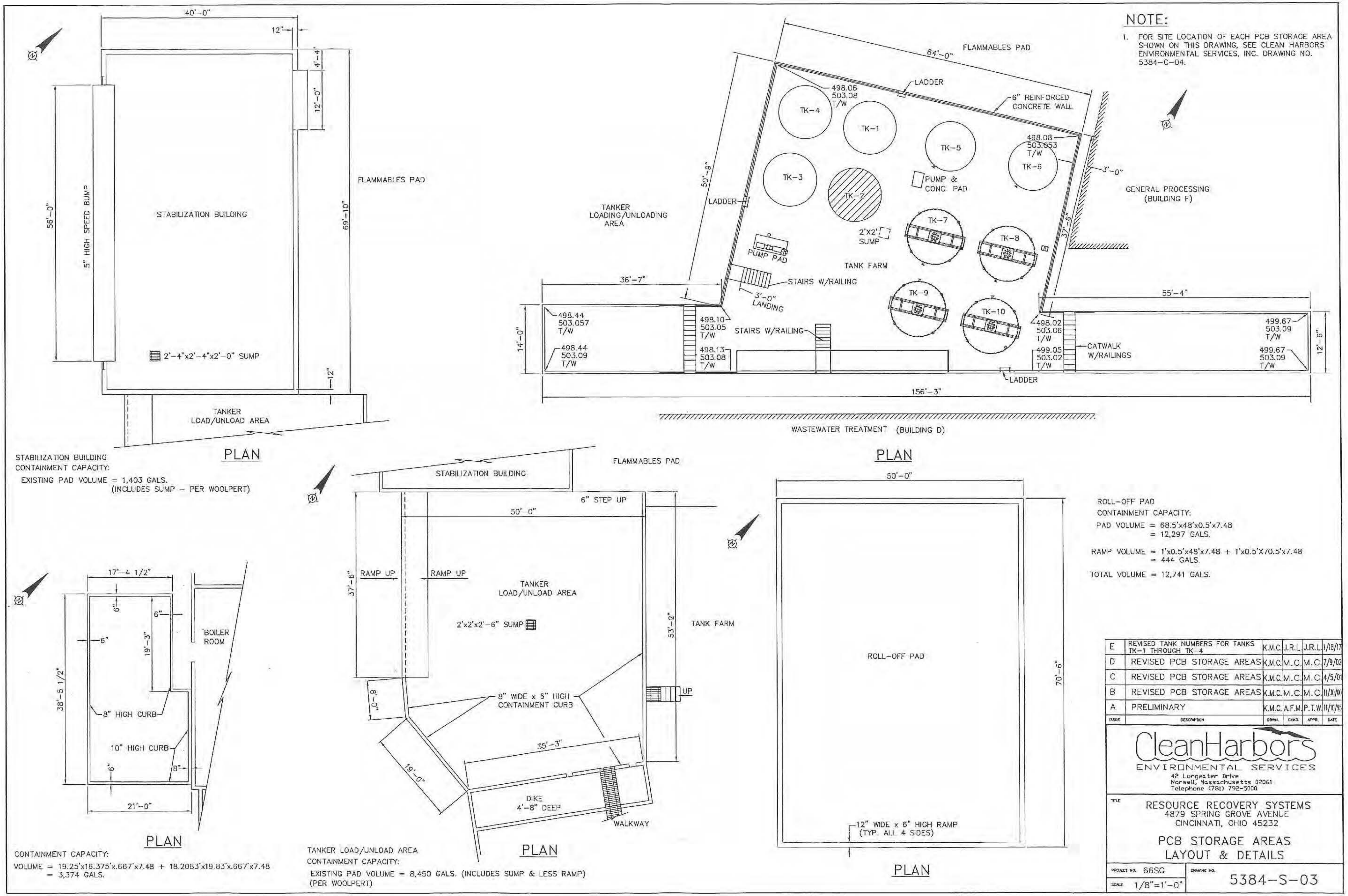
As a permitted RCRA Part B facility, SGRR is required to maintain financial assurance for the closure of the regulated RCRA units at the site. The total amount for TSCA closure is in addition to the total amount for RCRA closure. As such, SGRR shall provide a separate TSCA financial assurance instrument to cover the TSCA closure costs.

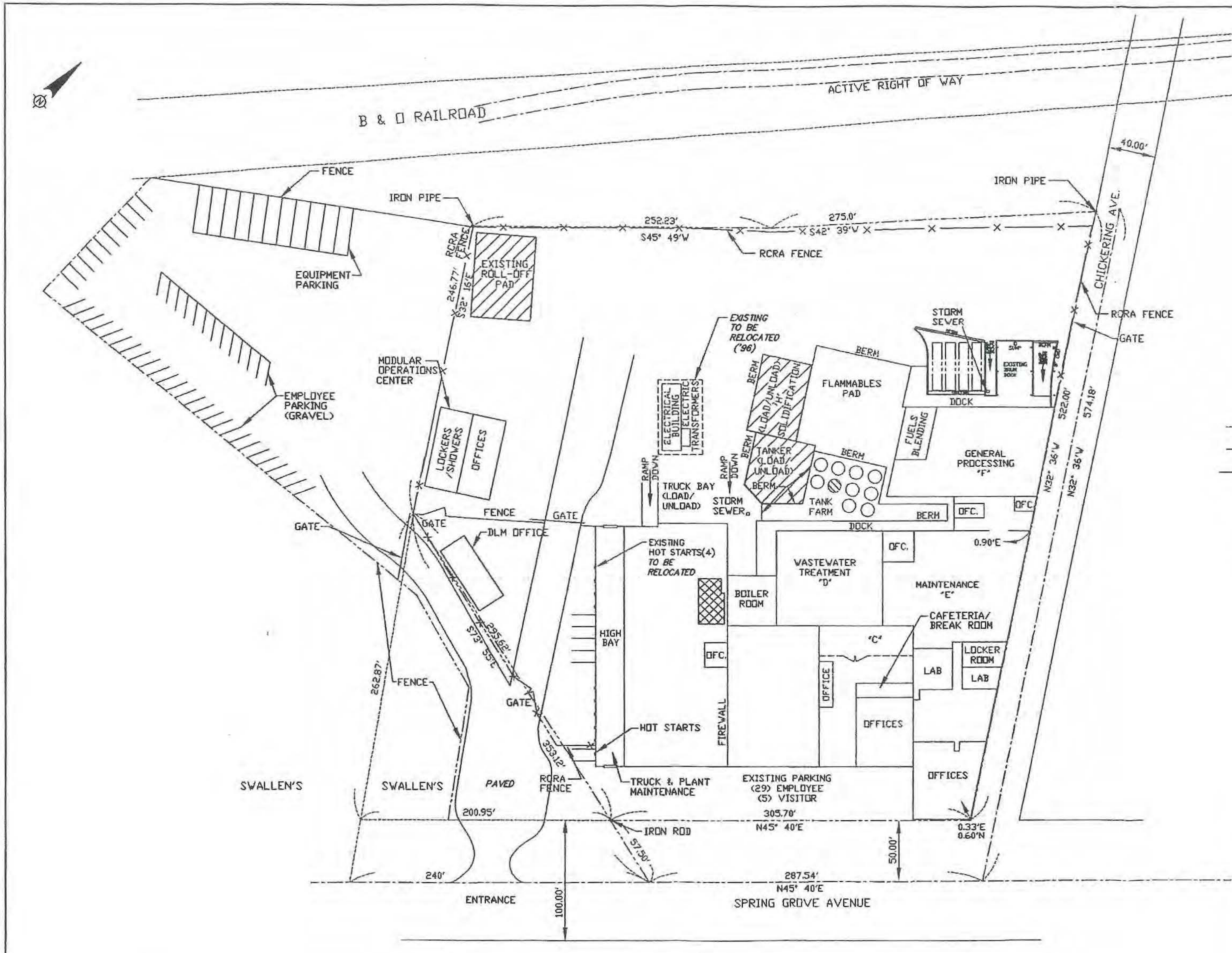
Table 1
Maximum PCB Waste Inventory at Closure

A. TSCA STORAGE AREA		
PCB ITEM	**MAXIMUM CONTAINER/ARTICLE**	**VOLUME**
1. Container Management Building (High Bay)		
Liquid PCB, Solid PCB, PCB capacitors, PCB transformers (drained)	194 -55 gallon drum equivalents	10,670 gallons
2. Tank Storage Area		
Liquid PCB	One-10,350 gallon tank	10,350 gallons
B. VEHICLE STORAGE AREAS		
PCB ITEM	**MAXIMUM CONTAINER/ARTICLE**	**VOLUME**
1. Rolloff Pad		
Solid CPB	Five 30 CY rolloff containers	30,295 gallons
?. Tanker Loading/Unloading Area		
Liquid PCB	Two 7,200 gallon bulk transporters or equivalent	14,400 gallons
3. Truck Loading/Unloading Area (Stabilization Building)		
Solid PCB	Two 30 CY rolloff containers	12,118 gallons
	TOTAL	**77,833 gallons**

NOTE: PCB CONCENTRATION OF EACH ITEM WILL VARY. MAXIMUM CONCENTRATION IS ASSUMED TO BE 100% IN LIQUIDS AND LESS THAN 100% IN SOLIDS. SOLID PCB'S ARE DEBRIS, SAND, RAGS, SOIL, ETC.

The financial mechanism will be updated on an annual basis as the cost estimates are adjusted for inflation.


NOTE:
1. FOR SITE LOCATION OF EACH PCB STORAGE AREA SHOWN ON THIS DRAWING, SEE CLEAN HARBORS ENVIRONMENTAL SERVICES, INC. DRAWING NO. 5384-C-04.
40'-0"
12"
4'-4"
12'-0"
56'-0"
5" HIGH SPEED BUMP
STABILIZATION BUILDING
69'-10"
FLAMMABLES PAD
2'-4"x2'-4"x2'-0" SUMP
12"
TANKER LOAD/UNLOAD AREA
PLAN
STABILIZATION BUILDING CONTAINMENT CAPACITY:
EXISTING PAD VOLUME = 1,403 GALS. (INCLUDES SUMP - PER WOOLPERT)
FLAMMABLES PAD
64'-0"
LADDER
6" REINFORCED CONCRETE WALL
498.06 503.08 T/W
TK-4
TK-1
TK-5
TK-6
498.08 503.053 T/W
TK-3
TK-2
PUMP & CONC. PAD
3'-0"
GENERAL PROCESSING (BUILDING F)
50'-9"
LADDER
TANKER LOADING/UNLOADING AREA
TK-7
TK-8
2'X2' SUMP
PUMP PAD
TANK FARM
37'-6"
36'-7"
STAIRS W/RAILING
3'-0" LANDING
TK-9
TK-10
55'-4"
498.44 503.057 T/W
14'-0"
498.44 503.09 T/W
498.10 503.05 T/W
498.13 503.08 T/W
STAIRS W/RAILING
498.02 503.06 T/W
499.05 503.02 T/W
CATWALK W/RAILINGS
499.67 503.09 T/W
499.67 503.09 T/W
12'-6"
LADDER
156'-3"
WASTEWATER TREATMENT (BUILDING D)
PLAN
STABILIZATION BUILDING
FLAMMABLES PAD
6" STEP UP
50'-0"
37'-6"
RAMP UP
RAMP UP
TANKER LOAD/UNLOAD AREA
2'x2'x2'-6" SUMP
53'-2"
TANK FARM
8'-0"
8" WIDE x 6" HIGH CONTAINMENT CURB
UP
35'-3"
19'-0"
DIKE 4'-8" DEEP
WALKWAY
PLAN
TANKER LOAD/UNLOAD AREA CONTAINMENT CAPACITY:
EXISTING PAD VOLUME = 8,450 GALS. (INCLUDES SUMP & LESS RAMP) (PER WOOLPERT)
17'-4 1/2"
6"
6"
6"
19'-3"
BOILER ROOM
38'-5 1/2"
8" HIGH CURB
10" HIGH CURB
6"
8"
21'-0"
PLAN
CONTAINMENT CAPACITY:
VOLUME = 19.25'x16.375'x.667'x7.48 + 18.2083'x19.83'x.667'x7.48 = 3,374 GALS.
50'-0"
ROLL-OFF PAD
70'-6"
12" WIDE x 6" HIGH RAMP (TYP. ALL 4 SIDES)
PLAN
ROLL-OFF PAD CONTAINMENT CAPACITY:
PAD VOLUME = 68.5'x48'x0.5'x7.48 = 12,297 GALS.
RAMP VOLUME = 1'x0.5'x48'x7.48 + 1'x0.5'X70.5'x7.48 = 444 GALS.
TOTAL VOLUME = 12,741 GALS.
E REVISED TANK NUMBERS FOR TANKS TK-1 THROUGH TK-4 K.M.C. J.R.L. J.R.L. 1/18/17
D REVISED PCB STORAGE AREAS K.M.C. M.C. M.C. 7/9/02
C REVISED PCB STORAGE AREAS K.M.C. M.C. M.C. 4/5/01
B REVISED PCB STORAGE AREAS K.M.C. M.C. M.C. 11/30/00
A PRELIMINARY K.M.C. A.F.M. P.T.W. 11/10/99
ISSUE DESCRIPTION DRWN. CHKD. APPR. DATE
CleanHarbors
ENVIRONMENTAL SERVICES
42 Longwater Drive
Norwell, Massachusetts 02061
Telephone (781) 792-5000
TITLE
RESOURCE RECOVERY SYSTEMS
4879 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232
PCB STORAGE AREAS
LAYOUT & DETAILS
PROJECT NO. 66SG
DRAWING NO. 5384-S-03
SCALE 1/8"=1'-0"



LEGEND

- PROPERTY LINE
- ROADWAY CENTER
- RCRA PLANT BOUNDARY FENCE
- PROPOSED ANNEX III PCB STORAGE AREAS
- PROPOSED 30 DAY PCB STORAGE AREAS
- PROPOSED PCB TANK STORAGE AREA

0 10 20 40 80 120 160
GRAPHIC SCALE

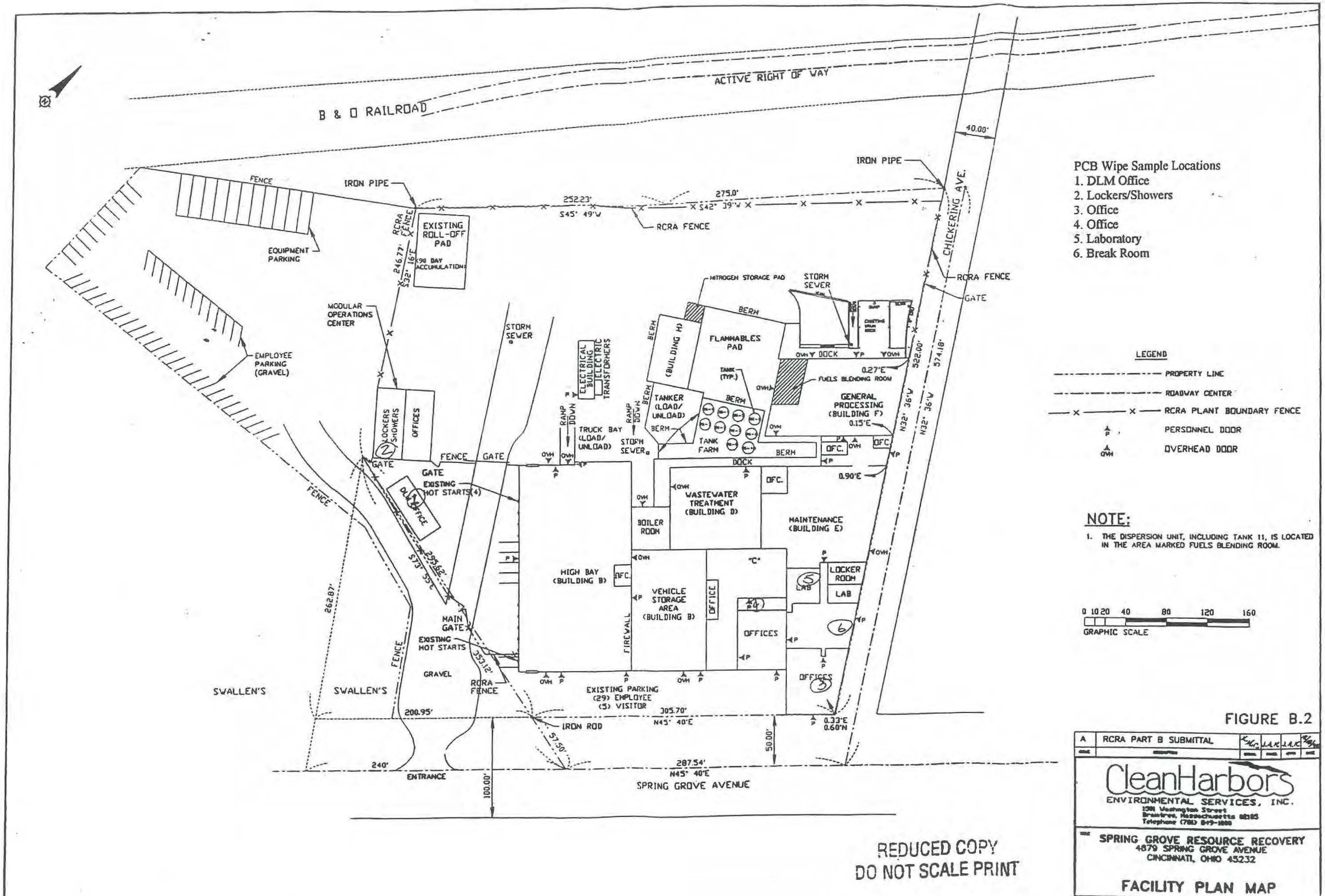
ISSUE	DESCRIPTION	DRWN.	CHKD.	APPVL.	DATE
D	REVISED PCB STORAGE AREA	KMC	M.C.	M.C.	7/9/02
C	ADDED PCB STORAGE AREA	K.M.C.	M.C.	M.C.	3/14/01
B	REVISED PCB STORAGE AREAS	K.M.C.	M.C.	M.C.	11/15/00
A	PRELIMINARY FOR REVIEW	K.M.C.	A.F.M.	P.T.W.	11/18/96

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1501 Washington Street
Braintree, Massachusetts 02185
Telephone (781) 849-1800

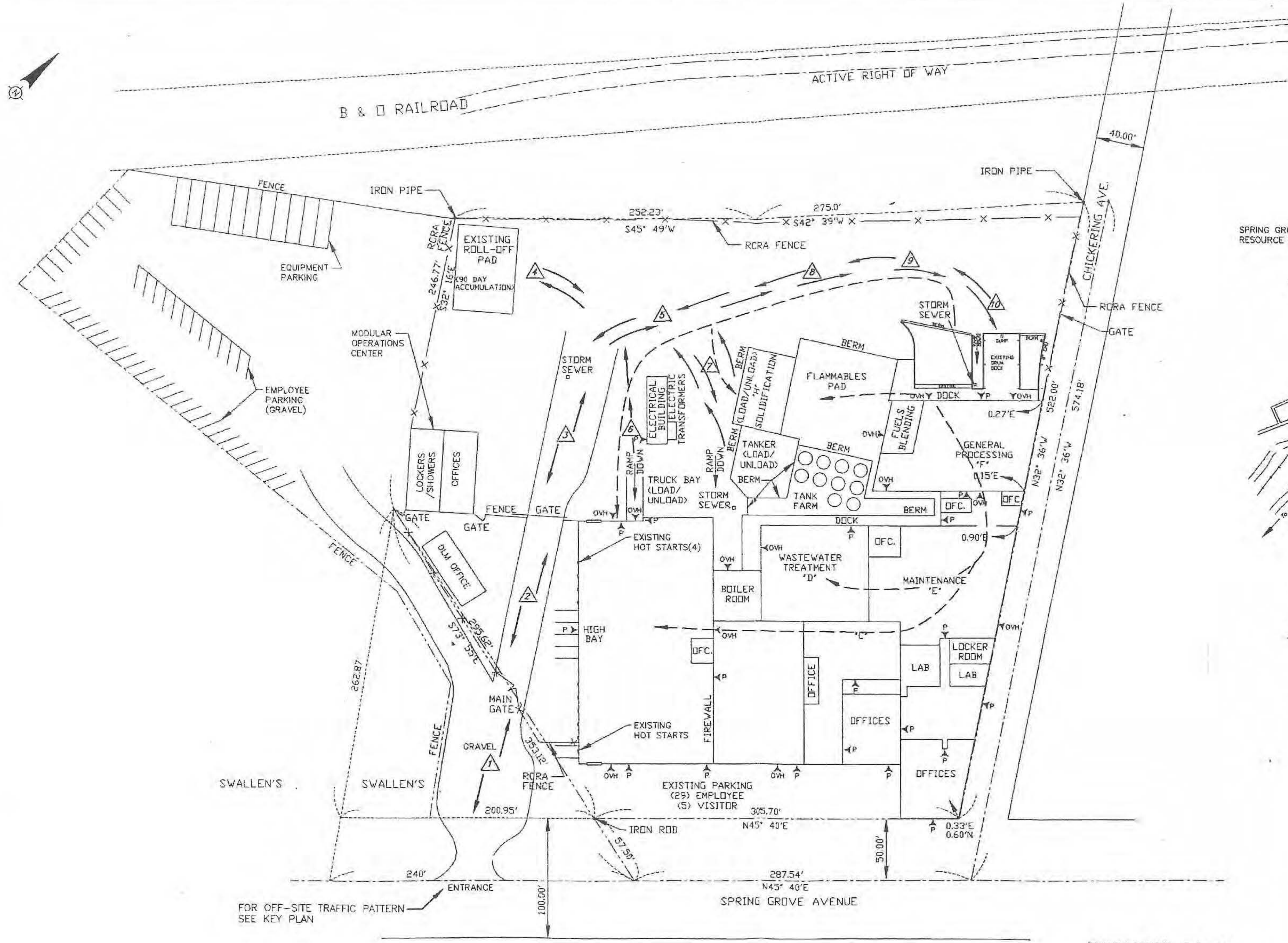
TITLE
RESOURCE RECOVERY SYSTEMS
4879 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232

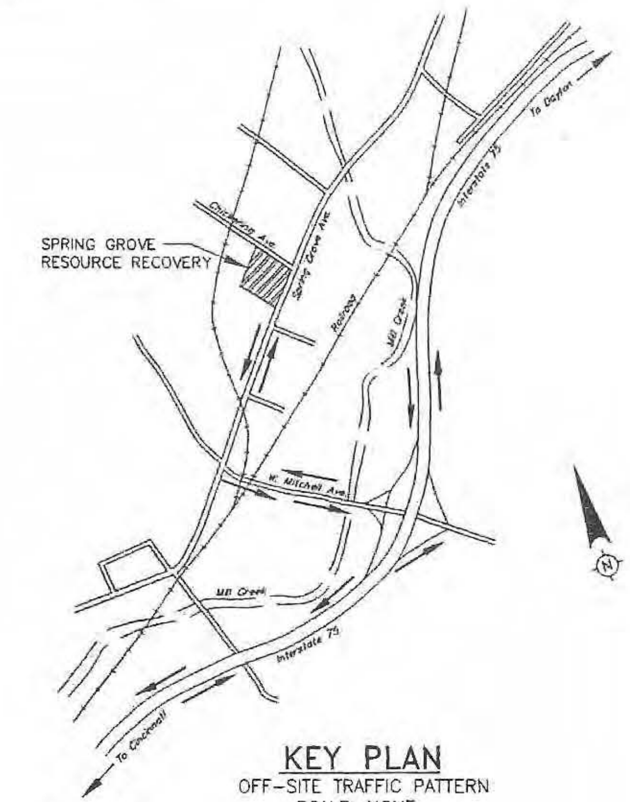
PROPOSED
COMMERCIAL PCB STORAGE LAYOUT

PROJECT NO. SG114635 DRAWING NO. 5384-C-04
SCALE 1"=40'



B & O RAILROAD
ACTIVE RIGHT OF WAY
PCB Wipe Sample Locations
1. DLM Office
2. Lockers/Showers
3. Office
4. Office
5. Laboratory
6. Break Room
IRON PIPE
FENCE
RCRA FENCE
252.23'
S45° 49'W
275.0'
S42° 39'W
40.00'
CHICKERING AVE.
EXISTING ROLL-OFF PAD
(90 DAY ACCUMULATION)
EQUIPMENT PARKING
EMPLOYEE PARKING (GRAVEL)
MODULAR OPERATIONS CENTER
246.77'
S32° 16'E
NITROGEN STORAGE PAD
STORM SEWER
BERM
FLAMMABLES PAD
(BUILDING H)
TANK (TYP.)
DOCK
FUELS BLENDING ROOM
GATE
522.00'
574.18'
N32° 36'W
LEGEND
PROPERTY LINE
ROADWAY CENTER
RCRA PLANT BOUNDARY FENCE
PERSONNEL DOOR
OVERHEAD DOOR
ELECTRICAL BUILDING
ELECTRIC TRANSFORMERS
TRUCK BAY (LOAD/ UNLOAD)
RAMP DOWN
TANKER (LOAD/ UNLOAD)
TANK FARM
GENERAL PROCESSING (BUILDING F)
0.27'E
0.15'E
0.90'E
OFC.
LOCKERS SHOWERS
OFFICES
FENCE
GATE
EXISTING HOT STARTS (4)
DLM OFFICE
WASTEWATER TREATMENT (BUILDING D)
MAINTENANCE (BUILDING E)
BOILER ROOM
NOTE:
1. THE DISPERSION UNIT, INCLUDING TANK 11, IS LOCATED IN THE AREA MARKED FUELS BLENDING ROOM.
HIGH BAY (BUILDING B)
VEHICLE STORAGE AREA (BUILDING B)
FIREWALL
OFFICE
"C"
LAB
LOCKER ROOM
OFFICES
S73° 55'E
295.62'
262.87'
MAIN GATE
EXISTING HOT STARTS
GRAVEL
RCRA FENCE
SWALLEN'S
SWALLEN'S
EXISTING PARKING (29) EMPLOYEE (5) VISITOR
200.95'
305.70'
N45° 40'E
IRON ROD
57.50'
50.00'
0.33'E
0.60'N
240'
ENTRANCE
287.54'
N45° 40'E
100.00'
SPRING GROVE AVENUE
0 10 20 40 80 120 160
GRAPHIC SCALE
FIGURE B.2
A RCRA PART B SUBMITTAL
CleanHarbors
ENVIRONMENTAL SERVICES, INC.
SPRING GROVE RESOURCE RECOVERY
4879 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232
FACILITY PLAN MAP
REDUCED COPY
DO NOT SCALE PRINT





KEY PLAN

OFF-SITE TRAFFIC PATTERN
SCALE: NONE

LEGEND

— - — - —	PROPERTY LINE
— — — —	ROADWAY CENTER
—×——×—	RCRA PLANT BOUNDARY FENCE
——→	TRUCK TRAFFIC PATTERNS
←— — —	ON-SITE CONTAINER TRANSFER TRAFFIC PATTERN
P	PERSONNEL DOOR
OVH	OVERHEAD DOOR
△	*RANDOM SOIL/ASPHALT SAMPLES*

ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
D	ADDED RANDOM SOIL/ASPHALT SAMPLES	K.M.C.	M.C.	M.C.	3/14/01
C	REVISED FOR REVIEW	K.M.C.	M.C.	M.C.	2/5/01
B	PRELIMINARY FOR REVIEW	K.M.C.	M.C.	M.C.	12/18/00
A	RCRA PART B SUBMITTAL	K.M.C.	J.A.K.	J.A.K.	12/18/98

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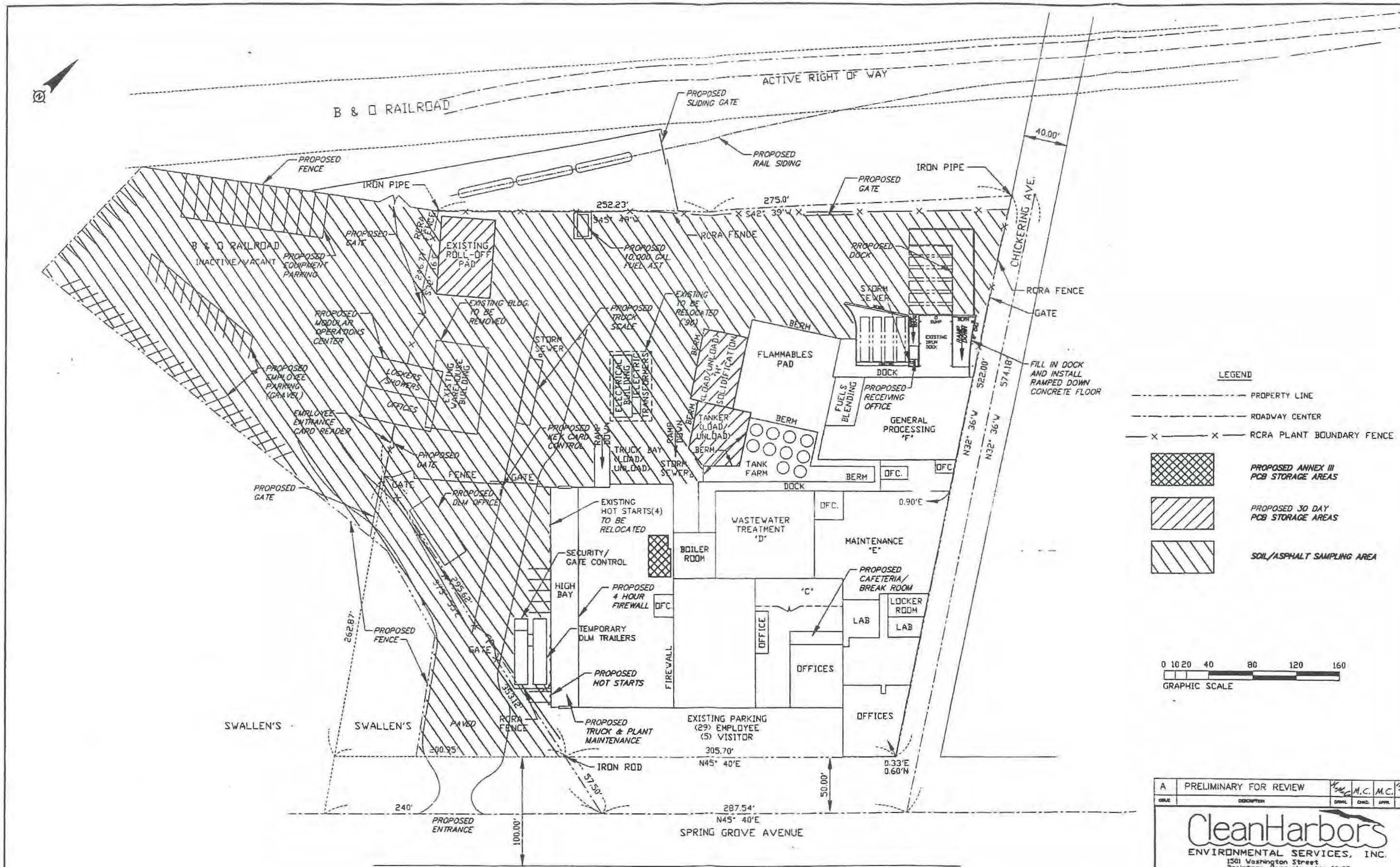
0 10 20 40 80 120 160
GRAPHIC SCALE

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1501 Washington Street
Braintree, Massachusetts 02185
Telephone (781) 849-1800

TITLE SPRING GROVE RESOURCE RECOVERY
4879 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232

TRAFFIC PATTERNS

PROJECT NO. SG114635 DRAWING NO. 5384-C-21
SCALE 1"=40'



REDUCED COPY
DO NOT SCALE PRINT

A	PRELIMINARY FOR REVIEW	M.C.	M.C.	M.C.	

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1501 Washington Street
Braintree, Massachusetts 02185
Telephone (781) 849-1800

RESOURCE RECOVERY SYSTEMS
4879 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232

SOIL/ASPHALT SAMPLING AREA PLAN

PROJECT NO. SG114635
SCALE 1"=40'
5384-C-22

Appendix 1

Spring Grove Resource Recovery, Inc.

RCRA Part B Permit

Issued by Ohio Environmental Protection Agency

Effective March 26, 2013

OHIO E.P.A.

MAR 26 2013

ENTERED DIRECTOR'S JOURNAL

Ohio EPA DMWM MAR 26 2013

OHIO ENVIRONMENTAL PROTECTION AGENCY

OHIO HAZARDOUS WASTE FACILITY INSTALLATION AND OPERATION PERMIT RENEWAL

Permittee: **Spring Grove Resource Recovery, Inc.**

Mailing Address: **Spring Grove Resource Recovery, Inc.**
4879 Spring Grove Avenue
Cincinnati, Ohio 45232

Owner: **Spring Grove Resource Recovery, Inc.**
4879 Spring Grove Avenue
Cincinnati, Ohio 45232

Operator: **Spring Grove Resource Recovery, Inc.**
4879 Spring Grove Avenue
Cincinnati, Ohio 45232

Location: **Spring Grove Resource Recovery, Inc.**
4879 Spring Grove Avenue
Cincinnati, Ohio 45232

Ohio Permit No.:	05-31-0012
US EPA ID:	OHD000816629
Issue Date:	March 26, 2013
Effective Date:	March 26, 2013
Expiration Date.	March 26, 2023

AUTHORIZED ACTIVITIES

In reference to the application of Spring Grove Resource Recovery, Inc. for an Ohio Hazardous Waste Facility Installation and Operation Renewal Permit under Ohio Revised Code (ORC) Chapter 3734 and the record in this matter, you are authorized to conduct at the above-named facility the following hazardous waste management activities:

- Storage of hazardous waste in containers and tanks
- Treatment of hazardous waste in containers and tanks
- Corrective Action

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

By: Kathy Lassiter **Date:** 3-26-13

PERMIT APPROVAL

Scott J. Nally, Director
Ohio Environmental Protection Agency

This permit approval is based upon the record in this matter which is maintained at the offices of the Ohio Environmental Protection Agency. The Director has considered the application, accompanying information, inspection reports of the facility, a report regarding the facility's compliance or noncompliance with the terms and conditions of its permit and rules adopted by the Director under this chapter, and such other information as is relevant to the operation of the facility. The Director has determined that the facility under the existing permit has a history of compliance with ORC Chapter 3734, rules adopted under it, the existing permit, or orders entered to enforce such requirements that demonstrate sufficient reliability, expertise, and competency to operate the facility henceforth under this chapter, rules adopted under it, and the renewal permit.

Entered into the Journal of the Director this 26 day of March, [YEAR].

By Amy L. Lassiter of the Ohio Environmental Protection Agency.

MODULE A - GENERAL PERMIT CONDITIONS

A. GENERAL PERMIT CONDITIONS

A.1 Effect of Permit
ORC Sections 3734.02 (E) and (F) and 3734.05
OAC Rule 3745-50-58(G)

(a) The Permittee is authorized to store and treat hazardous waste in containers and tanks in accordance with the terms and conditions of this Ohio hazardous waste permit (hereinafter permit), ORC Chapter 3734, all applicable Ohio hazardous waste rules, all applicable regulations promulgated under the Resource Conservation and Recovery Act (RCRA), as amended, and the permit application. The permit application, as submitted to Ohio EPA on April 2, 2012, and last updated on September 25, 2012, is hereby incorporated into this permit. In the instance of inconsistent language or discrepancies between the above, the language of the more stringent provision shall govern.

(b) Any management of hazardous waste not authorized by this permit is prohibited, unless otherwise expressly authorized or specifically exempted by law. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, or invasion of other private rights. Compliance with the terms and conditions of this permit does not obviate Permittee's obligation to comply with other applicable provisions of law governing protection of public health or the environment including but not limited to the Community Right to Know law under ORC Chapter 3750.

A.2 Permit Actions
OAC Rule 3745-50-58(F)

This permit may be modified or revoked as specified by Ohio law. The filing of a request by the Permittee for a permit modification, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay any permit term or condition.

A.3 Permit Effective/Expiration Date
OAC Rule 3745-50-54

The effective date of this permit is the date the permit is entered into the Director's Journal. The permit expiration date is ten years after the date of journalization of this permit.

A.4 Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

A.5 Duty to Comply
OAC Rule 3745-50-58(A)

The Permittee must comply with all applicable provisions of ORC Chapter 3734, all applicable Ohio hazardous waste rules, and all terms and conditions of this permit, except to the extent and for the duration such noncompliance is authorized by the laws of the State of Ohio. Any permit noncompliance, other than noncompliance authorized by the laws of the State of Ohio, constitutes a violation of ORC Chapter 3734 and is grounds for enforcement action, revocation, modification, denial of a permit renewal application or other appropriate action.

A.6 Duty to Reapply and Permit Expiration
OAC Rules 3745-50-40(D), 3745-50-58(B), 3745-50-56 and ORC Section 3734.05(H)

(a) If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the Permittee must submit a completed permit application for a hazardous waste facility installation and operation permit renewal and any necessary accompanying general plans, detailed plans, specifications, and such information as the Director may require, to the Director no later than one hundred eighty (180) days prior to the expiration date of this permit, unless a later submittal date has been authorized by the Director upon a showing of good cause.

(b) The Permittee may continue to operate in accordance with the terms and conditions of the expired permit until a renewal permit is issued or denied if:

(i) the Permittee has submitted a timely and complete permit application for a renewal permit under OAC Rule 3745-50-40; and

(ii) through no fault of the Permittee, a new permit has not been issued pursuant to OAC Rule 3745-50-40 on or before the expiration date of this permit.

(c) The Corrective Action obligations contained in this permit will continue regardless of whether the facility continues to operate or ceases operation and closes. The Permittee is obligated to complete facility-wide Corrective Action under the conditions of this permit regardless of the operational status of the facility. The Permittee must submit an application for permit renewal at least 180 days before the expiration date of this permit pursuant to OAC Rule 3745-50-40(D) unless a) the permit has been modified to terminate the Corrective Action schedule of compliance and the Permittee has been released from the requirements for financial assurance for Corrective Action; or b) a later submittal date has been authorized by the Director.

A.7 Need to Halt or Reduce Activity Not a Defense
OAC Rule 3745-50-58(C)

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce a permitted activity in order to maintain compliance with the conditions of this permit.

A.8 Duty to Mitigate
OAC Rule 3745-50-58(D)

The Permittee must take all reasonable steps to minimize releases to the environment and must carry out such measures as are reasonable to prevent significant adverse impact on human health or the environment resulting from noncompliance with this permit.

A.9 Proper Operation and Maintenance
OAC Rule 3745-50-58(E)

The Permittee must at all times properly operate and maintain the facility (and related appurtenances) to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective management practices, adequate funding, adequate operator staffing and training, and where appropriate, adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the terms and conditions of this permit.

Ohio EPA OMMM MAR 2 6 2013

A.10 Duty to Provide Information
OAC Rule 3745-50-58(H)

The Permittee must furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying or revoking, or to determine compliance with, this permit. The Permittee must also furnish to the Director, upon request, copies of records required to be kept by this permit.

A.11 Inspection and Entry
OAC Rules 3745-50-58(I) and 3745-50-30, and ORC Section 3734.07

(a) The Permittee must allow the Director, or an authorized representative, upon stating the purpose and necessity of the inspection and upon proper identification, to:

(i) enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the terms and conditions of this permit;

(ii) have access to and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;

(iii) inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the terms and conditions of this permit; and

(iv) sample, document, or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by ORC Chapter 3734 and the rules adopted thereunder, any substances or parameter at any location.

(b) Any record, report or other information obtained under the hazardous waste rules or Chapter 3734 of the Revised Code shall not be available to the public upon the Permittee's satisfactory showing to Ohio EPA that all or part of the information would divulge methods or processes entitled to protection as trade secrets pursuant to Ohio Trade Secret Law and OAC Rule 3745-50-30.

A.12 Monitoring and Records
OAC Rule 3745-50-58(J)

(a) Any sample and measurement taken for the purpose of monitoring must be representative of the monitored activity. Further, a sample must be a representative sample; as such term is defined and used in the Ohio hazardous waste rules. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of OAC Rule 3745-51-20, Laboratory Methods. Laboratory methods must be those specified in Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods, EPA Publication SW-846, Third Edition (November 1986), as amended by Updates I (dated July 1992), II (dated September 1994), IIA (dated August 1993), IIB (dated January 1995), III (dated December 1996) and IIIA (dated April 1998), and additional supplements or editions thereof; Standard Methods for the Examination of Water and Wastewater: Twentieth Edition, 1999; or an equivalent method as specified in the approved waste analysis plan, or as this term is defined and used in the Ohio hazardous waste rules.

(b) Records of monitoring information must specify the:

(i) date(s), exact place(s), and time(s) of sampling or measurements;

(ii) individual(s) who performed the sampling or measurements;

(iii) date(s) analyses were performed;

(iv) individual(s) who performed the analyses;

(v) analytical technique(s) or method(s) used; and

(vi) results of such analyses.

A.13 Signatory Requirement and Certification of Records
OAC Rules 3745-50-58(K) and 3745-50-42

All applications, reports or information must be properly signed and certified in accordance with OAC Rule 3745-50-58(K).

A.14 Retention of Records and Information Repository
OAC Rules 3745-50-40(G), 3745-50-58(J), 3745-50-58(M) and 3745-50-58(N)

(a) The Permittee must 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 and records required by this permit, the certification required by OAC Rule 3745-54-73(B)(9), and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report, certification, or application.

(b) The record retention period may be extended by request of the Director at any time and is automatically extended during the course of any unresolved enforcement action regarding the facility.

(c) The Permittee must maintain, in accordance with the Ohio hazardous waste rules, records of all data used to complete the permit application and any amendments, supplements or modifications of such application. The Permittee must retain a complete copy of the current application for the effective life of the permit as indicated in Permit Condition A.3.

(d) The Permittee must maintain records from all ground water monitoring wells and associated ground water surface elevations for the active life of the facility and for disposal facilities for the post-closure care period as well.

(e) Reserved

(f) Corrective Action records must be maintained at least three (3) years after all Corrective Action activities have been completed.

A.15 Planned Changes
OAC Rules 3745-50-51 and 3745-50-58(L)(1)

The Permittee must give notice to the Director as soon as possible of any planned physical alterations or additions to the facility. All such changes must be made in accordance with OAC Rule 3745-50-51.

A.16 Waste Shipments
OAC Rule 3745-53-11, ORC Section 3734.15(C)

The Permittee must only use properly registered transporters of hazardous waste to remove hazardous waste from the facility, in accordance with all applicable laws and rules.

A.17 Anticipated Noncompliance
OAC Rule 3745-50-58(L)(2)

The Permittee must give advance notice to the Director of any planned changes in the permitted facility or operations which may result in noncompliance with the terms and conditions of this permit. Such notification does not waive the Permittee's duty to comply with this permit pursuant to Permit Condition A.5.

A.18 Transfer of Permits
OAC Rules 3745-50-52, 3745-50-58(L)(3) and 3745-54-12

(a) The permit may be transferred to a new owner or operator only if such transfer is conducted in accordance with ORC Chapter 3734 and the rules adopted thereunder. This permit may be transferred by the Permittee to a new owner or operator only if the permit has been modified under OAC Rule 3745-50-51. Before transferring ownership or operation of the facility, the Permittee must notify the new owner or operator in writing of the requirements of ORC Chapter 3734 and the rules adopted thereunder (including all applicable Corrective Action requirements).

(b) The Permittee's failure to notify the new owner or operator of the requirements of the applicable Ohio law or hazardous waste rules does not relieve the new owner or operator of its obligation to comply with all applicable requirements.

A.19 Compliance Reports
OAC Rules 3745-50-58(L)(5) and 3745-50-50

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule (developed in accordance with OAC Rule 3745-50-50) of this permit must be submitted to the Director no later than fourteen (14) days following each scheduled date.

A.20 Immediate Reporting of Noncompliance
OAC Rule 3745-50-58(L)(6)

(a) The Permittee must report orally to Ohio EPA's Division of Environmental Response and Revitalization within twenty-four (24) hours from the time the Permittee becomes aware of any noncompliance with this permit, ORC Chapter 3734 or the rules adopted thereunder, which may endanger human health or the environment, including:

(i) information concerning the release of any hazardous waste that may cause an endangerment to public drinking water supplies; and

(ii) any information of a release or discharge of hazardous waste or a fire or explosion from the hazardous waste facility, which could threaten the environment or human health outside the facility.

(b) The report must consist of the following information (if such information is available at the time of the oral report):

(i) name, address, and telephone number of the owner or operator;

(ii) name, address, and telephone number of the facility;

(iii) date, time, and type of incident;

(iv) name and quantity of material(s) involved;

(v) the extent of injuries, if any;

(vi) an assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and

(vii) estimated quantity and disposition of recovered material that resulted from the incident.

A.21 Follow-Up Written Report of Noncompliance
OAC Rule 3745-50-58(L)(6)(c)

(a) A written report must also be provided to Ohio EPA's Division of Environmental Response and Revitalization and the Division of Materials and Waste Management Southwest District Office within five (5) days of the time the Permittee becomes aware of the circumstances reported in Permit Condition A.20.

(b) The written report must address the items in Permit Condition A.20 and must contain a description of such noncompliance and its cause; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and, if not, the anticipated time it is expected to continue; and steps taken or planned to minimize the impact on human health and the environment and to reduce, eliminate, and prevent recurrence of the noncompliance.

(c) The Permittee need not comply with the five (5) day written report requirement if the Director, upon good cause shown by the Permittee, waives that requirement and the Permittee submits a written report within fifteen (15) days of the time the Permittee becomes aware of the circumstances.

A.22 Other Noncompliance
OAC Rules 3745-50-58(L)(10) and 3745-50-58(L)(4)

The Permittee must report to the Director all other instances of noncompliance not provided for in Permit Conditions A.19 and A.20. These reports must be submitted within thirty (30) days of the time at which the Permittee is aware of such noncompliance. Such reports must contain all information set forth within Permit Condition A.20.

A.23 Certification of Construction or Modification
OAC Rule 3745-50-58(L)(2)

Reserved

A.24 Other Information
OAC Rule 3745-50-58(L)(11)

If at any time the Permittee becomes aware that it failed to submit any relevant facts, or submitted incorrect information to the Director, the Permittee must promptly submit such facts, information or corrected information to the Director.

A.25 Confidential Information
OAC Rule 3745-50-30

In accordance with ORC Chapter 3734 and the rules adopted thereunder, the Permittee may request confidentiality for any information required to be submitted by the terms and conditions of this permit, or any information obtained by the Director, or an authorized representative, pursuant to the authority provided under Permit Condition A.11.

A.26 Ohio Annual Permit, Disposal, and Treatment Fees
OAC Rules 3745-50-33 through 3745-50-36

The annual permit fee, calculated pursuant to OAC Rule 3745-50-36 and payable to the Treasurer of the State, must be submitted to the Director on or before the anniversary of the date of issuance during the term of the permit. For the purpose of the payment of the Ohio Annual Permit Fee, the date of issuance is the date the permit was entered into the Journal of the Director of Ohio EPA.

A.27 Compliance Schedule - Documents
OAC Rules 3745-50-50 and 3745-50-51

(a) Unless specified otherwise, the Permittee must submit the documents listed below to:

Ohio EPA, Director
c/o DMWM, Engineering, Remediation, and Authorizations Section
P.O. Box 1049
Columbus, Ohio 43216-1049

District Office: Southwest District Office

(b) The Permittee must submit to the Ohio EPA within sixty (60) days after permit journalization, in accordance with Ohio's hazardous waste rules, the following information to be incorporated in the permit application:

(i) Updated Closure/Post-Closure Cost Estimate
OAC Rules 3745-55-42 and 3745-55-44

Section I of the permit application containing the financial assurance mechanism for closure must be updated to include a copy of the current closure/post-closure cost estimate as set forth in OAC Rules 3745-55-42 and 3745-55-44.

(ii) Updated Financial Assurance Mechanism for Closure
OAC Rules 3745-55-43

Section I of the permit application containing the financial assurance mechanism for closure must be updated to include a copy of the current financial assurance mechanism, as set forth in OAC Rule 3745-55-43, and as specified by the wording requirements of OAC Rule 3745-55-51. The value of the financial assurance mechanism must reflect at least the current amount of the closure/post-closure cost estimate.

During the life of the permit the facility may change the financial assurance mechanism as stated in OAC Rule 3745-55-43. The facility must submit the financial assurance mechanism documentation to the Director of Ohio EPA in accordance with the parameters set forth in OAC Rule 3745-55-43.

(iii) Updated Liability Requirements
OAC Rule 3745-55-47

Section I of the permit application containing the mechanism used to demonstrate third party liability coverage must be updated to include a copy of the current liability mechanism as set forth in OAC Rule 3745-55-47 and as specified by the wording requirements of OAC Rule 3745-55-51.

During the life of the permit the facility may change the mechanism used to demonstrate liability coverage as stated in OAC Rule 3745-55-47. The facility must submit the liability mechanism documentation to the Director of Ohio EPA in accordance with the parameters set forth in OAC Rule 3745-55-47.

This information must be submitted in accordance with OAC Rule 3745-50-51.

A.28 Information to be Maintained at the Facility
OAC Rule 3745-54-74

(a) Unless otherwise specified by the hazardous waste rules, the Permittee must maintain at the facility, until closure is completed and certified by an independent, registered professional engineer, pursuant to OAC Rule 3745-55-15, and until the Director releases the Permittee from financial assurance requirements pursuant to OAC Rule 3745-55-43, the following documents (including amendments, revisions and modifications):

(i) waste analysis plan, developed and maintained in accordance with OAC Rule 3745-54-13 and the terms and conditions of this permit;

(ii) contingency plan, developed and maintained in accordance with OAC Rule 3745-54-53 and the terms and conditions of this permit;

(iii) closure plan, developed and maintained in accordance with OAC Rule 3745-55-12 and the terms and conditions of this permit;

(iv) cost estimate for facility closure, developed and maintained in accordance with OAC Rule 3745-55-42 and the terms and conditions of this permit;

(v) personnel training plan and the training records, developed and maintained in accordance with OAC Rule 3745-54-16 and the terms and conditions of this permit;

(vi) operating record, required by OAC Rule 3745-54-73 and the terms and conditions of this permit; and

(vii) inspection schedules, developed in accordance with OAC Rules 3745-54-15, 3745-55-74 and 3745-55-95 and the terms and conditions of this permit.

(viii) reserved.

(ix) annually-adjusted cost estimate for facility closure, as required by OAC Rules 3745-55-42 and 3745-55-44 and the terms and conditions of this permit.

(x) all other documents required by Module A, Permit Condition A.12.

(b) The Permittee must maintain copies of all inspection logs at the facility for a period not less than three (3) years from the date of inspection.

A.29 Waste Minimization Report
OAC Rules 3745-54-73 and 3745-54-75

(a) The Permittee must submit a Waste Minimization Report describing the waste minimization program required by OAC Rules 3745-54-75(H), (I), and (J); 3745-54-73(B)(9); and 3745-52-20(A) at least once every five years. The provisions of OAC Rules 3745-54-75(H), (I) and (J); and 3745-54-73(B)(9) must be satisfied annually.

(b) The Permittee must submit the Waste Minimization Report to Ohio EPA's Office of Compliance Assistance and Pollution Prevention within one hundred eighty (180) days of the effective date of this permit, and must submit updates to this report once every five years thereafter.

MODULE B - GENERAL FACILITY CONDITIONS

B. GENERAL FACILITY CONDITIONS

B.1 Design and Operation of Facility
OAC Rule 3745-54-31

(a) The Permittee must design, construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, ground water or surface waters which could threaten human health or the environment.

(b) The Permittee must not accept more than 31,500 tons of hazardous waste in any one calendar year from off-site sources during the life of the permit, until such time as this permit condition is modified or renewed. This is a facility wide limitation and includes all units.

B.2 Required Notices
OAC Rule 3745-54-12

(a) Hazardous Waste from Off-Site Sources

When the Permittee is to receive hazardous waste from an off-site source (except where the Permittee is also the generator), he must inform the generator in writing that he has the appropriate permits, and will accept the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the operating record.

(b) Hazardous Wastes from Foreign Sources

The Permittee must notify the Director in writing at least four weeks in advance of the date the Permittee expects to receive hazardous waste from a foreign source, as required by OAC Rule 3745-54-12(A). Notice of subsequent shipments of the same waste from the same foreign source is not required.

B.3 General Waste Analysis Plan
OAC Rule 3745-54-13

(a) Before the Permittee treats, stores, or disposes of any hazardous wastes, or nonhazardous wastes if applicable under OAC Rule 3745-55-13(D), the Permittee must obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, this analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with the requirements of Chapters 3745-54 to 3745-57, 3745-205, and 3745-270 of the Administrative Code.

(b) The Permittee must follow the procedures described in the waste analysis plan found in Section C of the permit application and the terms and conditions of this permit.

(c) The Permittee must verify the analysis of each waste stream annually as part of its quality assurance program, in accordance with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, or equivalent methods approved by the Director. At a minimum, the Permittee must maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations. If the Permittee uses a contract laboratory to perform analyses, then the Permittee must inform the laboratory in writing that it must operate under the waste analysis conditions set forth in this permit.

B.4 Security
OAC Rule 3745-54-14

The Permittee must comply with the security provisions of OAC Rule 3745-54-14(B)(1) and (C) and Section F of the permit application.

B.5 General Inspection Requirements
OAC Rules 3745-54-15 and 3745-54-73

The Permittee must inspect the facility in accordance with OAC Rule 3745-54-15 and the inspection schedule set forth in Section F of the permit application. The Permittee must remedy any deterioration or malfunction discovered by an inspection, as required by OAC Rule 3745-54-15(C). Records of inspection must be kept for a minimum of three years from the date of inspection. These records must be a part of the facility's operating record as required by OAC Rule 3745-54-73.

B.6 Personnel Training
OAC Rule 3745-54-16

The Permittee must conduct personnel training, as required by OAC Rule 3745-54-16. This training program must contain at least the elements set forth in Section H of the permit application. The Permittee must maintain training documents and records as required by OAC Rule 3745-54-16(D) and (E).

B.7 General Requirements for Ignitable, Reactive, or Incompatible Wastes
OAC Rule 3745-54-17

(a) The Permittee must comply with the requirements of OAC Rule 3745-54-17 and must follow the procedures for handling ignitable, reactive, and incompatible wastes set forth in Sections C, D and F of the permit application.

(b) The Permittee must provide electrical grounding for all containers, tanks, and transport vehicles during all operations involving the handling of ignitable or reactive wastes.

(c) The Permittee must provide, and require the use of, spark proof tools during all operations involving the handling of all ignitable or reactive wastes.

(d) The Permittee must prohibit smoking and open flames in each area where ignitable, reactive or incompatible hazardous wastes are managed and must post appropriate signs.

(e) All wiring and electrical equipment at the facility must meet the National Fire Protection Association's standards for hazardous locations (See National Fire Protection Association, "National Electric Code" National Fire Codes, 1985 Edition, Vol. 3, Chapter 5, Special Occupancies, Articles 500-503, pp.176 through 189).

B.8 Reserved

B.9 Required Equipment
OAC Rule 3745-54-32

At a minimum, the Permittee must maintain at the facility all the equipment required by OAC Rule 3745-54-32 and the equipment set forth in the contingency plan contained in Section G of the permit application.

B.10 Testing and Maintenance of Equipment
OAC Rule 3745-54-33

The Permittee must inspect, test and maintain the equipment required by Permit Condition B.9 as necessary to assure its proper operation in time of emergency, as specified in OAC Rule 3745-54-33, Section F of the permit application and the terms and conditions of this permit.

B.11 Access to Communications or Alarm System
OAC Rule 3745-54-34

The Permittee must maintain access to the communications and alarm systems, as required by OAC Rule 3745-54-34, Section F of the permit application and the terms and conditions of this permit.

B.12 Required Aisle Space
OAC Rule 3745-54-35

At a minimum, the Permittee must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, as required by OAC Rule 3745-54-35.

B.13 Arrangements with Local Authorities
OAC Rule 3745-54-37

(a) The Permittee must comply with the requirements of OAC Rule 3745-54-37 (A) by making a diligent effort to:

(i) make arrangements and familiarize all emergency response agencies which are likely to respond in an emergency with the location and layout of the facility, properties of hazardous waste managed at the facility and associated hazards, places where facility personnel will normally be working, entrances to and roads inside the facility, and possible evacuation routes as depicted and explained in Section G of the permit application;

(ii) make arrangements with Ohio EPA emergency response teams, emergency response contractors, and equipment suppliers;

(iii) make arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and types of injuries or illnesses which could result from fires, explosions, or releases at the facility; and

(iv) make agreements designating primary emergency authority to a specific police and a specific fire department and make agreements with any others to provide support to the primary emergency authority, where more than one police and fire department may respond to an emergency.

(b) Where authorities decline to enter into such agreements or arrangements set forth in OAC Rule 3745-54-37(A), the Permittee must document the refusal in the operating record as required by OAC Rule 3745-54-37(B).

B.14 Implementation of Contingency Plan
OAC Rules 3745-54-51 and 3745-54-56

The Permittee must immediately carry out the provisions of the contingency plan and follow the emergency procedures described in OAC Rule 3745-54-56, whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which threatens or could threaten human health or the environment.

In regard to spills and related toxic gas releases, the plan must describe the criteria to be used by the emergency coordinator to determine when the plan will be implemented. At a minimum, the plan must be implemented in the following situations:

(a) Any fire involving hazardous waste; or

(b) Any explosion involving hazardous waste; or

(c) Any uncontrolled hazardous waste reaction that produces or has the potential to produce hazardous conditions, including noxious, poisonous, flammable and/or explosive gases, fumes, or vapors; harmful dust; or explosive conditions; or

(d) Any hazardous waste release, outside of a secondary containment system, that causes or has the potential to cause off-site soil and/or surface water contamination; or

(e) Any hazardous waste release that produces or has the potential to produce hazardous conditions, including noxious, poisonous, flammable and/or explosive gases, fumes, or vapors; harmful dust; or explosive conditions.

B.15 Content of the Contingency Plan
OAC Rule 3745-54-52

The Permittee must comply with OAC Rule 3745-54-52 and the contingency plan, as set forth in Section G of the permit application.

B.16 Contingency Plan - Released Material and Emergency Response Material and By-products
OAC Rule 3745-54-56(G)

(a) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

(b) All liquid or solid material resulting from fire, explosion, released material or emergency response material and by-products that the Permittee is required to evaluate to determine whether such material is hazardous waste in accordance with OAC Rule 3745-52-11, must be collected and managed as a hazardous waste unless the Permittee can demonstrate that such waste is not hazardous in accordance with OAC Rule 3745-51-03(C) and (D).

B.17 Amendments to Plan
OAC Rule 3745-54-54

The Permittee must review the contingency plan at least annually and upon the occurrence of any event listed in OAC Rule 3745-54-54. If necessary or appropriate, the Permittee must amend the contingency plan as required by OAC Rule 3745-54-54 in accordance with OAC Rule 3745-50-51.

B.18 Copies of Plan
OAC Rule 3745-54-53

(a) The Permittee must comply with the requirements set forth in OAC Rule 3745-54-53 regarding contingency plan distribution. The Permittee must maintain at the facility a copy of the contingency plan and all revisions to the plan.

(b) The Permittee must, in accordance with OAC Rule 3745-54-53, submit a copy of the contingency plan to all local police departments, fire departments, hospitals and local emergency response teams that may be called upon to provide emergency services. The Permittee must notify such agencies and the local authorities, in writing, within ten (10) days of the effective date of any amendments of, revisions to, or modifications to the contingency plan.

(c) The Permittee must, in accordance with OAC Rule 3745-54-53, submit a copy of the contingency plan to the Ohio Environmental Protection Agency's Division of Environmental Response and Revitalization.

B.19 Emergency Coordinator
OAC Rule 3745-54-55

The Permittee must comply with the requirements set forth in OAC Rule 3745-54-55 regarding the emergency coordinator.

B.20 Emergency Procedures
OAC Rule 3745-54-56

The Permittee must comply with the requirements regarding emergency procedures set forth in OAC Rule 3745-54-56, Section G of the permit application and the terms and conditions of this permit.

B.21 Availability, Retention and Disposition of Records
OAC Rule 3745-54-74

All records shall be furnished by the Permittee upon request to, and made available at all reasonable times for inspection by, Ohio EPA, in accordance with OAC Rule 3745-54-74.

B.22 Operating Record
OAC Rule 3745-54-73

(a) The Permittee must comply with the requirements set forth in OAC Rule 3745-54-73 regarding an operating record, including information to be recorded and the maintenance thereof.

(b) The Permittee is authorized to maintain original copies of waste analysis information (i.e., GWMPS forms and attachments or functional equivalents) and initial notes to generators at its offsite central profile group, provided that: 1) the information is immediately accessible through an electronic data retrieval system; and 2) facsimile or original copies of such records must be made available to the Agency immediately upon request.

B.23 Contingency Plan Records
OAC Rule 3745-54-56(J)

The Permittee must note in the operating record the time, date, and details of any incident that requires the implementation of the contingency plan. Within fifteen (15) days after any such incident the Permittee must submit to the Director a written report of the incident containing the elements set forth in OAC Rule 3745-54-56(J).

B.24 Manifest System
OAC Rules 3745-54-70, 3745-54-71, 3745-54-72 and 3745-54-76

(a) In managing waste at the facility the Permittee must comply with OAC Chapter 3745-52 and OAC Rules 3745-54-71, 3745-54-72 and 3745-54-76 with regard to the manifest system.

(b) Manifest discrepancy report. If a significant discrepancy in a manifest is discovered, the Permittee must attempt to reconcile the discrepancy. If not resolved with fifteen (15) days after receiving the waste, the Permittee must submit a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest, to the Director in accordance with OAC Rule 3745-54-72.

(c) Unmanifested waste report. If the Permittee receives unmanifested waste which is not excluded from the manifest requirements of OAC Rule 3745-51-05, then the Permittee must submit an unmanifested waste report to the Director within fifteen (15) days after receipt of the waste. The report must include the information required under OAC Rule 3745-54-76.

B.25 Annual Reports and Additional Reports
OAC Rules 3745-54-75 and 3745-54-77

The Permittee must comply with the annual report requirements set forth in OAC Rule 3745-54-75 and the additional report requirements set forth in OAC Rule 3745-54-77.

B.26 Closure Performance Standard
OAC Rule 3745-55-11

During facility closure, the Permittee must implement the provisions of the closure plan found in Section I of the permit application in such a manner as to achieve compliance with OAC Rule 3745-55-11.

B.27 Closure Plan
OAC Rules 3745-55-10, 3745-55-11 and 3745-55-13

The Permittee must implement those procedures detailed within Section I of the permit application, in accordance with OAC Rules 3745-55-10 through 3745-55-20.

B.28 Amendment of Closure Plan
OAC Rules 3745-55-12 and 3745-50-51

Should a change in the facility closure plan become necessary, the Permittee must amend the closure plan in accordance with OAC Rule 3745-55-12(C).

B.29 Content of Closure Plan
OAC Rule 3745-55-12

The Permittee must maintain the closure plan at the facility which contains the elements set forth in OAC Rule 3745-55-12 and all elements required by the terms and conditions of this permit.

B.30 Notification of Closure
OAC Rule 3745-55-12

The Permittee must notify the Director in writing at least 45 days prior to the date on which he expects to begin final closure of a facility, as required by OAC Rule 3745-55-12(D).

B.31 Time Allowed For Closure
OAC Rule 3745-55-13

Within ninety (90) days after receiving the final volume of hazardous waste, the Permittee must remove from the facility, or treat or dispose of on-site, all hazardous waste in accordance with the closure plan. The Director may approve a longer closure period if the Permittee complies with all applicable requirements for requesting a modification to the permit as set forth in OAC Rule 3745-55-13(A). The Permittee must complete all closure activities within one hundred eighty (180) days after receiving the final volume of hazardous waste in accordance with OAC Rule 3745-55-13. The Director may approve a longer closure period if the Permittee complies with all applicable requirements for requesting a modification to the permit as set forth in OAC Rule 3745-55-13(B).

B.32 Disposal or Decontamination of Equipment, Structures, and Soils
OAC Rule 3745-55-14

(a) The Permittee must decontaminate or dispose of all contaminated facility equipment, structures, and soils, as required by OAC Rule 3745-55-14, the closure plan and the terms and conditions of this permit.

(b) The Permittee must notify the Ohio EPA Southwest District Office within 5 working days prior to all rinseate and soil sampling.

B.33 Certification of Closure
OAC Rule 3745-55-15

The Permittee and an independent, registered professional engineer must certify that each hazardous waste management unit or the facility has been closed in accordance with the specifications in the closure plan and the terms and conditions of this permit, as required by OAC Rule 3745-55-15. The Permittee must furnish to the Director, upon request, documentation supporting the certification.

B.34 Reserved

B.35 Reserved

B.36 Cost Estimate for Facility Closure
OAC Rule 3745-55-42

(a) The Permittee's most recent closure cost estimate, prepared in accordance with OAC Rule 3745-55-42 is specified in Section I of the permit application.

(b) The Permittee must adjust the closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with OAC Rule 3745-55-43.

(c) The Permittee must revise the closure cost estimate whenever there is a change in the facility's closure plan that increases the cost of closure as required by OAC Rule 3745-55-42(C).

(d) The Permittee must submit to the Ohio EPA and keep at the facility the latest closure cost estimate as required by OAC Rule 3745-55-42(D) and (E).

B.37 Financial Assurance for Facility Closure

The Permittee must maintain continuous compliance with OAC Rule 3745-55-43 and provide documentation of financial assurance, which meets the requirements of OAC Rule 3745-55-51, in at least the amount of the cost estimates required by Permit Condition B.36.

B.38 Liability Requirements

The Permittee must maintain continuous compliance with the requirements of OAC Rule 3745-55-47 and the documentation of liability by providing liability coverage which meets the requirements of OAC Rule 3745-55-51 for sudden accidental occurrences in the amount of at least $1 million per occurrence, with an annual aggregate of at least $2 million, exclusive of legal defense costs.

B.39 Incapacity of Owners or Operators, Guarantors, or Financial Institutions
OAC Rule 3745-55-48

The Permittee must comply with requirements set forth in OAC Rule 3745-55-48 regarding the incapacity of owners, operators, guarantors or financial institutions.

B.40 General Requirements for Land Disposal Restrictions
OAC Chapter 3745-270

The Permittee must comply with all applicable regulations regarding land disposal prohibitions and restrictions as required by OAC Chapter 3745-270.

MODULE C - CONTAINER STORAGE & TREATMENT

C. CONTAINER STORAGE AND MANAGEMENT

C.1 Container Storage/Quantity Limitation

(a) The Permittee is authorized to store 150,000 gallons of hazardous waste at any given time in the permitted container storage areas designated as Building H, Flammables Pad, Building F, Tanker Load/Unload Pad, Building D Pad, Truck Dock Area, High Bay, Container Storage Pad, and Outbound Storage Pad (Figure B.4 of the permit application).

The Permittee must store hazardous waste in the types of containers (size and type) described in Section D of the permit application.

(b) For the purpose of compliance with the capacity limitation of this permit, each container will be considered to be storing an amount of hazardous waste equal to its capacity, regardless of the actual quantity stored in the container.

(c) Permit Conditions C.1(a) and C.2 shall not apply to the Permittee's activities as a generator accumulating hazardous waste on-site in compliance with OAC Rule 3745-52-34 and 40 CFR Part 265, subparts AA, BB, and CC.

However, when accumulating waste within the permitted container storage area, in accordance with OAC Rule 3745-52-34 and 40 CFR Part 265, subparts AA, BB, and CC, the Permittee must not, for the total amount of hazardous waste stored and accumulated, exceed the maximum container storage inventory established under this permit condition.

C.2 Limitations on Treatment of Hazardous Waste in Containers

(a) The Permittee is authorized to treat hazardous waste in the permitted treatment areas designated as Building H, Flammables Pad, Building F, Tanker Load/Unload Pad, Building D Pad, Truck Dock Area, High Bay, Container Storage Pad, and Outbound Storage Pad (Figure B.4 of the permit application). The Permittee is authorized to treat (T04) a maximum of 3,650,000 gallons per year in containers with a daily limit of 80,800 gallons per day in containers. The Permittee must treat hazardous waste in containers in the manner described in Section D of the permit application.

(b) Permit Condition C.2(a) shall not apply to the Permittee's activities as a generator treating hazardous waste in containers on-site in compliance with OAC Rule 3745-52-34.

However, when treating waste within the permitted treatment area, in accordance with OAC Rule 3745-52-34, the Permittee must not, for the total amount of hazardous waste treated, exceed the maximum throughput capacity established under this condition.

C.3 Waste Identification

The Permittee must store or treat in containers only the hazardous waste codes specified in Attachment I

C.4 Limitation of Time of Storage

The Permittee must not store hazardous waste for a period which exceeds one year, except that upon good cause shown, the Ohio EPA may extend such time period. Each container stored must be clearly marked to identify its contents and the date each period of storage begins.

C.5 Condition of Containers
OAC Rule 3745-55-71

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee must transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this permit and the hazardous waste facility chapters of the OAC.

C.6 Compatibility of Waste with Containers
OAC Rule 3745-55-72

The Permittee must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

C.7 Management of Containers
OAC Rule 3745-55-73

(a) The Permittee must keep all containers closed during storage, except when it is necessary to add or remove waste, and must not open, handle, or store containers in a manner which may rupture the container or cause it to leak.

(b) In the event lab-pack wastes are generated they must be handled in compliance with applicable storage requirements.

(c) In the event lab-pack wastes are generated they must be packaged in drums containing absorbent material that is compatible with the waste.

C.8 Containment Systems
OAC Rule 3745-55-75

(a) The Permittee must maintain the containment system in accordance with the plans and specifications contained in Section D of the permit application.

(b) The Permittee must maintain the containment system as described in the permit application, designed with sufficient capacity to contain ten percent of the total volume of the containers or the volume of the largest container, whichever is greater. The containment system must be free of cracks and gaps and sufficiently impervious to contain leaks and spills and accumulated precipitation until the collected material is detected and removed.

(c) The base of the containment system must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids.

(d) Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in Permit Condition C.7(b) above.

(e) Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in a timely manner. This time period is not to exceed twenty-four (24) hours from the time spilled and/or leaked waste is discovered.

C.9 Reserved

C.10 Inspection Schedules and Procedures
OAC Rules 3745-54-15 and 3745-54-73

The Permittee must inspect the container storage area in accordance with the inspection schedule contained in Section F of the permit application and in accordance with OAC Rule 3745-54-15. The inspection schedule must be designed to detect for leaking containers, deteriorating containers, and/or containment systems. The Permittee must note the results of these inspections in the inspection log along with any remedial action taken.

Areas subject to spills, such as loading or unloading areas, shall be inspected daily when in use pursuant to the inspection procedure described in Section F of the permit application. The Permittee must maintain these inspection results in the facility operating record.

C.11 Recordkeeping
OAC Rule 3745-54-73

The Permittee must comply with all recordkeeping requirements of OAC Rule 3745-54-73 as part of the facility operating record.

C.12 Special Container Provisions for Ignitable or Reactive Waste
OAC Rules 3745-54-17 and 3745-55-76

(a) The Permittee must not store ignitable or reactive waste except in accordance with OAC Rules 3745-54-17 and 3745-55-76.

(b) The Permittee must not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line.

(c) The Permittee must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste and shall follow the storage procedures specified in Section D of the permit application.

C.13 Special Container Provisions for Incompatible Waste
OAC Rules 3745-54-17(B) and 3745-55-77

(a) The Permittee must not store incompatible waste except in accordance with OAC Rules 3745-54-17(B) and 3745-55-77.

(b) The Permittee must not place hazardous waste in an unwashed container that previously held an incompatible waste or material.

(c) The Permittee must separate or protect (by means of a dike, berm, wall, or other device) a storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments.

C.14 Reserved

C.15 Closure and Post-Closure
OAC Rules 3745-55-10 through 3745-55-20, and 3745-55-78

At closure of the container area, the Permittee shall remove all hazardous waste and hazardous waste residues from the containment system, in accordance with the procedures in the closure plan set forth in Section I of the permit application.

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MODULE D - TANK STORAGE AND MANAGEMENT

D. MODULE HIGHLIGHTS

D.1 Tank Storage Quantity Limitation/Waste Identification

(a) The Permittee may store a total volume of 75,450 gallons of hazardous waste in 8 tanks, subject to the terms of this permit and as detailed in the table below.

The Permittee shall store in tanks only the hazardous waste codes specified in the permit application and summarized below:

Tank No.	Capacity (Gallons)	Dimensions of Tank	Secondary Containment Volume (Gallons)	Treatment Type	Hazardous Waste No.
Tank #5	7,000	10 ft. (diam) x 12 ft.	143,368 Gallons – total capacity of Tank Farm	Consolidation for Fuels Blending	See Attachment I
Tank #6	7,000	10 ft. (diam) x 12 ft.			See Attachment I
Tank #7	15,000	11 ft. (diam) x 22 ft.			See Attachment I
Tank #8	15,000	11 ft. (diam) x 22 ft.			See Attachment I
Tank #9	15,000	11 ft. (diam) x 22 ft.			See Attachment I
Tank #10	15,000	11 ft. (diam) x 22 ft.			See Attachment I
Tank #11, Dispersion Unit*	1,200	72 in. (diam) x 68.75 in.	4,039 Gallons - total capacity in the Dispersion Unit Processing Room		See Attachment I
Tank #12, Pump Feed Chamber	250	Not given (integral to Tank #11)			See Attachment I

*Dispersion Unit includes: 1) Dispersion Tank; 2) over flow tank; 3) drum scraping auger; 4) Drum Dumping chamber; 5) coarse shredder; 6) pump feed chamber; 7) drum movement chamber, and 8) any other ancillary equipment.

(b) During any calendar year, the Permittee must not manage through tank storage hazardous waste in excess of the maximum annual quantity set forth in Permit Condition B.1(b).

D.2 Limitations on Treatment of Hazardous Waste in Tanks

(a) The Permittee is authorized to treat hazardous waste in the tanks specified in the table above. The Permittee shall treat in tanks only the hazardous waste codes specified in the permit application and summarized above.

(b) The provision of Condition D.2(a) shall not apply to the Permittee's activities as a generator treating hazardous waste in tanks on-site in compliance with the provisions of OAC Rule 3745-52-34.

D.3 Reserved

D.4 Containment and Detection of Releases.
OAC Rule 3745-55-93

(a) Reserved

(b) Existing Tank Systems with Secondary Containment. The Permittee must operate and maintain the secondary containment system in accordance with the detailed design plans and descriptions contained in the permit application.

(c) Reserved

D.5 Operating Requirements
OAC Rule 3745-55-94

(a) The Permittee must not place hazardous wastes or treatment reagents in the tank system if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail.

(b) The Permittee must prevent spills and overflows from the tank or containment systems using the methods described in the permit application. The Permittee must comply with the requirements of OAC Rule 3745-55-96 if a leak or spill occurs in the tank system.

D.6 Inspection Schedules and Procedures
OAC Rule 3745-55-95

(a) The Permittee must inspect the tank systems, in accordance with the Inspection Schedule found in Section F of the permit application and must complete the items in Permit Conditions D.6(b) and D.6(c) as part of those inspections:

(b) The Permittee must inspect the overfill controls, in accordance with the procedure and schedule in the permit application.

(c) The Permittee must inspect the following components of the tank system once each operating day:

(i) Aboveground portions of the tank system, if any, to detect corrosion or releases of waste;

(ii) Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and

(iii) Construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system, to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

(d) Reserved

(e) The Permittee must document compliance with Permit Condition D.6 in the operating record of the facility.

D.7 <u>Response to Leaks or Spills</u>
OAC Rule 3745-55-96

(a) In the event of a leak or a spill from the tank system, from a secondary containment system, or if a system becomes unfit for continued use, the Permittee must remove the system from service immediately and complete the following actions:

(i) Immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

(ii) If the release was from the tank system, the owner/operator must, within twenty-four hours after detection of the leak, or, if the owner/operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

If the material released was to a secondary containment system, all released materials must be removed within twenty-four hours or in as timely a manner as possible to prevent harm to human health and the environment.

(iii) The Permittee must immediately conduct a visual inspection of all releases to the environment and based on that inspection: (1) prevent further migration of the leak or spill to soils or surface water and (2) remove and properly dispose of any visible contamination of the soil or surface water.

(b) Unless the requirements of Permit Conditions D.7(b)(i) through D.7(b)(vi) are satisfied, the Permittee must close its tank system in accordance with OAC Rule 3745-55-97 and its closure plan if there has been a leak or spill from the tank system, from a secondary containment system, or if a system becomes unfit for continual use.

(i) For a release caused by a spill that has not damaged the integrity of the system, the Permittee must remove the released waste and make any necessary repairs to fully restore the integrity of the system before returning the tank system to service.

(ii) For a release caused by a leak from the primary tank system to the secondary containment system, the Permittee must repair the primary system prior to returning it to service.

(iii) Reserved.

(iv) Reserved.

(v) Reserved.

(vi) If the Permittee replaces a component of the tank system to eliminate the leak, that component must satisfy the requirements for new tank systems or components in OAC Rules 3745-55-92 and 3745-55-93.

(d) For all major repairs (e.g., installation of an internal liner, repair of a ruptured tank, or repair or replacement of a secondary containment vault) to eliminate leaks or restore the integrity of the tank system, the Permittee must obtain a certification by an independent, qualified, registered professional engineer in accordance with OAC Rule 3745-50-42(D)(1) that the repaired system is capable of handling hazardous wastes without

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release for the intended life of the system before returning the system to service. This certification must be submitted to the Director within seven days after returning the tank system to use.

D.8 Recordkeeping and Reporting
OAC Rules 3745-55-96, 3745-55-91(A), and 3745-55-92(G)

(a) The Permittee must report to the Director, within 24 hours of detection, when a leak or spill occurs from the tank system or secondary containment system to the environment. A leak or spill of one pound or less of hazardous waste, that is immediately contained and cleaned-up, need not be reported. Releases that are contained within a secondary containment system need not be reported.

(b) Within 30 days of detecting a release to the environment from the tank system or secondary containment system, the Permittee must report the following information to the Director:

(i) Likely route of migration of the release;

(ii) Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);

(iii) Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee should provide the Director with a schedule of when the results will be available. This schedule must be provided before the required 30-day submittal period expires;

(iv) Proximity of downgradient drinking water, surface water, and populated areas; and

(v) Description of response actions taken or planned.

(c) Reserved.

(d) The Permittee must keep on file at the facility the written assessment of the tank system's integrity.

(e) Reserved.

D.9 Closure and Post-Closure Care

OAC Rule 3745-55-97

(a) At closure of the tank system(s), the Permittee must follow the procedures in the closure plan in Section I of the permit application.

(b) If the Permittee demonstrates that not all contaminated soils can be practically removed or decontaminated, in accordance with the closure plan, then the Permittee must close the tank system(s) and perform post-closure care.

D.10 Special Tank Provisions for Ignitable or Reactive Wastes
OAC Rule 3745-55-98

(a) The Permittee must not place ignitable or reactive waste in the tank system or in the secondary containment system, unless the procedures specified in the permit application are followed. The Permittee must document compliance with this condition and place it in the operating record.

(b) The Permittee must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon, as required in Tables 2-1 to 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1996 or most recent edition) incorporated by reference in OAC Rule 3745-50-11.

D.11 Special Tank Provisions for Incompatible Wastes
OAC Rule 3745-55-99

(a) The Permittee must not place incompatible wastes, or incompatible wastes and materials, in the same tank system or the same secondary containment system, unless the procedures specified in the permit application are followed. The Permittee must document compliance with this condition and place that documentation into the operating record.

(b) The Permittee must not place hazardous waste in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless the requirements of Permit Condition D.11(a) are met.

D.12 Reserved

MODULE E - CORRECTIVE ACTION REQUIREMENTS

The goals of the Corrective Action program are to evaluate the nature and extent of releases of hazardous substances from facilities, and to develop and implement appropriate corrective measures to protect human health and the environment. On December 20, 1996, the United States Environmental Protection Agency issued a Resource Conservation and Recovery Act (RCRA)/Hazardous and Solid Waste Amendments (HSWA) permit to Spring Grove Resource Recovery, Inc. (SGRR), requiring Corrective Action activities at the facility. Upon issuance of the state renewal permit on September 30, 2002, Ohio EPA assumed authority for conducting regulatory oversight of all RCRA Corrective Action activities required at this facility, as detailed in Conditions E.5 through E.12.

SGRR submitted to U.S. EPA the Workplan for Phase 1 of the RCRA Corrective Action Facility Investigation (RFI) on June 30, 1999. The purpose of an RFI is to obtain information to fully characterize the nature, extent and rate of migration of releases of hazardous waste or constituents and to interpret this information to determine if interim corrective measures and/or a Corrective Measures Study may be necessary. According to the Workplan, the initial investigation focused on affirming suspected site conditions in a manner and using methods in accordance with U.S. EPA approved quality assurance measures. Based upon the results of the initial investigation, a Phase 2 investigation was initiated to further define the nature and extent of any releases to soil or groundwater.

The first step of the Phase 1 RFI conducted an ecological screening assessment, described in detail in Section 5.7 of the Workplan. The results of the screening assessment were submitted to U.S. EPA in November 2001. On April 29, 2002, U.S. EPA approved the Ecological Site Characterization Report. The action levels, found in Figure 1-1 of the Workplan, were based on the outcome of the ecological screening assessment.

Field work was conducted as detailed in the Phase 1 RFI Workplan in accordance with the approved schedule. Upon completion of field activities and receipt and evaluation of data, SGRR submitted the Phase I Final Report on February 18, 2003, which included both conclusions and recommendations regarding the need for further investigation. On January 7, 2004, Ohio EPA approved the Phase I Final Report. SGRR submitted a Phase 2 RFI Workplan for Ohio EPA review on March 26, 2004.

The Phase 2 Workplan included sections addressing detailed approaches to both human health and ecological risk assessment. The intent of the Phase 2 effort was to complete delineation of releases at the facility and to supply all information necessary to both characterize the site and determine the need for Corrective Measures. Upon approval of the Workplan by Ohio EPA on May 8, 2004, field work was conducted as detailed in the plan in accordance with the approved schedule. On August 29, 2005, SGRR submitted the RFI Phase II Final Report, with approval from Ohio EPA on December 9, 2005. Based upon Ohio EPA's review of the Phase I and II RFI activities, SGRR submitted a Supplemental Phase II RFI Workplan on May 12, 2006. The Supplemental Phase II Workplan required additional site characterization activities. Ohio EPA approved the Supplemental Phase II Workplan on July 6, 2006.

On January 31, 2008, SGRR submitted to Ohio EPA the RFI Final Report which included both conclusions and recommendations regarding the need for Corrective Measures. On June 19, 2008, EPA approved the RFI Final Report which determined releases had occurred that require remediation. In accordance with Condition E.8, SGRR submitted a Corrective Measures Study Workplan to Ohio EPA on February 27, 2009. Ohio EPA approved the CMS Workplan on March 11, 2009.

On November 9, 2010, SGRR submitted the CMS Report which summarized the results of the investigations for each remedy studied and included an evaluation of each remedial alternative. Ohio EPA approved the CMS Report on January 3, 2011. Based on an evaluation of the information contained in SGRR's CMS Report, Ohio EPA will initiate a permit modification to require implementation of the corrective measures authorized.

E.1 Corrective Action at the Facility
OAC Rules 3745-50-10 and 3745-54-101

In accordance with OAC Rule 3745-50-10, waste management unit means any discernible unit at which solid waste, hazardous waste, infectious waste (as those terms are defined in ORC Chapter 3734), construction and demolition debris (as defined in ORC Chapter 3714), industrial waste, or other waste (as those terms are defined in ORC Chapter 6111), has been placed at any time, irrespective of whether the unit was intended for the management of waste or hazardous waste. Such units include any area at a facility at which wastes have been routinely and systematically released. For the purpose of Corrective Action, facility is defined as all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA. The terms Interim Measure (IM), RCRA Facility Investigation (RFI), Corrective Measures Study (CMS) and Corrective Measure Implementation (CMI) are defined in U.S. EPA's Corrective Action Plan (CAP) (OSWER Directive 9902.3-2A, May 1994).

The Permittee must institute Corrective Action as necessary to protect human health and the environment for all releases of hazardous wastes or hazardous constituents from any waste management units (WMUs) at the Facility,

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regardless of the time at which waste was placed in such units.

E.2 Corrective Action Beyond the Facility Boundary
OAC Rule 3745-54-101

The Permittee must implement Corrective Action beyond the Facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of Ohio EPA that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the Facility boundary where off-site access is denied. On-site measures to address such releases will be addressed under the RFI, CMS, and CMI phases, as determined to be necessary on a case-by-case basis.

E.3 Identification of WMUs
OAC Rules 3745-50-44(D) and 3745-54-101

Please refer to Attachments II and III (excerpted from SGRR's RCRA RFI Final Report dated January 31, 2008) for descriptions of WMUs and a location map. The WMUs which have been identified do not preclude the identification of additional WMUs.

E.4 Reserved

E.5 RCRA Facility Investigation (RFI)
OAC Rule 3745-54-101

The Permittee must conduct an RFI to thoroughly evaluate the nature and extent of the release of hazardous wastes and hazardous constituents from all applicable WMUs identified in Permit Condition E.3 above and Permit Condition E.10. The major tasks and required submittal dates are shown below. The scope of work for each of the tasks is found in U.S. EPA's CAP.

(a) RFI Workplan

The Permittee submitted the RFI Workplan in July 2001.

(b) RFI Implementation

The Permittee implemented the RFI Workplan according to the terms and schedule in the approved RFI Workplan.

(c) RFI Final Report

The Permittee submitted the RFI Final Report on January 31, 2008. The RFI Final Report was approved by Ohio EPA on June 19, 2008.

E.6 Interim Measure (IM)

Based on the RFI Final Report the Permittee was not required to develop and implement an IM.

Due to a future release of hazardous waste or constituents to the environment, Ohio EPA may require (or the Permittee may propose) the development and implementation of an IM (this may include an IM Workplan) at any time during the life of the permit to mitigate or eliminate a threat to human health or the environment. The Permittee must implement the IM upon a time frame established by Ohio EPA.

E.7 Determination of No Further Action

(a) Permit Modification

Based on the results of the completed RFI and other relevant information, the Permittee did not submit a permit modification to terminate Corrective Actions.

(b) Periodic Monitoring

A determination of no further action shall not preclude Ohio EPA from requiring continued or periodic monitoring of air, soil, ground water, or surface water, if necessary to protect human health and the environment, when site-specific circumstances indicate that a potential or an actual release of hazardous waste or constituents exists.

(c) Further Investigations

A determination of no further action shall not preclude Ohio EPA from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates that a release or potential release from a WMU at the Facility may pose an unacceptable risk to human health or the environment. In such a case, Ohio EPA shall initiate a modification to the terms of the permit to rescind the determination made in accordance with Permit Condition E.7(a). Additionally, in the event Ohio EPA determines that there is insufficient information on which to base a determination, the Permittee, upon notification, is required to develop a Work Plan and upon Ohio EPA approval of that Work Plan, perform additional investigations as needed.

E.8 Corrective Measures Study (CMS)

Based on the results of the RFI and any other relevant information, Ohio EPA notified the Permittee on June 19, 2008, that corrective measures were necessary.

(a) CMS Workplan

The Permittee submitted the CMS Workplan on February 27, 2009. Ohio EPA approved the CMS Workplan on March 11, 2009.

(b) CMS Workplan Implementation

The Permittee implemented the CMS Workplan according to the terms and schedule in the approved CMS Workplan.

(c) CMS Final Report

The Permittee submitted the CMS Final Report on November 9, 2010. Ohio EPA approved the CMS Final Report on January 3, 2011.

E.9 Corrective Measures Implementation (CMI)

Based on the results of the CMS, the Permittee must implement one or more of the Corrective Measures authorized by Ohio EPA. Ohio EPA will authorize one or more of the Corrective Measures in the CMS, and will notify the Permittee in writing of the decision. The Corrective Measure selected for implementation must: (1) be protective of human health and the environment; (2) attain media cleanup standards; (3) control the source(s) of releases so as to reduce or eliminate further releases of hazardous waste(s) (including hazardous constituent[s]); and (4) comply with all applicable standards for management of wastes.

If two or more of the Corrective Measures studied meet the threshold criteria set out above, Ohio EPA will authorize the Corrective Measures Implementation by considering remedy selection factors including: (1) long-term reliability and effectiveness; (2) the degree to which the Corrective Measure will reduce the toxicity, mobility or volume of contamination; (3) the Corrective Measure's short-term effectiveness; (4) the Corrective Measure's implementability; and (5) the relative cost associated with the alternative.

(a) Permit Modification

Ohio EPA will initiate a permit modification, as provided by OAC Rule 3745-50-51 to require implementation of the corrective measure(s) authorized.

The Permittee must not implement the corrective measure until the permit is modified pursuant to OAC Rule 3745-50-51.

(b) Financial Assurance
OAC Rule 3745-54-101

Within 30 days after receiving approval of the CMI, the Permittee must provide financial assurance in the amount necessary to implement the corrective measure(s) as required by OAC Rule 3745-54-101 (B) and (C).

E.10 Newly Identified WMUs or Releases
OAC Rule 3745-54-101

(a) General Information

The Permittee must submit to Ohio EPA, within 30 days of discovery, the following information regarding any new WMU identified at the Facility by Ohio EPA or the Permittee:

(i) The location of the unit on the site topographic map;

(ii) Designation of the type of unit;

(iii) General dimensions and structural description (supply any available drawings);

(iv) When the unit was operated; and

(v) Specification of all waste(s) that have been managed at the unit.

(b) Release Information

The Permittee must submit to Ohio EPA, within 30 days of discovery, all available information pertaining to any release of hazardous waste(s) or hazardous constituent(s) from any new or existing WMU.

E.11 Corrective Action for Newly Identified WMUs and Releases
OAC Rule 3745-54-101

If Ohio EPA determines that an RFI is required for newly identified WMUs, the Permittee must submit a written RFI Workplan to Ohio EPA upon a time frame established in written notification by Ohio EPA in accordance with Permit Condition E.5. This determination will be made based on the information submitted in accordance with Permit Condition E.10.

Further investigations or corrective measures will be established by Ohio EPA.

The Permittee must make such submittal in accordance with time frames established by Ohio EPA.

E.12 Completion of Corrective Action
OAC Rule 3745-54-101

After completing Corrective Action as necessary to protect human health and the environment for all releases of hazardous wastes or hazardous constituents from any WMUs at the Facility, the Permittee shall submit a Corrective Measures Completion of Work (CMCW) Report. The CMCW Report shall document that Corrective Action construction is complete, cleanup objectives and standards have been met, and any releases of hazardous waste or constituents no longer pose an unacceptable risk to human health and the environment. The CMCW Report may be submitted for any part of the Facility for which corrective measures are complete, or for the entire Facility. The CMCW Report must be submitted as a request for permit modification pursuant to OAC Rule 3745-50-51.

E.13 Documents Requiring Professional Engineer Stamp
ORC Section 4733.01

Preparation of the following Corrective Action documents constitutes the "practice of engineering" as defined by ORC Section 4733.01:

Final Interim Measures Report

Corrective Measures Final Design

Corrective Measures Construction Completion Report

Corrective Measures Attainment of Groundwater Performance Standards Report

Corrective Measures Completion of Work Report

As such, the Permittee must ensure that these documents, as submitted to Ohio EPA, are stamped by a Professional Engineer licensed to practice in the State of Ohio.

End Conditions

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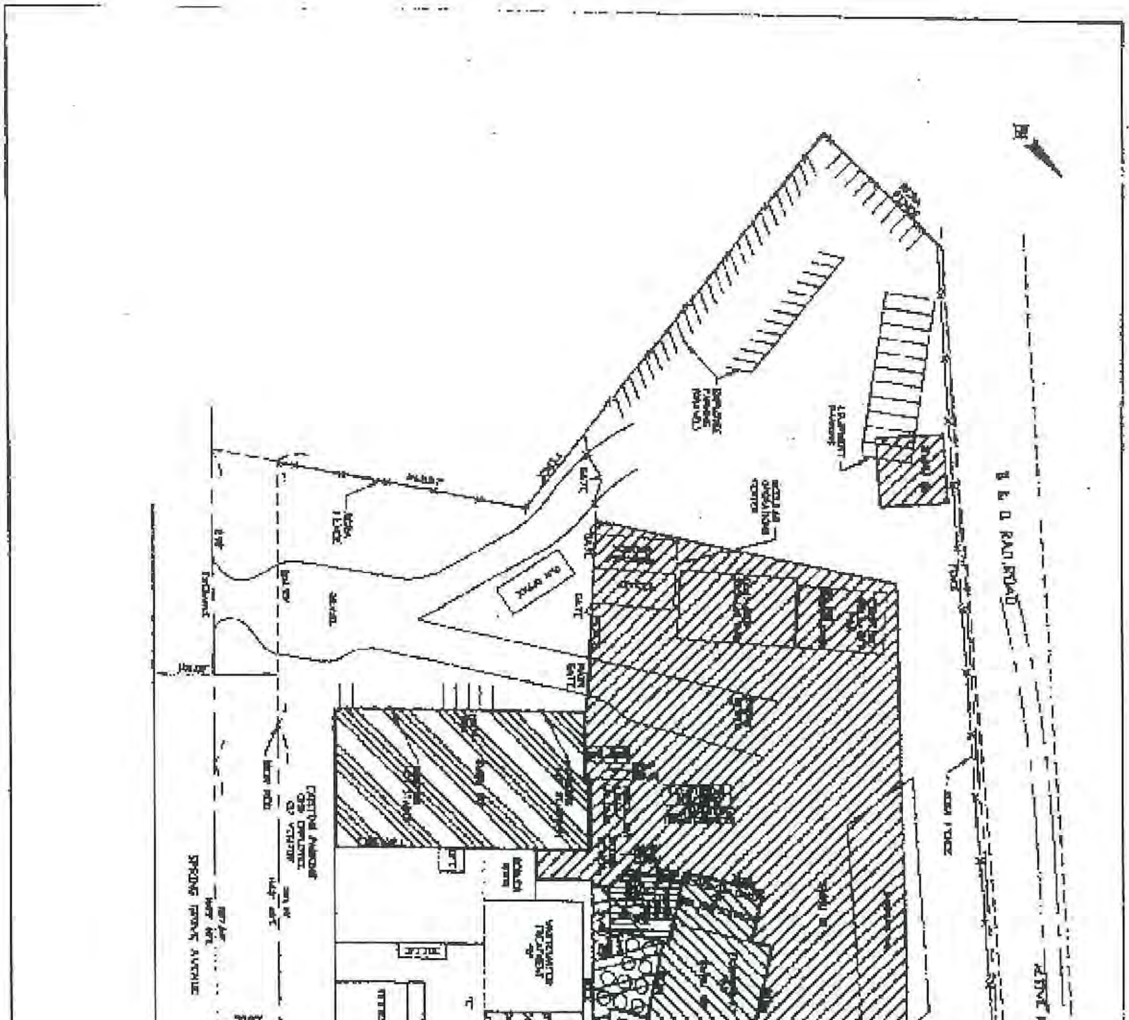
ATTACHMENT I

Hazardous Wastes for Storage, Transfer and Treatment

D001	F005	K025	K097	K174	P044	P104	U007	U059	U111	U161	U215	
D002	F006	K026	K098	K175	P045	P105	U008	U060	U112	U162	U216	
D003	F007	K027	K099	K176	P046	P106	U009	U061	U113	U163	U217	U387
D004	F008	K028	K100	K177	P047		U010	U062	U114	U164	U218	U389
D005	F009	K029	K101	K178	P048	P108	U011	U063	U115	U165	U219	
D006	F010	K030	K102	K181	P049	P109	U012	U064	U116	U166	U220	
D007	F011	K031	K103		P050	P110	U014	U066	U117	U167	U221	
D008	F012	K032	K104		P051	P111	U015	U067	U118	U168	U222	
D009	F019	K033	K105		P054	P112	U016	U068	U119	U169	U223	U394
D010	F020	K034	K106		P056	P113	U017	U069	U120	U170	U225	U395
D011	F021	K035	K107	P001	P057	P114	U018	U070	U121	U171	U226	
D012	F022	K036	K108	P002	P058	P115	U019	U071	U122	U172	U227	U404
D013	F023	K037	K109	P003	P059	P116	U020	U072	U123	U173	U228	U409
D014	F024	K038	K110	P004	P060	P118	U021	U073	U124	U174	U234	U410
D015	F025	K039	K111	P005	P062	P119	U022	U074	U125	U176	U235	U411
D016	F026	K040	K112	P006	P063	P120	U023	U075	U126	U177	U236	
D017	F027	K041	K113	P007	P064	P121	U024	U076	U127	U178	U237	
D018	F028	K042	K114	P008	P065	P122	U025	U077	U128	U179	U238	
D019	F032	K043	K115	P009	P066	P123	U026	U078	U129	U180	U239	
D020	F034	K044	K116	P010	P067	P127	U027	U079	U130	U181	U240	
D021	F035	K045	K117	P011	P068	P128	U028	U080	U131	U182	U243	
D022	F037	K046	K118	P012	P069	P185	U029	U081	U132	U183	U244	
D023	F038	K047	K123	P013	P070	P188	U030	U082	U133	U184	U246	
D024	F039	K048	K124	P014	P071	P189	U031	U083	U134	U185	U247	
D025		K049	K125	P015	P072	P190	U032	U084	U135	U186	U248	
D026		K050	K126	P016	P073	P191	U033	U085	U136	U187	U249	
D027	K001	K051	K131	P017	P074	P192	U034	U086	U137	U188	U271	
D028	K002	K052	K132	P018	P075	P194	U035	U087	U138	U189		
D029	K003	K060	K136	P020	P076	P196	U036	U088	U140	U190	U278	
D030	K004	K061	K141	P021	P077	P197	U037	U089	U141	U191	U279	
D031	K005	K062	K142	P022	P078	P198	U038	U090	U142	U192	U280	
D032	K006	K064	K143	P023	P081	P199	U039	U091	U143	U193	U328	
D033	K007	K065	K144	P024	P082	P201	U041	U092	U144	U194	U353	
D034	K008	K066	K145	P026	P084	P202	U042	U093	U145	U196	U359	
D035	K009	K069	K147	P027	P085	P203	U043	U094	U146	U197	U364	
D036	K010	K071	K148	P028	P087	P204	U044	U095	U147	U200		
D037	K011	K073	K149	P029	P088	P205	U045	U096	U148	U201		
D038	K013	K083	K150	P030	P089		U046	U097	U149	U202	U367	
D039	K014	K084	K151	P031	P092		U047	U098	U150	U203	U372	
D040	K015	K085	K156	P033	P093		U048	U099	U151	U204	U373	
D041	K016	K086	K157	P034	P094		U049	U101	U152	U205		
D042	K017	K087	K158	P036	P095		U050	U102	U153	U206		
D043	K018	K088	K159	P037	P096		U051	U103	U154	U207		
	K019	K090		P038	P097	U001	U052	U105	U155	U208		
	K020	K091	K161	P039	P098	U002	U053	U106	U156	U209		
F001	K021	K093	K169	P040	P099	U003	U055	U107	U157	U210		
F002	K022	K094	K170	P041	P101	U004	U056	U108	U158	U211		
F003	K023	K095	K171	P042	P102	U005	U057	U109	U159	U213		
F004	K024	K096	K172	P043	P103	U006	U058	U110	U160	U214		

ATTACHMENT III



Ohio EPA MAY 2 6 2013

Location	Date	Description
High Bay	March 7, 1991	Floor sweepings contaminated with low levels of PCBs (<0.012 ppm) created dust when they were being transferred to another container in the high bay. The entire area was swept and decontaminated with commercial degreaser in water.
—	February 14, 1991	Five bottles, each containing about 5 ounces of material, fell out of a drum (thought to contain only rags) while workers were emptying it. The material ignited almost immediately. The material was residue in one-pint bottles which originally held phosphorus/cryolite Getter solution (according to the manufacturer, the residue was red phosphorus). Other chemicals involved may have been methanol and sodium fluoaluminate. The fire was quickly extinguished. Combustion products suspected from the fire were carbon monoxide, carbon dioxide and phosphorus pentoxide.
High Bay	September 15, 1987	An OHIO EPA inspection found an oily spot approximately one foot in diameter in the high bay. The area was triple rinsed with #2 fuel oil.

PS:MMM CS: ES

835

2.3.6 SWMU # 37 Bone Yard

There have been no documented spills in the Bone Yard.

2.3.7 SWMU # 38 Maintenance Building

During September 2005, paint filters, which were profiled as non-hazardous by the generator, were stored on the concrete pad located next to the wastewater treatment office. After some of the paint filters had been processed and disposed, SGRR discovered the waste was incorrectly characterized and should have been RCRA-regulated as hazardous for chromium. There were no documented releases associated with the staging filters. In addition, SGRR has corrected the circumstances that led to the improper staging and disposal of the hazardous paint filters.

Location	Date	Description
Rear Yard	August, 5 1987	PCBs spilled when a PCB tanker driver pulled out over a berm without securing the dome lid. A trail of spilled material ran from the tanker pad around Building H in front of the docks. The truck was placed in the flat dock (between the covered dock and the sloped docks behind Building F). Some asphalt from along the path taken by the truck in rear yard was excavated and disposed of off-site. The spill was limited to areas covered with concrete and/or asphalt and did not reach soil. SGRR facility records indicate that soil and asphalt were sampled but there are no details recorded in the facility's files.

PB:MMM CB:RJS

2.3.5 Permit SWMU #5

As reported in the RFI Workplan, the following releases have been recorded at Permit SWMU #5.

Chart 7. Recorded Releases at SWMU #5

Location	Date	Description
High Bay	August 8, 2006	A fire started in one of the roll-offs that was located in the high bay. The source of the fire was believed to be a drum that contained hazardous waste solids with metals. The fire was contained to the roll-off.
High Bay	February 11, 2005	A fire started in one of the roll-offs that was located in the high bay. The Cincinnati fire department responded to the fire.
High Bay	July 12, 1998	One gallon of hazardous liquid containing perchloroethylene and xylene was released from a leaking drum onto the sealed concrete floor in high bay. Absorbents were used to immediately clean up the spill.
High Bay	July 7, 1998	A 55 gallon drum of styrene ruptured in a sealed concrete area in high bay. The sealed concrete in the vicinity of the release was cleaned with absorbent and water.
High Bay	April 22, 1998	Five gallons of non-RCRA water spilled in a sealed concrete area in the high bay when a container fell while being moved by a forklift. The spill was immediately cleaned up with absorbent.
High Bay	February 27, 1997	Less than one pound of non-RCRA liquid was released from a roll-off onto the high bay sealed concrete floor. The release was immediately cleaned with absorbent.

2.3.4 Permit SWMU #4

As reported in the RFI Workplan, the following releases have been recorded at Permit SWMU #4.

Chart 6. Recorded Releases at SWMU #4

Location	Date	Description
Tanker Pad	April 26, 2000	Less than one gallon of TSCA water was released while unloading a tanker on the sealed concrete tanker pad. The spill was immediately cleaned with soap and water and grid sampling per 761 was performed to confirm that the impacted area was clean.
Tanker Pad	November 2, 1999	10 gallons of TSCA water were released onto the sealed concrete pad while unloading a tanker on the tanker pad. The impacted area was immediately cleaned with soap and water, and grid sampling per 761 was conducted to confirm that the impacted area was clean.
Tanker Pad	October 29, 1999	Less than one gallon of hazardous liquid was released from a tanker on the tanker pad. The spill was completely contained within a sealed concrete area and was immediately cleaned be with absorbents.
Tanker Pad	May 6, 1999	25 gallons of formaldehyde bisulfite solution spilled onto the sealed concrete pad while loading a tanker on the tanker pad. The release was immediately cleaned up with absorbents.
Tanker Pad	July 23, 1997	Two quarts of non-RCRA Polyol were released onto the sealed concrete tanker pad. The concrete was immediately cleaned with absorbents. A second spill of less than ½ gallon of unknown material that was released from a hole in a drum onto the sealed concrete was also reported on July 23, 1997. The exact location of this spill was not identified; however, the spill was cleaned up immediately. It appears that these two reports may actually refer to the same release but this assumption could not be verified during a review of the facility's records.
Tanker Pad	February, 18 1991	Approximately 100 gallons of alphamethyl styrene wastes were released on the concrete pad when a cam lock on a hose came loose from a tanker. The spill was cleaned up with soap and water immediately.

Location	Date	Description
Tank Farm	March 17, 2000	Ten gallons of hazardous liquid were released from a defective valve in the tank farm. The spill was confined to a sealed concrete area and was immediately cleaned up with absorbents.
Tank Farm	March 26, 1999	150 gallons of TSCA water were released within a sealed concrete area while unloading a tanker in the tank farm. The area was immediately cleaned with soap and water, and grid sampling was conducted per 761 to confirm that the impacted area had been cleaned. No PCB were detected in any of the three samples that were submitted for analysis.
Tank Farm	March 24, 1999	50 gallons of TSCA water were released within a sealed concrete area while unloading a tanker in the tank farm. The area was immediately cleaned with soap and water, and grid sampling was conducted per 761 to confirm that the impacted area had been cleaned. No PCBs were detected in any of the 23 samples that were submitted for analysis.
Tank Farm	August 28, 1998	Three gallons of flammable liquid containing xylenes and toluene were released from a hose while loading a tanker at the tank farm. The spill was completed contained within a sealed concrete area and was immediately cleaned up with absorbents.
--	January 18, 1991	Contaminated soil excavated for the footers to the new roof for the flammables waste storage and processing pad (see Permit SWMU #2) was discovered. VOCs, including PCE, and SVOC were detected in the samples. The contaminated soil, which was stored in a roll-off box (RFA unit #10) was disposed of off-site.
Tank Farm Concrete Pad	1991	Soil was excavated from beneath the tank farm concrete pad in 1991 as part of the installation of the new tanks. Metals, VOCs, including dichlorobenzene, ethylbenzene, PCE, toluene and xylenes, and an SVOC, naphthalene, were detected in samples of the excavated soil.

PB:MMM CB:PJS

Location	Date	Description
Concrete Pad, Building H	November 24, 1988	At 10:50 pm, the local fire department received a report from the SGRR facility that a vapor cloud was being emitted from a fire in a roll-off box. The fire was from 40,000 lbs of still bottom residue from the production of the gasoline additive MMT (methyl-cyclo-penta-dienyl-manganese tricarbonyl) that the SGRR facility had attempted to solidify. Ohio EPA emergency response personnel were called in to assess the situation at 12:10 A.M. on November 25, 1988. No other release information is available.
Concrete Pad, Building H	July 30, 1984	A drum of resins pressurized itself on-site. The bung of the drum blew out and the reaction of monomer resins caused the resin to be sprayed from Building H to the dock area. Neither the clean up method nor the quantity of constituents released was documented.

PB:MMM CB:RJS
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2.3.3 Permit SWMU #3

As reported in the RFI Workplan, the following releases have been recorded at Permit SWMU #3.

Chart 5. Recorded Releases at SWMU #3

Location	Date	Description
Tank Farm	December 16, 2004	A reaction in the tank farm. The reaction involved 70 drums of waste profiled as CH9412. The fire department responded. The area was cleaned with absorbents.
Tank Farm	June 19, 2000	600 gallons of TSCA oil from the wastewater treatment system were released within a sealed concrete area in the tank farm. The impacted area was immediately cleaned with soap and water. Grid sampling was performed per 761 to confirm that the impacted area was clean. Aroclor 1260 was detected in only one of the 36 samples that were analyzed for PCB. Aroclor 1260 was detected at 5.7 ug/100 cm2 in PCB wipe sample #99, which is below the 100 ug/cm2 action level.
Tank 7	May 2, 2000	Fifty gallons of hazardous liquid were released from Tank 7 onto the sealed concrete pad. The impacted area was immediately cleaned up with a water wash.
Tank Farm	April 18, 2000	100 gallons of hazardous liquid were released from the wastewater treatment tank in the tank farm. The spill was completely contained by the sealed concrete pad and was immediately cleaned up with a water wash.

Location	Date	Description
Flammables Waste Storage and Processing Pad	March 3, 1998	Ten gallons of flammable liquid spilled onto the sealed concrete at the pump station on the flammables pad. The spill was immediately cleaned with absorbent.
Fuels Blending Room	June 6, 1997	Approximately one quart of flammable liquid was released from a pump onto the sealed concrete floor in the fuels blending room (east of SWMU #2) The release was immediately cleaned with absorbent.
Concrete Pad, Building H	1994	Soil excavated from a location in front of Building H was submitted for laboratory analysis in 1994. The soil sample contained 1,2-dichloroethene, several metals, including lead, cadmium, chromium and mercury, and several SVOCs.
Flammable Waste Storage and Processing Pad	1991	Soil excavated for the footers to a new roof was submitted for laboratory analysis in 1991. Several VOCs, including tetrachloroethene, trichloroethene, ethylbenzene, toluene, and xylenes; and SVOCs were detected in samples of the excavated soil. The contaminated soil, which was stored in a roll-off box (RFA unit #10) was ultimately disposed of off-site (see Permit SWMU #1).
Solidification Bin	November 11, 1989	F006 liquid splashed out of the solidification bin onto the concrete pad. Ground clay and water were used to clean up the spill.
Flammable Waste Storage and Processing Pad	May 10, 1989	Less than one pound of PCB material was spilled from a drum onto the pad when it fell from the drum grabber. Ground clay was placed over the spilled area, and the pad was scrubbed with soapy water and then wiped with absorbent pads containing trichloroethane.
Flammable Waste Storage and Processing Pad	April 20, 1989	Two gallons of F006 sludge leaked out onto the pad when the sludge was being unloaded from a roll-off box into a container in Building H. No other information is available.

Location	Date	Description
Storm Sewer	--	No evidence of past releases was identified; however, some liquid in the collection sump had an oil sheen.

PB:MMM CB:

2.3.2 Permit SWMU #2

As reported in the RFI Workplan, the following releases have been recorded at Permit SWMU #2.

Chart 4. Recorded Releases at SWMU #2

Location	Date	Description
Fuels Blending Room	December 1, 1999	Approximately 7 to 100 gallons of flammable liquid were released within a sealed concrete area when a pump failed in the fuels blending room (east of SWMU #2). The area was immediately cleaned up with absorbents and the floor was washed with water.
Concrete Pad, Building H	August 12, 1998	20 gallons of non-RCRA oil and water were released from a roll-off onto the sealed concrete floor in Building H. The spill was immediately cleaned up with absorbent.
Concrete Pad, Building H	August 4, 1998	Five gallons of non-RCRA paint and resins were released from a drum in Building H. The spilled was contained within a sealed concrete area and was immediately cleaned up with absorbents.
Flammables Waste Storage and Processing Pad	April 21, 1998	20 gallons of non-RCRA oil spilled onto the sealed concrete floor when a drum was pierced on the flammables pad. The spill was immediately cleaned up with absorbent. A second release occurred in the sealed concrete area of the flammables pad when a drum fell while being moved with a forklift. The spill consisted of 15 gallons on non-RCRA oil-based ink, which was immediately cleaned up with absorbent.
Flammables Waste Storage and Processing Pad	April 8, 1998	One gallon of flammable liquid containing xylene and methylene chloride spilled from a tanker onto the flammables pad. The spill was contained by the sealed concrete floor and was immediately cleaned up with soap and water.
Flammables Waste Storage and Processing Pad	March 30, 1998	Ten gallons of flammable liquid spilled onto the sealed concrete flammables pad in the vicinity of the pump station. The liquid was immediately cleaned up with absorbent.

Location	Date	Description
Truck Bay	May 22, 1998	A drum containing non-RCRA wastes was pierced by a forklift on the 4 bay dock. The spill was immediately cleaned up with absorbent.
--	April 21, 1998	One quart of non-RCRA paint leaked from a container on a trailer parked on the existing sealed concrete pad. The spill was immediately cleaned up with absorbent.
Truck Bay and Rear Yard	February 22, 1991	A small release (less that one quart of residue of unknown composition) occurred on as a pump was being moved from the truck loading/unloading pad, around Building H and in through Building F via the Truck Bay. Ground clay, penetone, and acid rinse were applied to the spilled residue.
Truck Bay	January 29, 1989	A drum containing PCBs, oil and solvents ruptured; the material was absorbed and the area was wiped clean with absorbent pads.
Rear Yard	August 5, 1987	PCBs spilled when a PCB tanker driver pulled out over a berm without securing the dome lid. A trail of spilled material ran from the tanker pad around Building H in front of the docks. The truck was placed in the flat dock (between the covered dock and the sloped docks behind Building F). Some asphalt from along the path taken by the truck in the rear yard was excavated and disposed of off-site. The spill was limited to areas covered with concrete and/or asphalt and did not reach soil. SGRR facility records indicate that soil and asphalt samples were collected, but there are no details of these samples in the facility's files.
Truck Bay	July 8, 1986	Based on the detection of PCBs in samples collected from the bottom of the sumps, the sumps, concrete and piping were excavated and analyzed for PCBs. The dock areas were found not to be water tight; therefore, soils were excavated and cleaned until PCBs <10 ppm. The area was then backfilled and covered over with concrete.
Truck Bay	--	Approximately 2 gallons of PCB oil leaked onto the truck-bay dock floor after a drum was punctured while being unloaded. The spill was cleaned up using ground clay and Chemsolve rinse.

wastewater, wastes from on-site sumps, low-level organically contaminated leachate water from the closed CECOS landfill in Williamsburg, Ohio, and small drummed volumes of acids and bases for neutralization prior to discharge to MSD are managed in this unit.

2.2.8.2 Building F

Building F is completely enclosed and roofed, consisting of 15,000 square feet and a maximum inventory of 33,000 gallons. Acids (corrosives) are stored in a bermed location along the north wall in 55-gallon drums. PCB and non-hazardous wastes are stored in containers in a diked area on the east wall. Various wastes are also stored throughout the remainder of the building as part of the lab pack operation. The building includes the following RFA units:

#5: Sample Storage Lockers : This unit consists of the sample storage lockers for flammable waste, and includes two metal storage lockers containing flammable and U.S. Department of Transportation (DOT)-compatible waste samples located between the office and Building F. These lockers are vented to the outside. The unit has a start-up date of 1985.

#6: Analysis Station: The analysis station for flammable waste includes a work table and a hood which vents to the outside of the SGRR facility. It is located between the office and Building F, next to the sample storage lockers. This unit has a start-up date of 1986-1987 and is used to quality control (QC) inbound wastes for analysis of representative samples.

#7 Trash Compactor: This unit is a small (2-foot high) trash compactor located immediately inside the doorway of Building F from Building E. It has a start-up date of 1987. The compactor is used for personnel safety equipment (i.e., gloves, Tyvek). This waste is then incinerated or landfilled.

#8 Concrete Pad: This unit is a concrete pad on which PCB wastes, non-regulated wastes, corrosives, and flammable wastes are stored.

2.3 SWMU REPORTED RELEASES

The following includes the releases that were reported in the RFI Workplan and includes the releases and findings and orders that occurred after the RFI Workplan was revised in December 2001.

2.3.1 Permit SWMU #1

As reported in the RFI Workplan, the following releases have been recorded at Permit SWMU #1.

Chart 3. Recorded Releases at SWMU #1

Location	Date	Description
Truck Bay	June 1, 2000	25 gallons of flammable liquid were released from a pierced drum while unloading at the 4 bay dock. The spill was completely contained within a sealed concrete area and was immediately cleaned up with a water wash.
Truck Bay	December 21, 1999	25 gallons of non-RCRA coolant were released when a drum was pierced while loading at the highbay dock. The spill was completely contained within a sealed concrete area and was immediately cleaned up with absorbent.

with plastic sheeting within the dikes. The dikes and the vapor collection system (RFA unit #25) act as release controls for this unit. The concrete was poured as a single unit. There were visible cracks in the concrete that had been individually sealed.

#25: Vapor Collection System: This area consists of 1) a vapor collection system which runs along the west, south and half of the east walls of the high bay, and has three suction/blower units that formerly vented to the atmosphere. Each vent had activated carbon acting as a filter; and 2) a fan located in the roof above the container consolidation (there is not a release control system on the fan). This unit managed any vapors from the container consolidation system or spills/leaks of wastes from processes in Building B (RFA unit #24). The system has since undergone TSCA/PCB closure. The decontaminated equipment remains on-site, but is not in use.

#26: Roll-off Box, High Bay: This unit is an uncovered roll-off box located in the northwest corner of high bay. It holds crushed drums that previously contained paint and other semi-solid hazardous waste.

#27: Drum Crusher: This unit is a large drum crusher located in the high bay that can crush up to six drums at a time. Before the drums are placed in the crusher they are "scraped clean" in the area in which they are processed. The unit manages any residual hazardous waste from the crushing of drums, including vapors.

#29: Freon Recovery System: This area consists of two freon distillation units and a venting system surrounded by a diked concrete pad (RFA unit #24). This unit is located in the northeast corner of the high bay. The unit ceased operations in 1989 after one month of operation. The system has undergone TSCA/PCB closure. The still pots have been removed from the SGRR facility and disposed. The decontaminated base remains in place.

2.2.6 Permit SWMU #37 Bone Yard

On July 31, 2004, SGRR Submitted a Class I modification to its operating permit to document a newly identified SWMU. A gravel staging area identified as SWMU #37 Bone Yard had been used to stage outgoing RCRA and non-RCRA materials prior to shipment. Based upon the limited activity in the SWMU and no documented spill history, no further investigation of the SWMU was required.

2.2.7 Permit SWMU #38 Maintenance Building

On April 5, 2006, SGRR Submitted a Class I modification to its operating permit to document a newly identified SWMU. A concrete pad located in the northern portion of the Building E had been used for maintenance and to stage non-hazardous materials prior to shipment. SWMU #37 is located in the northwestern portion of the site. Based upon the limited activity in the SWMU and no documented spill history, no further investigation of the SWMU was required.

2.2.8 Other Areas – Wastewater Treatment System and Building F

2.2.8.1 Wastewater Treatment System

The wastewater treatment system (RFA unit # 33) is located in Building D and contains six carbon-steel tanks with phenoxy coating inside and painted outside. They are housed in a 40 x 50 foot, diked, raised concrete area located in Building D. The system as a whole has a maximum treatment capacity of 250 gallons per minute (GPM) and can hold a volume of 17,000 gallons. The pipes, fittings, and valves are inspected for leaks, corrosion and deterioration on a weekly basis, and the levels in the tanks are inspected daily. The tanks are equipped with over pressurization alarms. The system discharges to the MSD via a sewer line. The discharge is sampled every 10,000 gallons and a report is submitted monthly to MSD. This unit began operating in 1981; however, the current design was installed in 1985. Industrial bulk and ship off-site via tanker truck. Release controls for this unit include the tank farm secondary containment (RFA unit #15), the carbon canisters for vapor control, and the capacity alarms on the tanks themselves. The integrity of the secondary containment appeared to be good. The two 8,000 gallon tanks had a start-up date of approximately April 1987, but were replaced by two 7,000 gallon carbon steel tanks (Tanks 5 and 6) which were installed in 2000. The four 15,000 gallon tanks (Tank 7 through 10) were installed around 1992.

#14: Former PCB-Waste Storage Tanks and Piping: This area consists of four vented 10,000 gallon pedestal design, cylindrical, carbon steel tanks (Tanks 1 through 4). Two of the tanks contained PCB-contaminated oil from the decommissioning of transformers; another contained spent trichlorofluoroethane (TCTF, aka freon) used as a flush solvent in the transformer treatment process; and another contained distilled TCTF from the flush-solvent recovery process. Two sets of double-walled, above-ground pipes run between the tanks and the High Bay decommissioning area, and between the tanks and the tanker-truck loading/unloading pad (RFA unit #16) for loading/unloading of the PCB waste oil. The tanks have a start-up date of around 1982 or 1983; however, the piping to the high bay was not installed until 1986/1987. The use of these tanks for PCB-waste storage was discontinued in approximately 1989 or 1990. The tanks have been closed under the Toxic Substance Control Act (TSCA), and are currently used to hold wastewater.

#15: Tank Farm Secondary Containment: This area is located to the southwest of the flammable-waste storage and processing pad (RFA unit #12, see Permit SWMU #2). The unit consists of an excavated concrete pad that was 6-inch thick and approximately four feet below the flammable waste storage and processing pad (SWMU #2). It is contained by a reinforced concrete wall four feet high and eight inches wide. The concrete is coated with a protective epoxy that is compatible with the wastes stored in the tanks. This unit has a containment volume of approximately 130,000 gallons. A 15 gallon blind sump, located in the middle of the unit, is used to collect spills and run-on. The water in the blind sump is pumped to the wastewater treatment plant on a daily basis using a portable sump pump. The unit contains the flammable waste blending tanks and the wastewater tanks. This unit has a start-up date of 1983. Although the integrity of the sump could not be determined during the RFA, the integrity of the unit as a whole appeared to be good. There were no visible cracks in the concrete.

2.2.4 Permit SWMU #4

Permit SWMU #4 consists of a tanker loading/unloading pad and associated blind sump, which was originally labeled SWMU #16 in the RFA. The 60 feet by 40 feet diked reinforced concrete pad was constructed in 1982. A blind sump collects rainwater and/or any spills or leaks during loading/unloading of tanker trucks containing TSCA or RCRA wastes. The area is used primarily for pumping out the contents of tanker trucks but is also permitted to store containers. The slope and diking of the concrete pad toward the sump act as release controls. The concrete was not poured as a single unit but it has been sealed with a chemical-resistant coating.

2.2.5 Permit SWMU #5

Permit SWMU #5 includes current or former waste management areas within the high bay building in the central portion of the SGRR facility. The following RFA units are incorporated in Permit SWMU #5:

#24: Concrete Pad, High Bay: This unit is a concrete pad on which PCB drums, empty drums, and flammable solids are stored in various diked areas throughout the building. A drum crusher, used for crushing RCRA-empty containers, (RFA unit #27) and a Roll-off Box (RFA unit #26) are located on the pad. The high bay pad was used for the decommissioning of PCB transformers which included the freon recovery system (RFA unit #29). The SGRR facility also has its container consolidation system on the pad. This system is contained within an area marked by moveable dikes and the concrete pad is covered

#36: Rear Yard: This location is the partially graveled, black-topped, and concrete-paved outside area traveled by vehicles bringing waste to the facility. The Roll-off Box (RFA unit #10) containing contaminated debris from the soil excavation and various other waste containers have been located in the rear yard at various times.

2.2.2 Permit SWMU #2

Permit SWMU #2 consists of one flammable-waste storage and processing pad and adjacent solidification bin and concrete pad within Building H. The RFA units incorporated into Permit SWMU #2 are described as follows:

#12 The Flammable Waste Storage and Processing Pad: This unit is located to the west of Building F. This reinforced concrete pad is approximately 80 feet. by 80 feet., diked, six inches thick, and sloped towards its center. The dikes are made of 6 inch high by 6 inch thick concrete. A blind sump is located near the middle of the pad. The diked pad holds up to 26,400 gallons of liquids. A roof was constructed in 1990 to protect the pad from rainfall. This unit stores approximately 1,000 drums of solid and liquid flammable wastes until they are blended for off-site incineration. In the southeast corner of the pad is a pumping station to pump the drummed contents into the flammable waste blending tanks (RFA unit #13). The unit manages any spills/leaks from the loading/unloading storage and processing of flammable wastes and also from the pumping of fuel from drums into the flammable waste blending tanks (RFA unit #13). The dike and sump act as release controls. The concrete pad was not poured as a single unit, nor was it sealed with a chemical-resistant coating. There was no evidence of cracking. There are no drains associated with this unit.

#19 Solidification Bin, Building H: This is an 800-gallon open mixing bin used for waste solidification and dewatering of spent carbon from the wastewater treatment system (RFA unit #33). The unit formerly managed F006 waste and currently manages F039 waste. The bin itself, as well as the underlying diked concrete pad and the sump (RFA unit #20) act as release controls. The startup date for this unit was 1989.

#20: Concrete Pad, Building H: This unit is a 70 feet. by 70 feet. reinforced diked concrete pad with a sump. The unit is under a roof and enclosed on three sides. It is located to the west of the flammable waste storage and processing pad (RFA unit #12). This unit has been used primarily to support waste solidification. Additional activities have included drum crushing, drum storage for up to 200 drums, and carbon dewatering. The unit is currently being used to store containers of various wastes. This unit manages any spills/leaks of F006 waste sludge as well as various RCRA wastes being stored and spent carbon.

2.2.3 Permit SWMU #3

Permit SWMU #3 consists of above-ground storage tanks located immediately southeast of the Permit SWMU #2 flammables processing pad. These include six flammable-waste blending tanks and associated carbon adsorption system and piping, four PCB-waste storage tanks and associated piping, and a tank farm secondary containment system. The RFA units incorporated into Permit SWMU #3 are described as follows:

#13: Flammable Waste Blending Tanks, Carbon Adsorption System and Piping: This unit includes two vented, 8,000 gallon and four 15,000 gallon, cone-bottom tanks constructed of carbon steel located in the northeast corner of the tank farm. The tanks contain liquid fuels and RCRA wastes destined for incineration. They have a carbon adsorption system consisting of carbon canisters for vapor control. The tanks are part of a pumping system, located on the flammable waste storage and processing pad (RFA unit #12; see Permit SWMU #2). This unit was designed primarily to consolidate drummed quantities into

#10: Roll-Off Box, Building F Truck Bay: This unit was a tarp-covered roll-off box formerly located in the middle truck bay outside Building F. The roll-off box is no longer at the SGRR facility and was not part of Clean Harbors' purchase of the facility. It contained methylene chloride and tetrachloroethene (PCE)-contaminated soil and concrete excavated in October 1990 during installation of roof footers for the Flammable-Waste Storage and Processing Pad. See RFA unit #12 for additional information.

#11: Tank Trailer, Building F Truck Bay: This unit was located in the northeast enclosed truck bay outside Building F and was not part of Clean Harbors' purchase. It contained PCB waste at >50 ppm and therefore, fell under Land Disposal Restrictions. It was being held in storage until approval/acceptance of the waste was granted by an off-site commercial treatment, storage, and disposal facility (TSDF). Subsequent to the RFA, it was removed to Rollins Incinerator in Deer Park, Texas.

#17: Storm Sewer: This unit is located to the south of the tank-truck loading/unloading pad (RFA unit #16) at the bottom of a concrete ramp and contains an overflow pipe that goes to the Cincinnati Metropolitan Sewer District (MSD) combined sewer. This unit is designed to manage any rainwater that may escape the release controls of the tank truck unloading pad. Integrity as a whole appeared to be good; however, at the time of the RFA, there were cracks in the surrounding concrete which were not sealed with a chemical-resistant coating.

#18: Solid Waste BFI Trash Dumpster containing solid waste: The solid waste dumpster is still in use, but its location has been changed. It is usually located near Building H, but may be placed anywhere in the yard depending on space availability. The storm sewer (RFA unit #17) to the northeast and the diked concrete pad (that is sloped toward the sewer) under and around the unit act as release controls for this unit.

#21: Scrap Yard for former CECOS Environmental Services (CES): This was an area of gravel and weeds in the west corner of the facility that at the time of the RFA contained various tanks, barrels, and other pieces of scrap metal. These scraps were left from various off-site clean-up/remediation projects done by CES for customers and decontaminated prior to being brought on-site. The scrap identified during the RFA has since been shipped off-site. A diked concrete pad was poured in this area in 1993, and included a blind sump. The area is now used as a 90-day generator accumulation area.

#22: Concrete Pad, Building L: This is a concrete pad that was located inside former Building L. This building was used mostly for supply/equipment storage. During the RFA, it was noted that there were several boxes of solid waste (i.e., Tyvek, construction lumber, trash) located in the south corner of the building. According to facility personnel, none of the material was contaminated with hazardous waste or hazardous constituents. There are no sumps or drains associated with this unit. The integrity as a whole appeared to be good during the Visual Site Inspection (VSI) (EPA, 1991), although the concrete was not poured as a single unit, was cracked, and was not sealed with a chemical-resistant coating. The building was removed; however, the concrete pad remains.

#23: Truck Bay at High Bay: This is a concrete ramp sloped towards a sump at the base of the concrete dock attached to the High Bay Building. Although the edge of the dock dropping down to the sump is not diked, the sides of the dock effectively prevent a spill from spreading outside that area. The truck bay, where two trucks may park simultaneously, is used to load/unload transformers, drums of non-hazardous waste, and 5-gallon pails of solid fuels (i.e., paint waste). The concrete is not chemical-resistant sealed and was not poured as a single unit. There were no visible cracks in the concrete.

#35: Backhoe: This mobile equipment was used for the solidification process (mixing) in Building H. It was located behind the electrical building in August 1991, but is no longer at this location.

2.2 SWMU DESCRIPTIONS

Based upon the findings of the RFA (U.S. EPA, 1991), five SWMUs were formally identified in the 1996 RCRA Part B Permit. The five Permit SWMUs identified in the 1996 permit were each composed of multiple units that ranged from #1 to #36. Since the 1996, two additional SWMUs, which were identified as #37 (the bone yard) and #38 (the maintenance building), have been added to the RCRA Part B Permit. For ease of comparison with the existing RFA discussions and maps, the original RFA unit numbers are shown on Figure 2-3 and are referenced within each Permit SWMU description provided below.

Brief descriptions of other areas, i.e., wastewater treatment system and Building F, that were not included in the Part B permit, but were voluntarily investigated further during the RFI, are also included in this section.

2.2.1 Permit SWMU #1

Permit SWMU #1 encompasses much of the northern portion of the SGRR facility, and includes truck bays and associated sumps and storm sewers, a building used for storage of supplies and equipment, the facility's rear yard, and a scrap yard. Several portable units (a roll-off box, a tank trailer, a trash dumpster, and a backhoe) that were present at the time of the RFA and are referenced in SWMU #1 no longer exist within this area. The various RFA units incorporated into Permit SWMU #1 are described as follows:

<u>#9: Truck Bay, Associated Sumps, and Storm Sewer, Building E:</u> This unit consists of a concrete dock with three diked concrete truck bays, 3 associated sumps and 1 storm sewer. The bay on the northeast end of the dock is enclosed and the concrete slopes toward a sump. The middle bay has a sump at the top of the slope and a storm sewer at the bottom. The storm sewer is actually a sump with an overflow pipe that leads directly to the sewer system and typically manages rainwater run-off. The northwest bay also slopes toward a sump. At the time of the RFA, the concrete was not sealed with a chemical-resistant coating nor was it poured as a single unit. The joint seams were not sealed and showed signs of wear. There were cracks in the concrete which have been sealed. Integrity of the sumps and storm sewer could not be determined during the RFA.

Appendix 2

Spring Grove Resource Recovery, Inc.
Notification of PCB Activity
EPA Form 7710-53(12-89)
July 30, 1992

Southdown Environmental Systems

Spring Grove Resource Recovery Facility

July 30, 1992

Chemical Regulations Branch
Office of Toxic Substances TS-798
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Please find enclosed a Notification of PCB Activity for Spring Grove Resource Recovery Inc., OHD 000 816 629. This facility previously filed this Notification in January of 1990 under the name of CECOS International Inc. Since that time the facility has been purchased and existing permits transferred to Spring Grove Resource Recovery Inc. At the request of Region 5 a new Notification is being submitted to account for the transfer.

Should you have any questions regarding this submission I can be reached at (513) 681-5738.

Sincerely,

Eric Anderson

Eric Anderson
Environmental Manager

cc: Michael Crisenbery
Phil Sadowski
Tony Martig - USEPA Region 5
TSCA File

EPA

United States Environmental Protection Agency
Washington, DC 20460

Notification of PCB Activity

Form Approved
OMB No. xxxx-xxxx
Approval expires xx-xx-xx

No Information on this form may be claimed as TSCA CBI.

Return To:	For Official Use Only
Chemical Regulation Branch Office of Toxic Substances TS-798 U.S. Environmental Protection Agency 401 M St., SW Washington, DC 20460 FAX NUMBER: 1-(202)260-1724	TSCA PCB ID Number

I. Name of Facility	Name of Owner of Facility	II. EPA Identification Number (if already assigned under RCRA)
Spring Grove Resource Recovery	Spring Grove Resource Recovery	OHD 000 816 629

III. Facility Mailing Address (Street or PO Box, City, State, & ZIP Code)	IV. Location of Facility (No. & Street, City, State, & ZIP Code)
4879 Spring Grove Avenue Cincinnati, Ohio 45232	4879 Spring Grove Avenue Cincinnati, Ohio 45232

V. Installation Contact (Name and Title)	VI. Type of PCB Activity (Mark 'X' in appropriate box. See instructions.)
Eric Anderson Environmental Manager	XX A. Generator with onsite storage facility XX B. Storer (Commercial)
Telephone Number (Area Code and Number) (513) 681-5738	XX C. Transporter [ ] D. Permitted Disposer

VII. Certification

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Signature	Name and Official Title (Type or print)	Date Signed
Michael Crisenbery	Michael Crisenbery Facility Manager	7/30/92

Paperwork Reduction Act Notice

The public reporting burden for this collection of information is estimated to average 1.5 hours per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information to the Chief, Information Policy Branch (PM-223), US Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked ATTENTION: Desk Officer for EPA.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

RECEIVED
MAR 07 1990
CECOS INTERNATIONAL

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

(TS-798)
February 26, 1990
0284

SNOWDEN JACK
CECOS INTL INC
4879 SPRING GROVE AVE
CINCINNATI, OH 45232

Subject: Notification of PCB Activity

Thank you for filing the **Notification of PCB Activity** form dated **January 19, 1990** for the facility location listed below:

CECOS INTL INC
4879 SPRING GROVE AVE
CINCINNATI, OH 45232

Please be advised that the EPA Identification Number for the above facility is correctly stated on your form as **OHD000816629.**

Sincerely,

Barbara Ostrow

Barbara Ostrow
Acting Chief
Chemical Regulation Branch

EPA

United States Environmental Protection Agency
Washington, DC 20460

Notification of PCB Activity

Form Approved
OMB No. 2070-0112
Approval expires 12-31-92

No Information on this form may be claimed as TSCA CBI.

Return To:

Chemical Regulation Branch
Office of Toxic Substances TS-798
U.S. Environmental Protection Agency
401 M St., SW
Washington, DC 20460

For Official Use Only

TSCA PCB ID Number

Copy

RECEIVED
FEB 15 1990
CECOS INTERNATIONA

I. Name of Facility	Name of Owner of Facility	II. EPA Identification Number (if already assigned under RCRA)
CECOS International, Inc.	Browning-Ferris Industries	OHD 000816629

III. Facility Mailing Address (Street or PO Box, City, State, & ZIP Code)	IV. Location of Facility (No. & Street, City, State, & ZIP Code)
4879 Spring Grove Avenue Cincinnati, Ohio 45232	4879 Spring Grove Avenue Cincinnati, Ohio 45232

V. Installation Contact (Name and Title)

Jack Snowden, Permits Manager

Telephone Number (Area Code and Number)

(513) 681-5738

VI. Type of PCB Activity (Mark "X" in appropriate box. See instructions.)

- [X] A. Generator with onsite storage facility
- [X] B. Storer (Commercial)
- [ ] C. Transporter
- [ ] D. Permitted Disposer

VII. Certification

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Signature	Name and Official Title (Type or print)	Date Signed
	Tim Henry, District Manager	1-19-90

Paperwork Reduction Act Notice

The public reporting burden for this collection of information is estimated to average 1.5 hours per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information to the Chief, Information Policy Branch (PM-223), US Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked ATTENTION: Desk Officer for EPA.

EPA Form 7710-53(12-89)

000284

RECEIVED
1-31-90

Appendix 3

Spring Grove Resource Recovery, Inc.
Facility Location, Area Topography,
Floodplain and Zoning/Land Use Information Maps

FIGURE B.1
FACILITY LOCATION

0 1 MILE
APPROXIMATE SCALE
1:63,000

SOURCE:
Color-Art, 1988

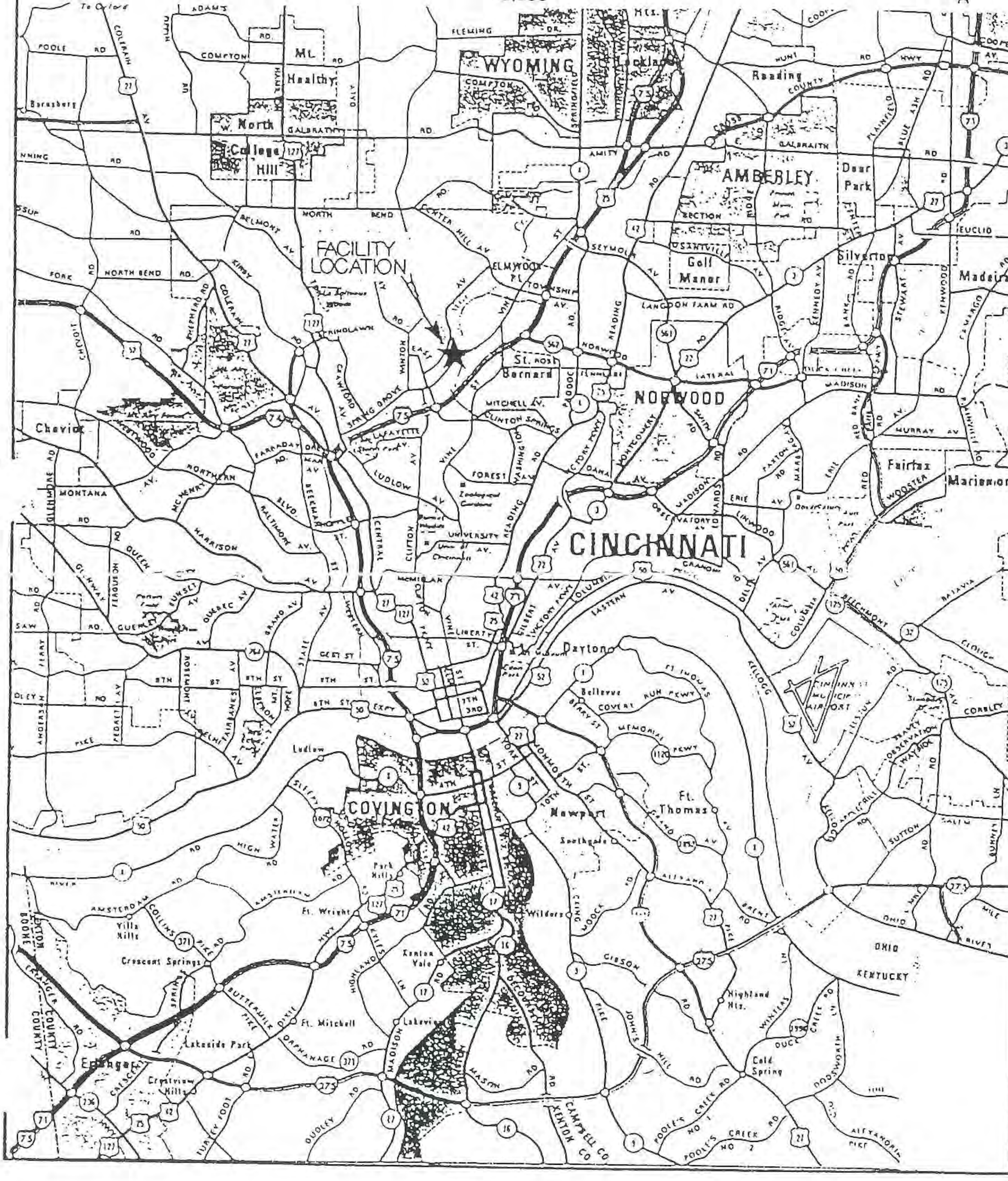
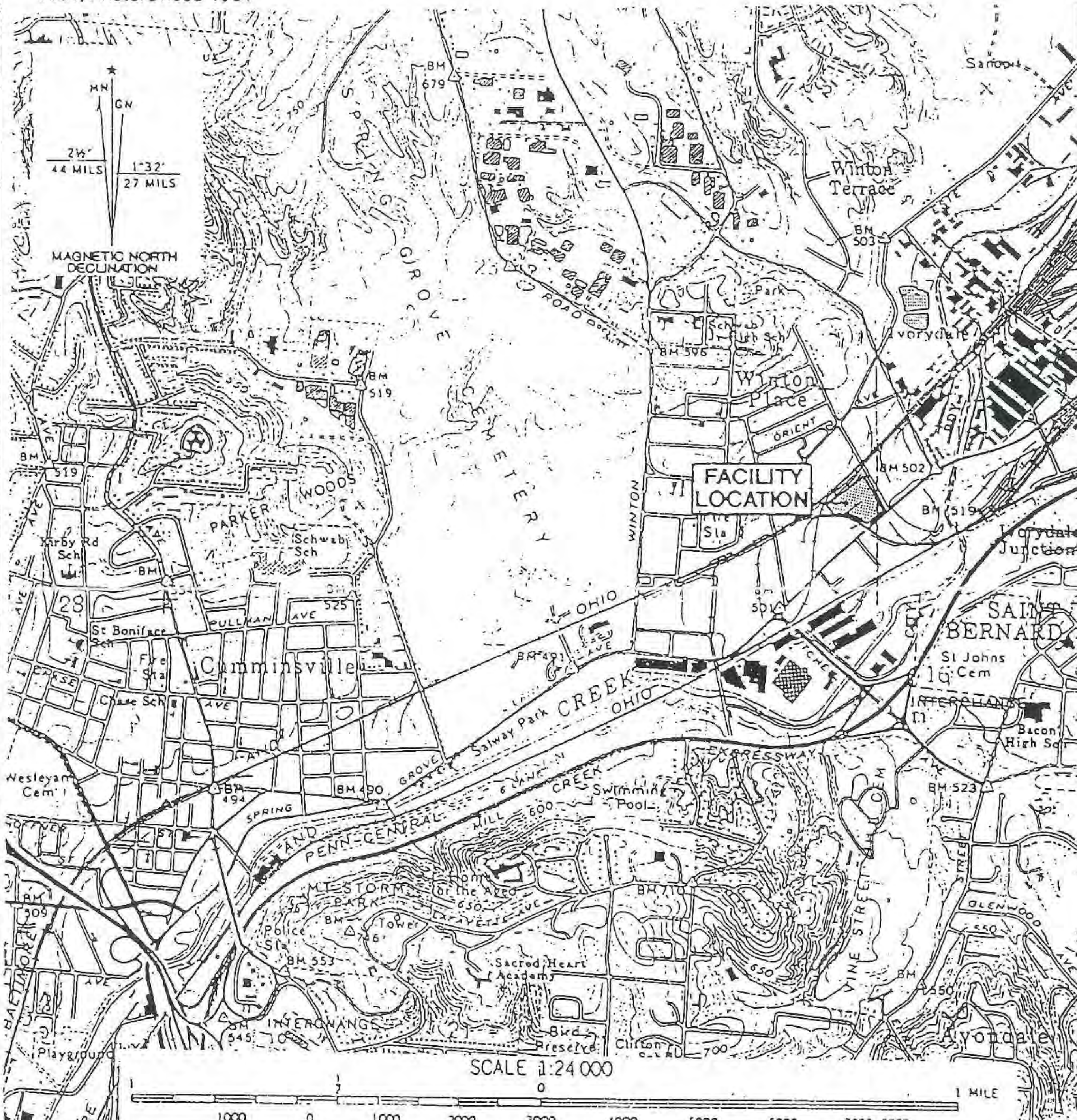


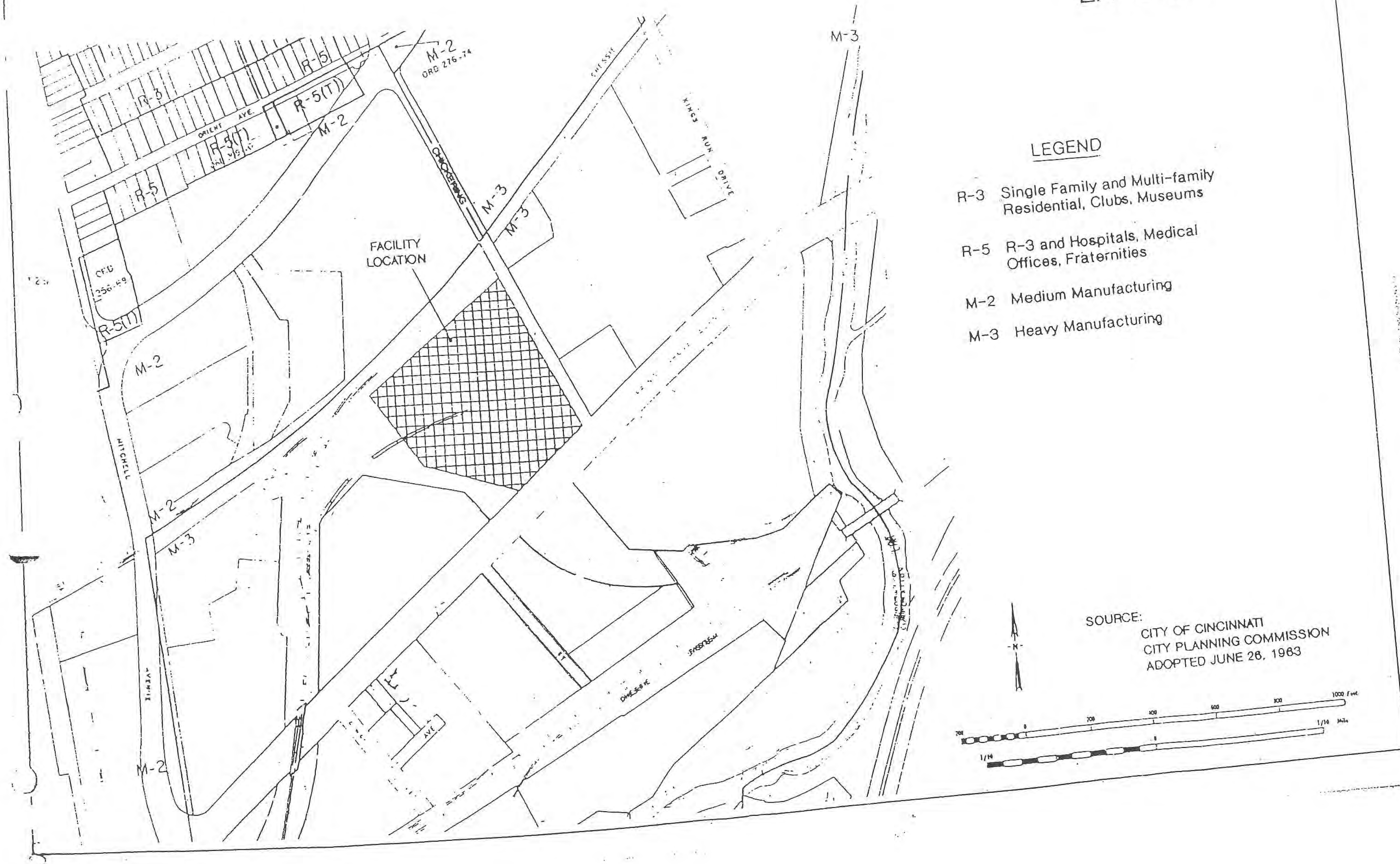
FIGURE B.4

AREA TOPOGRAPHY

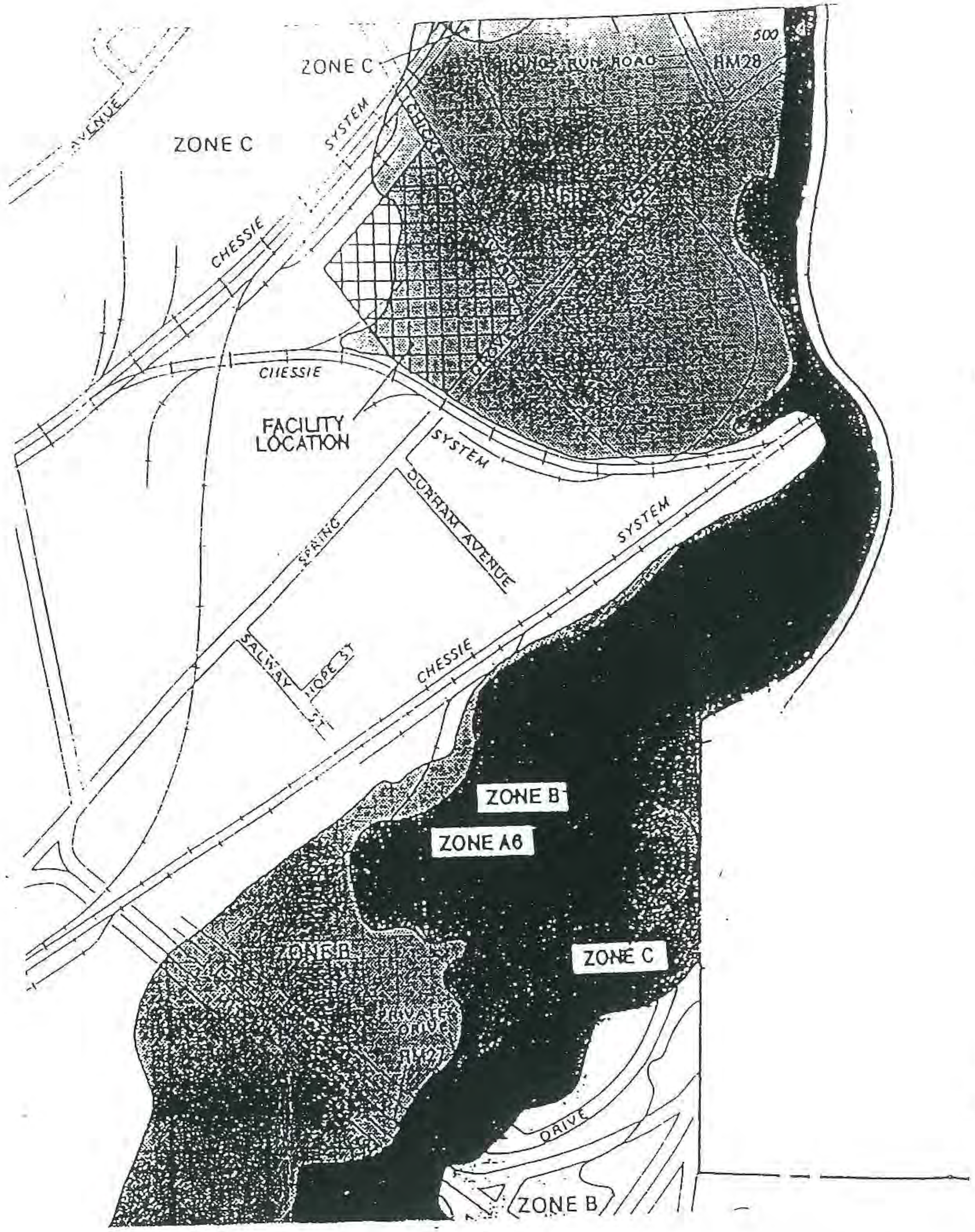
SOURCE:
Cincinnati West Quadrangle
U.S. Geological Survey
7.5 Minute Series
1961, Photorevised 1981



ZONING AND LAND USE MAP



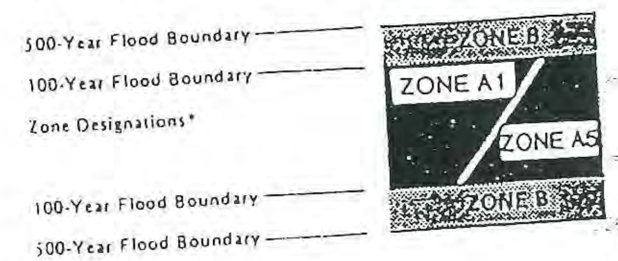
FLOOD PLAIN MAP

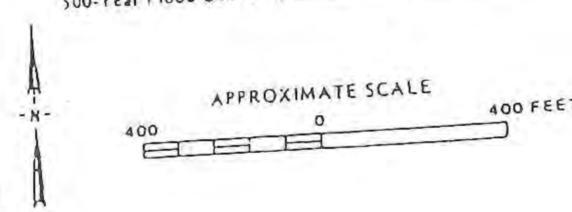


KEY TO MAP

EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)





FIRM

FLOOD INSURANCE RATE MAP

CITY OF
CINCINNATI,
OHIO
HAMILTON COUNTY

COMMUNITY-PANEL NUMBER
390210 0010 B

EFFECTIVE DATE:
OCTOBER 15, 1982

Federal Emergency Management Agency

APPENDIX 4

Clean Harbors Statement of Qualifications and Experience

James M. Rutledge
Vice Chairman and President

James M. Rutledge joined Clean Harbors as Executive Vice President and Chief Financial Officer in 2005. In 2011, Mr. Rutledge was appointed Vice Chairman of the Board of Directors. In 2012, he was named the Company's President. Before joining Clean Harbors, Mr. Rutledge served as Chief Financial Officer of Rogers Corporation, a developer and manufacturer of specialty polymer and electronic materials for targeted applications. At that company, he was responsible for Rogers' financial, tax and legal functions as well its supply chain operations worldwide. He also assisted in expanding the strategic focus of the company, contributing to its record sales and earnings. Prior to Rogers Corporation, Mr. Rutledge served as Chief Financial Officer at Baldwin Technology Company, Inc., a publicly listed manufacturer of controls, accessories, and material handling equipment for the printing industry. He also served in various capacities, including Vice President and Treasurer, over a 20-year span at Witco Corporation, a $2 billion global specialty chemicals company. Mr. Rutledge began his career at Price Waterhouse & Company, and earned an MBA degree in Finance from Rutgers University, and a BA degree in Math and Literature from Assumption College.

Michael L. Battles
Executive Vice President and Chief Financial Officer

Michael Battles was named Executive Vice President and Chief Financial Officer in January 2016. He joined Clean Harbors as Senior Vice President, Corporate Controller and Chief Accounting Officer in September 2013. Prior to Clean Harbors, Mr. Battles spent 12 years in a variety of senior financial positions at PerkinElmer Inc. (NYSE: PKI), a global leader in human and environmental health. Most recently, he was Vice President and Chief Financial Officer of PerkinElmer's Human Health business. Prior to his role in Human Health, he served as Chief Accounting Officer for several years and Acting Chief Financial Officer during a one-year search period. Prior to PerkinElmer, Mr. Battles held several positions at Deloitte & Touche LLP from 1990 to 2001, including senior manager, accounting and auditing. He earned a Bachelor of Science in business administration with a concentration in accounting from the University of Vermont. He is a Certified Public Accountant.

Eric W. Gerstenberg
Chief Operating Officer

Eric W. Gerstenberg is Chief Operating Officer. Mr. Gerstenberg rejoined the Company in June 1999 as Vice President of Disposal Services of Clean Harbors Environmental Services, Inc. From 1997 to 1999, Mr. Gerstenberg was the Vice President of Operations for Pollution Control Industries, a privately owned environmental services company. From 1989 to 1997, he held a variety of positions with the Company including General Manager of the Natick, Baltimore, and Chicago facilities. In 2010, he was promoted to Executive Vice President, Environmental Services, overseeing Field Services, Technical Services, Disposal Facilities, Transportation and Sales for the Environmental Group. He was named President, Environmental, Industrial & Field Services in 2014. Mr. Gerstenberg holds a Bachelor of Science degree in Engineering from Syracuse University.

Statement of Qualifications

CleanHarbors
ENVIRONMENTAL SERVICES®

TABLE OF CONTENTS

1.0 COMPANY OVERVIEW

Clean Harbors is a publicly traded company that maintains a vast network of service centers and waste management, treatment and disposal facilities, and provides a broad range of environmental services. Services include hazardous and non-hazardous waste transportation and disposal, laboratory chemical packing, emergency response, field services and industrial services. Clean Harbors is an innovative leader, committed to preserving our natural environment and adhering to strict government regulations.

Since its inception in 1980, Clean Harbors has grown to become the leading provider of environmental services in North America with over 100 locations spanning the United States and Canada, as well as locations in Mexico and Puerto Rico. Our clients include a large number of the Fortune 500 companies; many major utilities, oil, pharmaceutical, and chemical companies; the high tech and biotech industries; and numerous local, state, provincial and federal government agencies.

Clean Harbors has taken the lead in identifying the most cost-effective, environmentally sound options for waste management. We own and operate over 49 waste management facilities, which provide a wide range of recycling, incineration, landfill and treatment options. These facilities have been rigorously tested and approved to ensure the safe handling of customers' waste with minimal risk or liability.

Our *Technical Services* have been developed specifically for the collection and transporting of all containerized and bulk waste (*Transportation and Disposal*), as well as the categorizing, packaging and removal of laboratory chemicals for disposal *(CleanPack®)*. Through a highly coordinated transportation fleet of more than 3,500 vehicles, Clean Harbors provides reliable, cost-effective Transportation and Disposal to customers across North America. Our vast service network consists of over 100 service locations. From our Technical Service Centers, we dispatch our trucks to pick up customers' waste on a pre-determined schedule as well as on demand, and then deliver it to one of our nearby Transfer, Storage and Disposal (TSD) facilities. From these same Technical Service Centers, we can dispatch chemists to a customer location to safely collect, label and package all quantities of laboratory chemicals for disposal.

Clean Harbors' *Site Services* are designed to provide customers highly skilled experts with specialty equipment and resources to perform an array of services at any chosen location. Under the Site Services umbrella, Clean Harbors' *Field Services* ensure that crews and equipment are dispatched on a scheduled or on-call emergency basis to perform everything from facility decontamination and large remediation projects to selective demolition, spill clean up, and vacuum services. Also, as part of Clean Harbors' Site Services, our *Industrial Services* feature crews focused on industrial cleaning and maintenance projects that typically require fast turnaround due to facility shutdowns. These services may include chemical cleaning, hydroblasting, liquid/dry vacuuming, sodium bicarbonate blasting, and steam cleaning of equipment and systems.

Clean Harbors' *Apollo Program* is a premier onsite solution that serves the dual purpose improving customers' waste stream management and making their entire environmental program safer, more cost-effective and self-sufficient. Clean Harbors' skilled technicians work onsite in tandem with customers to deliver proper waste transportation and disposal, lab chemical packing (CleanPack®), industrial cleaning and maintenance, and more. Whether a customer requires a single field technician or a multi-person team of diversified experience, Clean Harbors can design the right program to satisfy their specific needs. We utilize a hand-in-hand, team approach that leverages our extensive resources and infrastructure, including our Web-enhanced technology and online services.

Clean Harbors' Environmental Training Specialists provide *Environmental and Health and Safety Training* at a customer's location or at one of our nationwide locations. Customers can take advantage of our many open-enrollment classes, have us design customized programs, or have us assist them with technical/procedure writing and development. Whether it's training to meet OSHA, DOT or EPA requirements, our training services help our customers meet the demands to provide continuous education for their employees.

Service Chemical, a limited liability company within Clean Harbors, is a full service supplier of specialty and commodity chemicals and distributes raw materials from the world's leading chemical manufacturers. Service Chemical's state-of-the-art program, *Total Chemical Management (TCM)*, offers manufacturers the ability to outsource key business activities with a high level of confidence. The TCM solution reduces storage, inventory-carrying cost, regulatory reporting and waste minimization due to obsolescence. Minimum/maximum levels are established in conjunction with the customer's needs and are set in our database to automatically replenish inventory based on the customer's lead times and usage on a *'just-in-time'* basis.

Clean Harbors' *Online Services* allow our customers to have access to, create, submit, edit and view all of their Clean Harbors waste profiles. Available 24 hours a day, seven days a week, these services are free and include waste profiling and management, waste tracking, and manifest viewing.

Clean Harbors has successfully solved thousands of environmental problems throughout United States, Canada and Puerto Rico and is confident that our previous experience, technical and operational resources, and compliance history uniquely qualify us to provide our clients with the resolution to most environmental needs.

2.0 SCOPE OF SERVICES

With over twenty-five years of experience, Clean Harbors' dedicated employees are committed to providing the highest quality and most comprehensive environmental services available. The scope of our services encompasses the widest range and provides our customers with one single source for satisfying their multiple environmental needs.

TECHNICAL SERVICES

Transportation & Disposal Services

- Incineration
- Wastewater Treatment
- Landfill

- Reuse, Recycling and Reclamation
- Fuel Blending
- Laboratory Chemical Disposal
- Used Oil & Oil Products Recycling
- Explosives Management
- PCB Disposal
- Waste Transportation and Logistics

CleanPack Laboratory Chemical Management Services

- Laboratory Chemical Packing
- Household Hazardous Waste Management
- Cylinder and Compressed Gas Management
- Reactive Material Services
- Laboratory Moves
- CustomPack Services
- Facility Closures
- On-site Program Management (See Apollo Onsite Services.)

SITE SERVICES

Field Services

- Emergency Response for Minor and Major Incidents
- Vacuum Services
- Tank Cleaning
- Decontamination
- Product Recovery & Transfer
- Marine Services
- Demolition Services
- PCB Management & Disposal
- Remediation & Environmental Construction

Industrial Services

- Vacuum Services
- Sodium Bicarbonate Blasting
- Hydroblasting
- Onsite Material Processing
- Onsite Dewatering & Pressing
- Container Management
- Steam Cleaning
- Chemical Cleaning

ADDITIONAL SERVICES

Apollo Services

- Onsite Program Management

Service Chemical, LLC

- Chemical Distribution
- Raw Material Inventory Management Services

Training Services

- Commercial Health, Safety & Environmental Training Services

Online Services

- Waste Profiling, Waste Tracking and Manifest Viewing

3.0 AREAS OF EXPERTISE

TECHNICAL SERVICES

Technical Services provides the pick up and transportation of containerized and bulk wastes as well as categorizes, packages and removes laboratory chemicals for disposal. Through a network of Technical Service Centers, trucks are typically dispatched on predetermined "milkrun" schedules to pick waste up from customer locations for delivery to a Clean Harbors Transfer, Storage and Disposal Facility (*Transportation & Disposal*). The Technical Service Centers also dispatch chemists who go to customer locations to categorize, package and remove various sized laboratory chemicals for disposal (*CleanPack®*).

Transportation & Disposal Services

Clean Harbors transports, treats and disposes of industrial wastes for commercial and industrial customers, health care providers, education and research organizations, other environmental service companies and governmental entities. The wastes handled include substances, which are classified as "hazardous" because of their corrosive, ignitable, infectious, reactive or toxic properties, and other substances subject to state, provincial and federal environmental regulations.

Clean Harbors disposal capabilities include Incineration, Wastewater Treatment, Landfill, Reuse, Recycling and Reclamation, Fuel Blending, Laboratory Chemical Disposal, Used Oil and Oil Products Recycling, Explosives Management, PCB Disposal, and Waste Transportation & Logistics.

Incineration

Clean Harbors owns and operates six active incineration facilities that offer a wide range of technological capabilities to customers through this network. In the United States, we operate a fluidized bed thermal oxidation unit for maximum destruction efficiency of hazardous waste with an annual capacity of 55,000 tons, and two solids and liquids-capable incineration facilities with a combined estimated annual capacity of 280,000 tons. We also operate two hazardous waste liquid injection incinerators in Canada with total annual capacity of approximately 175,000 tons. Of the various waste disposal technologies, incineration offers the most complete destruction, destroying 99.99% of all materials through the use of high temperatures.

Our facilities in Deer Park, Texas and Aragonite, Utah use a *rotary kiln technology*, which provides greater flexibility in destruction of hazardous wastes. The Deer Park facility is the largest incinerator in North America.

Clean Harbors' Canadian facilities situated in Lambton and Mercier specialize in *liquid waste injection incineration*, allowing them to have lower operating costs than other hazardous waste incinerators in North America.

Our *fluidized bed* incineration facility located in Kimball, Nebraska uses a state-of-the-art technology to ensure maximum thermal destruction at lower temperatures. This Greenfield facility is the only commercial hazardous waste incinerator in the United States that can delist its ash. Rendered non-hazardous after stabilization and analysis, the ash is placed in an onsite monofill built to RCRA Subtitle C standards.

Clean Harbors El Dorado, Arkansas incineration facility specializes in the treatment of hazardous wastes (RCRA regulated) and non-hazardous wastes by high temperature incineration. RCRA solids and sludge may be received from the customer, packaged for ram feed into the *rotary kilns*, repacked for ram feed, or fed directly into the kilns through an automated shredder auger machine. This system enables the El Dorado facility to accept waste that is packaged in any size Department of Transportation (D.O.T.) approved container.

Wastewater Treatment

Clean Harbors owns and operates six dedicated wastewater treatment facilities in North America. These facilities utilize various treatment methods including *chemical precipitation of metals*, *acid/base neutralization*, and *chemical oxidation/reduction* for inorganic wastewater. For organic wastewater, we utilize *chemical oxidation, supercritical fluid extraction, biological treatment, oil/water separation*, and *deep well injection* treatment methods.

Our facilities are permitted to treat a wide variety of hazardous and non-hazardous wastewaters including RCRA hazardous waste; Listed hazardous waste; CERCLA hazardous waste; TSCA, RCRA/TSCA and non-TSCA PCB waste; non-RCRA regulated industrial waste; and, non-hazardous waste.

Landfill

Clean Harbors offers cost-effective and safe disposal of hazardous and non-hazardous solids for secure landfill in drum and bulk forms through its network of sites across the country. Shipments are accepted by rail or road.

Our nine landfills, with duplicate and varying capabilities, ensure a customer's business line will not be interrupted. Six sites are utilized for the disposal of hazardous waste (Subtitle C). Three sites specialize in non-hazardous industrial and municipal waste (Subtitle D). Our services include macroencapsulation, microencapsulation, metals stabilization, chemical oxidation, PCB disposal, and NORM and TENORM waste.

Reuse, Recycling and Reclamation

Clean Harbors' Reuse, Recycling and Reclamation Services identify waste streams that are candidates for reuse, recycling or reclamation opportunities, providing a responsible alternative to incineration, fuel blending and other disposal routes.

Reuse: Waste or by-product to one industry may be a valuable raw material to another industry. Our experience with a broad range of industries enables us to identify which materials you may have of value, what specifications must be met, and source potential users.

Solvent/Oil Recycling: Clean Harbors' solvent and oil recycling technologies help minimize waste. Our solvent recovery operation handles chlorinated and fluorinated solvents from a variety of industries including high technology manufacturers, paints and plastics processing firms and metal finishing companies. Additionally, through our network of reclamation facilities and direct re-use clients, many non-halogenated solvents can be reused or recycled.

Our oil recovery plants re-process motor, lubricating and specialty oils from almost every industry source. All Clean Harbors facilities accept and process oils and oily waters for recycling. Our three dedicated oil reclamation facilities provide safe recycling options with a variety of heat separation, centrifugation and micro-separation processes. Oil/water emulsions and coolants can also be handled at our plants.

Fuel Blending of Liquids, Solids & Sludge: Fuel blending minimizes the use of fossil fuels as an energy source for cement production and supplements waste as the fuel source. Every month, Clean Harbors blends millions of gallons of high BTU (>5,000 BTUs/pound) liquids, sludge and solids to produce an excellent fuel conforming to cement kiln specifications.

Other Recycling Options: Clean Harbors provides management and recycling of fluorescent bulbs, batteries, computers, paints and a variety of heavy metal bearing solids. Retorting technologies are used to reclaim mercury from light bulbs. Smelting technologies are used for batteries and a variety of options are used after dismantling computer and other industrial equipment. Our trained service representatives will assist customers in determining the proper classification and appropriate recycling methods for each unique situation.

Fuel Blending

Clean Harbors operates fuel blending processes handling all forms of industrial waste including liquids, solids and sludge. Fuel blending is an alternative to incineration for organic waste streams that contain > 5,000 BTUs/pound. Our CleanFuels® fuel blending unit safely blends organic solids and sludge into a kiln-ready pumpable slurry. Using safe, nitrogen-blanketed coarse shredding and high-speed dispersion, wastes like resins, paints, tars and polymers are blended into an alternative fuel for cement kilns. This "waste derived fuel" replaces the use of coal, oil and other fossil fuels for cement production.

Clean Harbors will pick up your waste streams in bulk or drums and transport them to one of our blending facilities. Our professionals will analyze and blend your waste streams to meet the strict inbound specifications that a cement kiln demands.

Our commitments to integrity and high performance standards have resulted in long standing business relationships. Arrangements with multiple cement kiln companies throughout the United States ensure that customer waste will be disposed of in a timely and efficient manner.

Laboratory Chemical Disposal

Clean Harbors' laboratory chemical services provide customers with cost-effective, environmentally sound disposal options for lab pack quantity chemicals (typically chemicals in containers less than 5 gallons in size).

At our facilities, we are able to process, repack and consolidate lab packed materials making them suitable for a variety of disposal options. Clean Harbors is equipped to perform virtually every existing treatment technology available in managing wastes including Aqueous Treatment for inorganic acids, bases and oxidizers; Fuel Blending for laboratory solvents, oil based paints and thinners; Incineration for toxic, corrosive, flammable and reactive waste; and Landfill for non-hazardous waste and latex paint.

We also offer recycling options for materials including batteries, mercury, and paints, and provide disposal services for specialty items such as compressed gas cylinders and certain explosive/temperature controlled materials.

Used Oil and Oil Products Recycling

Primarily serving the Northeast, Mid-Atlantic and Midwestern regions of the U.S., Clean Harbors provides pick up, recycling and disposal of waste oils and related products including oily wastewater, used automotive oil filters, antifreeze and absorbents. We routinely pump out and pick up bulk and drummed waste oils using a specialized fleet of vehicles.

Typical customers include railroads, industrial fabricators, machinery manufacturers, automotive industry and related services, utilities, paper mills, asphalt batch plants, petroleum distributors, and government facilities.

Clean Harbors is authorized to accept and treat oily wastewater and other non-hazardous wastewaters as well as process oily solid materials including absorbents for disposal at our company owned, operated and permitted waste processing and treatment facilities. In addition, our oil facilities consolidate and blend used oil. Heat separation, filtration, carbon absorption and/or flocculation allow us to recover used oil. Reclaimed specification waste oil can then be sold as supplemental fuel for industrial boilers and furnaces. We also provide specialized programs for the automotive industry for routine pick up and recycling of oil filters. Using specialized bins and vehicles, automotive retail and service centers have a clean and easy way to store and dispose of used oil and oil filters.

Explosives Management

Clean Harbors' Colfax, Louisiana facility is uniquely permitted to treat over 300 kinds of explosives and reactive waste materials. Storage for 50,000 pounds of explosives is provided in ten permitted storage magazines, and open burning in 20 permitted open-burn treatment units treats the waste. Residue is collected from the treatment process and shipped off-site for disposal at a RCRA approved facility.

When requested, Clean Harbors personnel will package and remove explosives onsite, thereby reducing customer liability. From treating fireworks to rocket motors containing up to 350 pounds of explosives, Clean Harbors' Colfax facility has a health and safety record that is unparalleled in the United States.

PCB Disposal

Clean Harbors provides disposal services for all types of PCB (polychlorinated biphenyl) related wastes including soils, waters, oils, transformers, capacitors, cable, bushings/switches and ballasts. Depending on regulations and customer preferences, PCB materials can be recycled, incinerated, treated or landfilled.

Several Clean Harbors facilities are dedicated to handling PCB wastes. Our Cincinnati, Ohio facility is unique in its ability to accept TSCA and particularly TSCA/RCRA contaminated water for carbon treatment, a treatment that is typically less expensive than incineration. Facilities in Ashtabula, Ohio and Coffeyville, Kansas use a patented solvent washing process to decontaminate PCB transformer components to levels that allow recycling or reuse. Deer Park, Texas and Aragonite, Utah incineration facilities are permitted to destroy PCB waste. Our Twinsburg, Ohio facility performs metal recovery of non-regulated electrical equipment and lighting ballasts. In Canada, our Guelph, Ontario facility offers mobile dechlorination treatment for PCB fluids.

With over 20 years of PCB management experience, Clean Harbors understands out-of-service date issues, PCB tracking requirements and the allowable PCB management options.

Waste Transportation & Logistics

Clean Harbors operates a fully licensed fleet of over 3,500 transportation vehicles. Our drivers and milkrun service systems make up an integral part of Clean Harbors' waste management services. Whether a five-gallon pail needs to get picked up in a remote location in Wyoming or two truckloads per day need to be moved to maintain key production levels at a petrochemical plant, Clean Harbors has the logistic network to service the job.

Truck Transportation: Clean Harbors owns and operates a wide variety of transportation vehicles and employs drivers who are fully trained to comply with all DOT and RCRA regulations. Central control is maintained to ensure vehicle maintenance and control of proper permitting. Local maintenance facilities are staffed by our own mechanics for maximum on time performance. A sampling of vehicles in the Clean Harbors fleet includes box trucks, dump trailers, explosion-proof mixing tanks, liquid and solid waste transports, roll-off containers, rubber lined tankers, sludge boxes, tractors, vacuum containers, vacuum trucks and van trailers.

Rail Transportation: Many of Clean Harbors' facilities can accept and ship by rail. Several of our plants routinely ship bulk liquids and solids over rail. Bulk liquid shipments utilize 20,000-gallon rail cars, while bulked solids are shipped in specially designed and sealed intermodal containers. Clean Harbors has more than 350 rail cars in our fleet. Rail shipments can provide Clean Harbors customers with an economic advantage as well as a safer mode of transportation.

Ocean Transportation: Clean Harbors utilizes sea and ISO containers to ship drum and bulk wastes to our mainland facilities. Coordination between Clean Harbors' service centers and our national logistics group enables us to efficiently manage waste materials from generators outside of the continental United States and Canada and provide cost effective transportation to the ultimate disposal facility.

CleanPack - Laboratory Chemical Management Services

Clean Harbors provides specialized handling, packaging, transportation and disposal of laboratory quantities of hazardous chemicals and household hazardous wastes. CleanPack chemists utilize the company's proprietary waste management software system to support the lab pack services and complete the regulatory information required for every pick-up.

The CleanPack operation offers a wide variety of services including Laboratory Chemical Packing, Household Hazardous Waste, Cylinder and Compressed Gas Management, Reactive Material Services, Laboratory Moves, CustomPack® Services, Facility Closures, and Onsite Program Management.

Laboratory Chemical Packing

CleanPack, Clean Harbors' lab pack program, provides the proper handling, packaging, transportation and disposal of hazardous chemicals. Our highly trained chemists are skilled in chemical recognition and compatibility. Their expertise helps ensure superior customer service by keeping our customers in compliance with the latest EPA and DOT regulations. The CleanPack program follows three simple steps for complete and fully compliant chemical disposal services.

Step 1-Proper Packing - CleanPack chemists, dispatched from our network of service locations, collect, identify, label and package wastes into DOT-approved containers. Using laptop computers with Clean Harbors' proprietary software, they quickly produce inventory lists, manifests, LDR forms and labels that comply with local, state and federal regulations.

Step 2-Safe Shipment - Wastes are generally removed the same day to a fully permitted Clean Harbors treatment, storage and disposal facility.

Step 3-Dependable Disposal - Our broad network of waste-management and disposal facilities provides options of incineration, recycling, wastewater treatment and fuel blending. Clean Harbors' online services allow you to precisely track waste shipments to ultimate disposal.

Household Hazardous Waste Management

Clean Harbors handles thousands of household hazardous waste and pesticide collection events each year for state, provincial, local, and private agencies throughout the United States and Canada. Communities trust us to collect their paints, solvents, batteries, fluorescent lamps, metals and other hazardous materials during these one-day, multi-day, mobile and fixed-location programs because they know we'll do it safely and efficiently.

As an environmentally conscious company, we are committed to recycling and reclaiming wastes using a variety of methods. These methods effectively remove contaminants from the original material, restore its fitness for its intended purpose, or convert it to a beneficial use feed stock, thereby reducing the volume of waste requiring disposal.

Cylinder and Compressed Gas Management

Clean Harbors has the ability to manage damaged, defective or leaking cylinders using a variety of techniques. Whether performing a cryogenic valve replacement procedure, utilizing our tapping equipment, or incorporating one of cylinder overpacks, Clean Harbor's has technology and expertise to handle disassociated compounds, unknown sampling and identification, emergency response & containment, portable/fixed tanks, alkyl metals, phosgene leak testing, peroxide formers.

Clean Harbors utilizes numerous emergency response and containment devices to rapidly mobilize to sites where compressed gas cylinders are leaking or present imminent danger of leaking. This requires special equipment and training that is rarely found in the environmental community or local hazardous material response agencies.

Clean Harbors understands that disposing of cylinders or tanks containing highly reactive alkali metals can be costly and dangerous. Clean Harbors has developed and utilized a proprietary steam hydrolysis procedure that has been employed on numerous project sites through the United States. The process allows for the controlled hydrolysis of the alkali metals into hydroxide solutions. By product hydrogen gas is safely vented to the atmosphere through a scrubbing system that removes any caustic particulate from the reaction.

Reactive Material Services

Clean Harbors provides onsite remediation and stabilization services for our customers that have potentially unstable, shock sensitive or explosive materials. The handling of dry picric acid, peroxide-contaminated ethers, gas cylinders, and other highly reactive and potentially explosive compounds requires proven methodology. Stabilization techniques are researched using numerous chemical databases and references. Consultations with high hazard and reactive chemical consultants and PhD chemists are also conducted when necessary.

Clean Harbors is dedicated to protecting the health and safety of its employees and customers. Our Reactive Material Technicians utilize state-of -the-art and unique personal protective equipment to safeguard against a possible explosion or flash fire when opening potentially peroxidized or shock sensitive containers.

Once stabilized, the containers are packaged for disposal. As an added precaution, stabilized materials may be packaged in individual anti-static bags to eliminate the potential of a static charge. The bags are then lab packed for final disposal through a Clean Harbors facility. At the completion of each job, the Reactive Material Team provides the customer with an After Action Report that summarizes the day's activities including safety meeting; materials that were handled; opening, stabilization or treatment methods utilized; and site restoration.

Laboratory Moves

Clean Harbors has extensive experience in the relocation of laboratory chemicals including small, one-day moves within the same building to larger, multiple-day moves to different cities and, in some cases, different states or provinces. Our chemists will inventory and package the chemicals to be moved in the same manner as chemicals intended for disposal, following the same regulations and adhering to the same health and safety procedures.

CleanPack crews consist of a lead chemist and chemists working in pairs. The lead chemist oversees and coordinates all onsite operations of the project and the activities of the work crews. As a liaison between Clean Harbors, the customer and its subcontractors, the lead chemist ensures compliance with all regulations and a safe environment for all personnel.

CleanPack crews will segregate the materials to be moved by chemical compatibility and package them into DOT approved containers using poly bags and vermiculite or other cushioning material to ensure that the chemical containers are not damaged during transportation. Coolers with ice may be used to keep refrigerated items cold. Packing lists are generated for each container, listing each substance in the container, its physical state, size of the container and number of containers. All packaged containers are then transported to the new facility where Clean Harbors personnel will unpack them.

CustomPack® Services

Clean Harbors' CustomPack Program provides an easy to use, step-by-step system for waste generators who choose to package their own laboratory and industrial waste lab packs. We assign a dedicated Program Manager who will be the customer's single source for all approvals, pricing, technical assistance, and customer service. Based upon the customer's needs and experience, we design a training program as well as develop packing guidelines tailor-made to the waste streams that the customer normally generates and packages. Clean Harbors will also arrange to use our licensed transportation fleet to haul your wastes to our disposal facilities.

If requested, Clean Harbors can provide all necessary DOT rated containers, vermiculite, labels and paperwork to ensure that customers' waste is safely packed and in compliance with all applicable regulations.

Facility Closures

Regardless of the complexity of a facility closure, relocation, or cleanout, Clean Harbors can respond quickly to scope and execute a comprehensive, tailor-made plan to a site's requirements. Our CleanPack chemists will go onsite to categorize and properly package all sizes of hazardous and non-hazardous materials for movement to a customer's new location, or transport them to our network of company owned and operated waste processing and disposal facilities.

CleanPack chemists will segregate the materials by chemical compatibility and package them into DOT approved containers. Packing slips will be generated for each container, listing each substance in the container, its physical state, size of the container and number of containers.

During facility closures, it is not uncommon to encounter materials that are no longer needed or are unsuitable for shipment including highly hazardous materials such as peroxidized ethers and corroded cylinders. Clean Harbors will identify and provide the most sound, cost-effective disposal option for these materials as well.

Onsite Program Management

If you require assistance in managing chemical inventories and waste-storage areas, Clean Harbors' Apollo Program provides onsite program managers with expertise tailored to your specific needs. (See Apollo Onsite Services.)

SITE SERVICES

The Site Services product line is responsible for providing trained, skilled labor and specialty equipment to perform various services on a customer's site or other location. *Field Service* crews and equipment are dispatched on a planned or emergency basis to manage routine cleaning in hazardous environments or emergencies such as a chemical or oil spill clean up. *Industrial Services* crews focus on industrial cleaning and maintenance projects that typically require fast turnaround.

Field Services

Whether the action is planned, corrective or the result of an emergency response, Clean Harbors' multidisciplinary team of remedial action professionals can provide solutions to a variety of industrial cleanup problems. We perform facility decontamination and plant closures as a result of fires, process malfunctions, accidents or decommissioning activities. Clean Harbors' highly trained personnel are also equipped to respond to abandoned waste sites, contaminated soil and groundwater, leaking tanks and surface impoundments.

Clean Harbors Field Services offers a wide variety of services including Emergency Response for Minor and Major Incidents, Vacuum Services, Tank Cleaning, Decontamination, Product Recovery & Transfer, Marine Services, Demolition Services, PCB Management & Disposal, and Remediation & Environmental Construction.

Emergency Response for Minor and Major Incidents

Clean Harbors has the depth and resources to rapidly deploy personnel and equipment to respond to emergency situations of any magnitude. Our experienced 40-hour trained and certified workers operate on a 24-hour basis from response centers across the United States and southeastern Canada.

Typical emergency responses can include manhole responses, punctured lines, tank overflows, and saddle tank spills. On a major and catastrophic scale, we handle tanker truck rollovers, ship groundings, and facility releases. Working under all local, state, provincial and federal agency guidelines (EPA, OSHA, USCG, etc.), typical emergency response actions coordinate the services of different divisions including containment and control procedures, analytical testing and assessment, neutralization and treatment, and collection and transportation of the waste substances to an appropriate treatment or disposal facility. Depending on the severity of the release, such as those that impact a waterway or sensitive area, Clean Harbors can also provide long-term remediation or containment maintenance.

Vacuum Services

Clean Harbors Field Services' specialized Vacuum Services collect and transport (wet or dry) hazardous and non-hazardous material. Our equipment, which includes stainless steel, carbon steel, dry and liquid units, is selected based on the nature and quantity of the material to be removed. New equipment is continually being added to our fleet in order to meet our customers' needs.

We service numerous operations including oil/water separators, pit and sump cleanouts, site transfers, electrical manholes and catch basins, materials storage and transfer areas, power plants, and physical plant maintenance.

Tank Cleaning

Clean Harbors is equipped to successfully clean the most difficult tanks. Serving numerous industries, municipalities and utility companies, we handle a broad spectrum of cleaning from 10-gallon acid neutralization tanks to 240-foot diameter tanks (approximately 6 million gallons).

We perform wastewater treatment neutralization for industrial, research and development facilities to comply with wastewater discharge regulations. Major utility companies contract with us to enter and clean utility manholes and vaults in order to ensure the safety of utility workers during inspections and maintenance. Industrial facilities call on us to enter and clean tanks during decommissioning and renovation projects. As part of our preventative maintenance to keep your equipment operating properly, Clean Harbors also inspects process vessels and provides equipment repair.

Decontamination

Clean Harbors has the expertise to manage a wide range of decontamination needs from small machinery to entire facilities. Areas contaminated with heavy metals or chemicals over long periods of time can be decontaminated to their original state through various methods including a triple wash and triple rinse process that may include the use of solvents and pressure. We routinely decontaminate leaking PCB transformers, contaminated transformer pads, PCB and high voltage transformer vaults and manholes.

Closing out RCRA Hazardous waste storage areas and storage tanks typically requires triple wash and triple rinse procedures including concrete scarifying to meet state, provincial and federal standards. We perform the full service including final sampling for closure reporting.

Product Recovery & Transfer

The immediate and complete capture of spilled product is the optimal way to minimize the overall cost of spill site remediation. On water, containment can be accomplished through the use of miles of hard boom in our inventory of equipment. On land, we have a wide variety of dry absorbents on hand to dike/absorb any material.

Clean Harbors' full equipment line also includes a fleet of wet and dry vacuum trucks, skimmers and specialty pumps. We maintain a variety of pumps to conduct onsite transfer of fuels and chemicals, ranging from 200 gallons-per-minute to 1,500 gallons-per-minute. On a 24-hour basis, 20,000-gallon fractionization tanks can be mobilized to a spill site and used for temporary storage. Other tanks ranging in size and type are also available for product to be stored. On an emergency basis, our carbon treatment systems, air strippers and other onsite treatment systems can be mobilized to secure the results you need.

Transfer services are also performed on a non-emergency basis when customers need to move materials from tank to tank or over water. For instance, our specialized pumping systems allow the easy movement of materials from storage tanks that need product moved prior to the tank being cleaned. Our ship-to-shore transfer capabilities allow us to easily off load product from ships or barges onto tanker trucks or other vessels.

Marine Services

Clean Harbors provides a wide range of services to the Maritime Industry. Our Onboard Services include oil, chemical, gray water, septic, potable water, and ballast tank, bilge, void cleaning and inspection to meet ABS standards. We provide line handling and protective booming for various ports and facilities across North America. As more and more commercial and military vessels are scheduled for breaking, scraping or reefing, we also provide decommissioning, cleaning, and abatement services to a host of shipyards, dry docks and breaking facilities.

Effectively handling any size release, we provide emergency response and response readiness for oil and chemical spills on water and land. Clean Harbors provides OPA 90 OSRO coverage for more than 90 clients and 300 facilities across North America. Our response crews and National Strike Team work closely with all national response organizations, spill management teams, and federal and state agencies.

Clean Harbors also performs both hazardous and non-hazardous waste disposal and recycling services from numerous facilities and vessels across the U.S. and Canada. Many of our coastal service centers hold Coast Guard approved Marine Operations Manuals for ship-to-shore transfers of oily waste and cargo.

Demolition Services

Clean Harbors provides Demolition Services in emergency and scheduled situations. Applications may include total building demolition, renovating building exteriors and interiors, and/or entire structures.

We offer removal of process equipment, tanks and piping; selective reinforced concrete, structural steel, wall and flooring removal; and demolition of contaminated building components. Our team of experts can rapidly produce a comprehensive plan to safely address dangerous situations when the integrity of a structure has been compromised by a catastrophic event.

PCB Management & Disposal

Clean Harbors has over 25 years of experience in PCB Management and Disposal. Our various fully-permitted PCB processing facilities specialize in disassembly, treatment, decontamination, reclamation and disposal of PCB-contaminated materials and equipment (transformers, capacitors, ballasts, etc.)

We can provide emergency response for PCB spills as well as total reclassification of PCB areas. As an alternative to a "total" cleanup, we can perform a cleanup in conjunction with Section 30P of the Federal PCB Regulations entitling the generator to maintain compliance with a minimum of cost and downtime.

Our Transformer Services clean fluid and transformer internals, allowing for years of safe and continued use of electrical equipment. Sludge is removed from windings and acids are de-gassed, dehydrated and removed from oil. Operating within a closed loop system, oil is refined to 'like new' condition.

Clean Harbors can arrange for onsite management or offsite disposal of electrical equipment <500 ppm PCB. Disposal capabilities are complemented and supported by our onsite draining, dismantling, rigging and transportation services. Units for disposal >500 ppm PCB (including the fluids housed in the equipment) are transported and disposed of within company owned and permitted facilities. Destruction results are certified and documented.

Remediation & Environmental Construction

Clean Harbors has constructed numerous integrated systems configured to meet site-specific cleanup criteria while satisfying air and/or water quality discharge standards. The integrated remedial systems address all aspects of surface and subsurface contamination. Clean Harbors continues to develop and implement in-situ remedial techniques, which are less intrusive to the environment and also provide sound and cost effective solutions to complex environmental conditions.

Clean Harbors has extensive qualifications, capabilities and a proven track record for handling large-scale, complex site cleanups and environmental construction needs for the public and private sectors.

Industrial Services

The fast turnaround of industrial cleaning and maintenance projects requires the right technologies, experience and care. Every project that Industrial Services performs incorporates techniques of chemistry, operational analysis and experience to identify the right process and procedure to satisfy our customers' needs. Clean Harbors Industrial Services focuses on planned cleaning activities most often associated with plant maintenance, shutdowns, routine boiler cleanouts, heat exchangers, process vessels and tanks.

Services include Vacuum Services, Sodium Bicarbonate Blasting, Hydroblasting, Onsite Material Processing, Onsite Dewatering and Pressing, Container Management, Steam Cleaning, and Chemical Cleaning.

Vacuum Services

Clean Harbors Industrial Services' specialized Vacuum Services collect and transport (wet or dry) hazardous and non-hazardous liquids and semisolid wastes. Vacuum equipment including stainless steel, carbon steel, dry and liquid units is selected based on the nature and quantity of the material to be removed. To meet the needs of our power plant, waste-to-energy, and industrial customers, the Industrial Services fleet is constantly being enhanced through the addition of new equipment.

Our highly trained staff provides service for numerous operations including fly ash, pit and sump cleanouts, site transfers, dust, catch basin, water intake, materials storage and transfer areas, power plants and physical plant maintenance, and shipyards.

Sodium Bicarbonate Blasting

Sodium Bicarbonate Blasting is a surface preparation technique that Clean Harbors Industrial Services commonly provides to a diverse customer base and a wide variety of applications including marine and architectural, the food processing industry and industrial plants. This technique is often a preferred method of cleaning since it is an environmentally friendly replacement to conventional sand or grit blasting and an alternative to chlorinated solvent applications.

Using benign-based media, sodium bicarbonate blasting safely removes any surface paint, coating or residue and is an effective method for cleaning both interior and exterior surfaces. Since sodium bicarbonate is water-soluble and environmentally safe, it cleans the most delicate surfaces while protecting workers and process equipment and its residue is easily disposed of.

Hydroblasting

Using the sheer force of water at pressures between 10,000 and 20,000 psi at a rate of 25-80 gpm, or ultra high-pressure water blasting up to 40,000 psi, Clean Harbors' Hydroblasting

Services utilize optimum pressure and flow rates with specialty tooling to handle virtually any type of project.

From the smallest heat exchanger to the largest condenser, hydroblasting returns the unit to peak performance without any of the metallurgical or hazardous waste concerns that arise with other cleaning methods. This process is extremely effective in cleaning containers not suited for other conventional cleaning methods. Hydroblasting powerfully removes material in even the hardest to reach areas. Its broad range of applications includes tanks and vessels, pipes, conduits, sewer lines, heat transfer equipment and large surfaces.

Onsite Material Processing

Material Processing on your site can help minimize your liability and disposal costs. Clean Harbors owns and operates a variety of waste minimization technologies including centrifuges, recessed chamber and belt filter presses, and mobile thermal treatment units. Through the use of our mobile thermal treatment units, we are able to remove and recover many organic compounds that may be entrained in the waste. These organics are vaporized, removed and recondensed for return to our customer. In addition, these units dehydrate the processed waste, thereby dramatically reducing the amount of material to be disposed of.

Onsite Dewatering & Pressing

Any business that generates wastewater in its manufacturing process and maintains any level of wastewater treatment system onsite (integrated complex system to simple tank or surface impoundment) can utilize Clean Harbors' dewatering and pressing services.

Surface impoundments and storage tanks that are full of sludge can limit the effectiveness of a wastewater treatment system. Clean Harbors can safely remove the sludge and reduce the volume of waste through the use of specialized dredging and dewatering equipment. Floating dredges utilize cable and winch conveyance systems to systematically move across surface impoundments for precise waste removal operations. With dredging capabilities up to 15 feet, waste can be pumped far distances to the dewatering system location. Our equipment inventory contains high and low pressure recessed chamber presses including membrane presses; our belt press inventory is comprised of various belt sizes and manufacturers and includes skid mounted and mobile units.

Our treatability lab in Houston, Texas receives representative samples of tank and surface impoundment waste and performs bench scale treatability studies to determine the most cost-effective chemistry and dewatering technology scenarios to manage the waste. Our lab provides key waste characteristics that are integral to the preparation of a comprehensive proposal and successful execution of the job.

Container Management

Clean Harbors' Comprehensive Container Management Program provides full-service container rental, transportation, waste treatment and disposal options. We coordinate all trucks transporting containers through our local service centers and logistics organization. Containers can be reconfigured to support specialty needs.

Our inspection form program tracks container maintenance needs, and our regional company facilities are utilized for ongoing preventative maintenance. Real-time tracking of our containers through a bar code labeling system increases efficiency and ensures compliance. Containers are available for immediate delivery to your site.

Steam Cleaning

Utilizing steam pressure washers ranging from 600 to 4,000 psi at 3-15 gpm and temperatures ranging from ambient to 200 degrees, Industrial Services' steam cleaning services remove all types of stains from concrete, oil from surfaces, and residues from process equipment. To maximize cleaning effectiveness, we add specialty chemicals, detergents, degreasers, mild acids and bases as needed.

Industrial Services routinely applies steam cleaning to heat exchangers, pipelines, heavy equipment, and tanks. In addition, we effectively utilize this technique in various situations including surface preparation, cosmetic cleaning (e.g. graffiti), line/equipment thawing, spill cleanups, and building decontaminations. Compared to traditional hydro-wash techniques, the volume of waste generated from steam cleaning is reduced, which may result in lower overall project costs.

Chemical Cleaning

Industrial Services begins each chemical cleaning project with a comprehensive analysis to determine the techniques best suited for the application. Chemical cleaning is an efficient, cost-effective way to remove corrosion, residual oils and greases, water hardeners, deposits and other contaminants from tainted surfaces. This process is used for passivation to eliminate fouling, oxidation, process system corrosion and decontamination of process lines and vessels.

Whether in the form of foam, liquid, vapor-phase cascading, or circulation, we incorporate the proper chemistry to eliminate deposits and scaling by identifying through bench testing, materials that are compatible with the integrity of the system being cleaned. Customers profit from reduced downtime, less process variation, and overall operating cost.

ADDITIONAL SERVICES

Apollo Onsite Services – Onsite Program Management

Clean Harbors' Apollo program places skilled technicians onsite to work in tandem with customers to deliver proper waste transportation and disposal, lab chemical packing (CleanPack), industrial cleaning and maintenance, and more. Whether a customer requires a single field technician or a multi-person team of diversified experience, Clean Harbors can design the right program to satisfy their specific needs.

Clean Harbors assigns select experienced employees with the skills and talents necessary to be members of your Apollo onsite team. Additional team members, equipment and resources are allocated based on the customer's specific needs. We utilize a hand-in-hand, team approach that leverages our extensive resources and infrastructure, including our Web-enhanced technology and online services.

By bringing our expertise and resources right to the customer, Clean Harbors' Apollo Program is the premier onsite solution that serves the dual purpose of improving customers' waste stream management and making their entire environmental program safer, more cost-effective and self-sufficient. Clean Harbors' Apollo Program brings the most extensive range of environmental services to your site:

- Trained onsite management and specialty labor resources such as lab pack chemists, environmental technicians, wastewater treatment operators, and incinerator operators
- Waste profiling, coordination, tracking (onsite/off-site), and beneficial reuse analysis, inventory and off-site shipping management
- Efficient waste treatment and processing capabilities to Clean Harbors owned and operated facilities
- Full-time onsite services including product recovery and transfer, tank cleaning including confined space entry, vacuum services, emergency response for oil/chemical spills, hydroblasting, and chemical cleaning
- Apollo Teams use Clean Harbors' proprietary software, to quickly produce inventory lists, manifests, LDR forms and labels that comply with all local, state, provincial and federal regulations
- Web-enabled systems utilize electronic profiling for multiple vendors, and ultimately provide a menu of available reports

Service Chemical, LLC

Service Chemical is a limited liability company within Clean Harbors. This full-service supplier stocks and distributes specialty and commodity chemicals and has serviced the manufacturing community since 1962. With warehousing in North Andover and Lawrence, Massachusetts, Service Chemical, LLC is a proud member of the Chemical Manufacturers Association of America and a Responsible Care® Company.

Chemical Distribution

Service Chemical, LLC is your single source for new generation and specialty solvents, industrial cleaners, commodity stocks and other raw materials. We also provide environmentally acceptable "green" chemistry alternatives to aid you in toxic use reduction and sourcing replacements for ozone depleting solvents, volatile organic compounds, flammable solvents and hazardous air pollutants.

Custom blending and formulations are available that can help improve your process. We can also formulate materials that you may be blending onsite to help reduce your handling of hazardous chemicals. Containers that meet or exceed UN and DOT regulations are available in a variety of types and sizes for shipments of your hazardous and non-hazardous material.

Raw Material Inventory Management Service

Service Chemical, LLC provides Total Chemical Management (TCM), a state-of-the-art program that offers manufacturers the ability to outsource key business activities with a high level of confidence. With TCM in place, Service Chemical handles the outsourcing of your chemical procurement and carries the burden of the associated costs, allowing you to focus on core business activities and not the regulatory burden that comes with onsite chemical storage.

We store hazardous materials off site and deliver them to your dock on a *just-in-time basis*. Minimum/maximum levels are established in conjunction with your needs and are set in our database to automatically replenish inventory based on your lead times and usage.

With the flow of all chemicals to your facilities coming from one conduit, Service Chemical's TCM solution will aid you in reducing storage, inventory-carrying cost, regulatory reporting and waste minimization due to obsolescence.

Training Services

Commercial Health & Safety and Environmental Training and Consulting Services

Clean Harbors Environmental Training Specialists teach the skills required by OSHA, RCRA and DOT to safely handle, store or transport hazardous materials. As well as training Clean Harbors' employees, the Environmental Training Department offers a number of courses to the public including:

- Hazardous Waste Handling and Management
- 24-Hour Emergency Response
- Confined Space Entry
- 40-Hour Hazardous Waste Site Operations
- Hazardous Communication/Right-To-Know
- Department of Transportation for Drivers and Hazmat Employees
- Satellite Accumulation Area Management
- Bio-Response

Customized programs designed, developed and presented by our training staff, focus on your unique training needs. These specially tailored programs can be conducted at our dedicated Environmental Training Centers, regional Clean Harbors Service Centers or on your site.

Clean Harbors *Consulting Services* will analyze your company's needs and generate recommendations that will assist you in maintaining compliance within the complex regulations that govern your industry. We offer EPA, OSHA and DOT consulting and auditing services as well as report writing and filing and multi-media regulatory consulting and audits.

Clean Harbors Online Services

Online Services

Clean Harbors' online services strategy is to provide customers with Internet access to information and applications that increase their efficiency and lower their cost to manage waste disposal. With an Online Services account, customers can profile waste streams, view truck schedules and place orders, track their waste, and obtain signed manifest copies via a password protected account at www.cleanharbors.com.

Clean Harbors Online Services are free and available 24-hours a day, seven days a week.

Online Services include:

- Waste Profiling and Management
- Waste Tracking
- Manifest Viewing
- Biennial Reporting

We have automated the waste disposal process from start to finish. To make the entire process simpler and more manageable, Clean Harbors' customers can rely on our proprietary online systems, which unify the entire process. Working on-line, customers make decisions, process paperwork and, most importantly, track their waste from their site to disposal.

Accounts are customized for the customer and are also secure. The information is confidential and is only available through password protection. Once logged on to www.cleanharbors.com, customers enter the details of their waste stream and create a profile that can be immediately submitted online for technical approval and quoting.

Waste Profiling: Secure access allows customers to select their profiles based on their current status. Customers can create new profiles, copy existing profiles and stay ahead of profile expirations. Built-in logic assists users in maneuvering easily through the profile application by providing waste codes and shipping descriptions. Additionally, hard copies of all profiles can be printed out.

Waste Tracking: Customers will receive waste tracking reports on a quarterly basis that are automatically posted to their account. Clean Harbors tracking reports contain all of the vital information necessary to confirm the final disposition of the customer's waste. Each report tracks every line item and every drum, gallon or pound shipped. Specific profiles or facility locations can be searched. Clicking on a manifest number will automatically bring up an imaged copy. Reports can be printed or downloaded and saved to a hard drive.

Manifest Viewing: With an online account, customers can view, download or print copies of their signed manifests. Upon receipt and sign off, their manifests are automatically available to them via the Internet.

Biennial Reporting: The Customer Biennial Data Extract report for large and small quantity generators provides the necessary information to assist customers in completing their State reporting requirements. Key elements of the report include receipts for all containers, manifest numbers, line numbers, source and form codes, and management methods, etc. The report is available self-serve in Microsoft Excel (XLS), Comma Separated Values (CSV) file, Adobe Acrobat (PDF), HTML and XML formats.

4.0 RISK MANAGEMENT

INSURANCE

Clean Harbors has performed various systematic evaluations of its Risk Management program. The company is confident that it has procured the appropriate insurance policies and limits to protect its interest as well as that of its customers. The policies are monitored and updated as needed to ensure that they continuously meet the requirements of the company's ongoing operations.

Our current policies include the following:

- Comprehensive General Liability
- Business Automobile Liability
- Workers' Compensation and Employers' Liability
- Umbrella Liability
- Contractors' Pollution Liability
- Environmental Impairment Liability
- Professional Liability
- Property
- Facility Closure/Post Closure Insurance

Clean Harbors' Insurance Program is managed through the Corporate Risk Management Department utilizing the brokerage services of William Gallagher Associates Insurance Brokers, Inc. All policies are purchased with Clean Harbors, Inc. as the named insured. Subsidiaries are insured under the Broad Form named insured endorsement. Additional information regarding the names of the insurers, expiration dates and policy numbers will be provided upon request.

BONDING

Clean Harbors' Surety Bonding Program is managed through the Corporate Risk Management Department utilizing the brokerage services of Skillings, Shaw & Associates. Clean Harbors has agreements in place with several surety companies that service the wide variety of contracts we perform. Each opportunity is individually evaluated and executed (bonded) with the optimal company available for the respective project (opportunity).

HEALTH & SAFETY AND ENVIRONMENTAL COMPLIANCE OVERVIEW

Organization

Clean Harbors' Environmental Health & Safety Department employs a centralized management system for the management of all health, safety and environmental compliance functions. Our professionals oversee compliance nationwide with an organization aligned with the business lines of the company. The corporate Environmental Health & Safety compliance group supports the field compliance managers, develops corporate policy, and implements the corporate compliance programs.

Continuous Improvement Philosophy and Relationship to Management Systems

One of the primary objectives of the Clean Harbors Safety and Health Program is continuous improvement. This ensures that we maintain efficient and effective internal processes, and thereby provide high quality, cost-effective services to our clients. A strong, focused, and effective Environmental Health & Safety program helps ensure that this objective is met. Towards this end, Clean Harbors has four facilities in Canada that are registered with the International Organization for Standardization (ISO) and have met the requirements of ISO 14001. The company is also pursuing OSHA Voluntary Protection Program (VPP) status at several operating locations, as well as researching the EPA's National Environmental Achievement Track Program for possible implementation at selected facilities in the United States.

Internal Audit Program

Striving for continuous improvement, the Corporate Environmental Health & Safety Audit Program also provides facility, functional, and senior management with current information on the compliance status of each Clean Harbors facility. Environmental Health & Safety staff members conduct the audits and the objective is for each auditor to not audit a facility for which they are assigned and directly responsible. The scope of the audits includes evaluation of regulations (e.g., RCRA, TSCA, CAA, CWA, OSHA, among others), Clean Harbors' operating permits, and company policies and procedures. Any deficiencies are captured in a Corrective Action Plan (CAP) and all items are tracked until each is completed.

In Canada, environmental personnel offer compliance assistance and conduct independent audits by region. The environmental regulations are provincial with emphasis on each facility's permit conditions.

Site Safety and Compliance Procedures

Clean Harbors has an extensive array of Health and Safety policies and Environmental Compliance procedures and guidelines that direct our day-to-day activities and ensure we have safe operating conditions for all of our employees and customers. These policies and guidelines are monitored and enforced as part of the daily oversight of our supervisors, as well as by the inspections and audit programs we utilize at all of our job sites and operating facilities.

Best Management Practices

The company also utilizes a Best Management Practice (BMP) concept in developing operating procedures. With this process, the broad regulatory categories affecting our operations are defined (e.g., air, water, PCB management), and a set of BMPs is written for each specific regulatory category. The BMPs are not a reiteration of the regulations, but a set of broad instructions on how the facility is to comply with the requirements of the regulatory programs. The BMPs form the basis of the facility's specific Standard Operating Procedures.

Medical Monitoring/Occupational Health/Industrial Hygiene Program

An effective Occupational Health program has always been a strong component of our employee protection efforts. By devoting specific resources to our program, Clean Harbors Environmental Services is ensuring that we not only meet the goals of this program, but we are also ensuring that improvements occur in our overall Environmental Health & Safety system and program. In addition to promoting the health and safety of Clean Harbors employees, we also believe that our service to our customers is significantly enhanced with this program as they can be assured of employee health protection and disease prevention while Clean Harbors personnel are working at their locations.

Internal Compliance Communications

The senior managers of the Environmental Health & Safety Department conduct weekly conference calls with the functional managers and the corporate support staff. In addition to this, each health, safety and compliance manager submits weekly status reports detailing significant issues. The company also utilizes an Incident Notification Program. With this program, significant incidents are communicated to the Vice President of Compliance via telephone or email within 15 minutes of occurrence. Follow-up reports are submitted within 48 hours. This information is then communicated to the senior management of the company, including the General Counsel.

On a monthly basis, a Regulatory Compliance Report is issued. This report, which includes data on Health & Safety incidents as well as key performance parameters within the environmental compliance group, is distributed to all senior managers of the company and provides a regular update on the company's performance in these critical areas. We are continuously evaluating new parameters for designation as key performance indicators.

In Canada, with the emphasis on facility manager compliance responsibility, communications are on an as needed basis in support of each facility. Monthly reports are generated for the Vice President of Environmental Compliance. Weekly discussions are held with the environmental staff and the Vice President of Environmental Compliance.

Regulatory Communications

The company proactively reviews, researches and manages regulatory developments. Specific sources of information include things such as the Bureau of National Affairs, RegScan, and CCOHS. Proactive compliance is also achieved through review of state, provincial and federal environmental compliance web sites. The process includes information gathering, regulatory analysis, determining the potential impact on the company's business and facilities, communication to the field personnel (e.g., compliance, operations, sales/marketing), providing feedback to the agencies, implementing new programs to meet any new requirements, and providing interpretive guidance on new regulations. Communication mechanisms include: Regulatory Alerts (summary analysis of proposed and final rules); Newsletters ("Readers Digest" version of regulatory initiatives); and communication from the field on state, provincial, and local issues.

Transportation Compliance

Clean Harbors' Transportation Compliance Department oversees the transport and transport-related activities by implementing and managing all applicable rules and regulations as mandated by the U. S. Department of Transportation (US DOT), Research and Special Programs Administration, Federal Motor Carrier Safety Administration, Federal Aviation Administration, Maritime Administration, Federal Railroad Administration, Transport Canada and other associated agencies at the local, state, provincial and federal level.

The Transportation Compliance Department brings 50 plus years of experience in the management of hazardous materials and driver regulations and presents and maintains a fleet of vehicles and personnel that represents the image, professionalism and service of Clean Harbors. With service encompassing an enormous geographical area, the Transportation Compliance Department monitors and maintains an entire array of transportation permits and exemptions as issued by local, state, provincial and federal agencies.

Clean Harbors' satisfactory DOT rating as well as the SafeStat measurement system status readily demonstrates the company's commitment to transportation compliance. The SafeStat measurement system is based on the performance of a motor carrier that is evaluated in four major categories identified as Accident data, Driver data, Vehicle data, and Safety Management data. This data is continuously collected, updated on a monthly basis, and is available to the public in an electronic format at **http://ai.vople.dot.gov/SafeStatMain.asp?PageN=results.**

Transportation Security has become one of the most important global concerns. Clean Harbors has devised and implemented a comprehensive Transportation Security Plan. The Transportation Compliance Department is consigned to maintain and revise the Transportation Security Plan pursuant to regulatory or internal procedural changes to maintain the continued safety of the transport of hazardous materials.

Training Compliance

Regulatory training is intended to generate and support a company-wide training program designed to achieve three objectives: Competence, Compliance, and Cost-effectiveness. The Regulatory Training Program includes elements such as a corporate training staff, a regulatory training plan, a trainer certification program, and a centralized training module tracking system.

The corporate training staff is responsible for developing and delivering courseware for the OSHA, DOT and EPA training programs. The staff also advises managers on various regulatory interpretations of the training requirements. Other responsibilities include customization of courseware to reflect job function or facility specific requirements, performing QA/QC of the delivery and content of the training conducted by both internal and external resources.

Trainer Certification Program

The company also utilizes a Trainer Certification Program. This program has been developed to ensure the quality of training delivered in the field by supervisors and managers. It is required that anyone who conducts training must be certified to do so by submitting a Trainer Application form and receiving approval from their supervisor. They must also meet prior experience requirements or attend a 3-day Train-the-Trainer course.

Training Tracking System

The training tracking system interacts with the human resource system. The system contains the regulatory training requirements for all affected positions in the company and tracks attendance at all internal or external training sessions by employee. The system is capable of producing employee-training transcripts and can alert managers of non-compliance issues.

5.0 APPENDICES

If applicable, supplemental documents will be provided separately.

Appendix 5

David T. Musselman

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Norwell, MA 02339
musselman.david@cleanharbors.com
Cell: (781) 635-9919
Office: (781) 792-5181

Professional Experience

Clean Harbors, Inc., Norwell, MA — 2011-Present
Senior Vice President and General Counsel

International Power America, Inc., Marlborough, MA — 2003 – 2011
Vice President, General Counsel and Secretary

American Electric Power Company, Inc., Columbus, OH — 2000-2003
Assistant General Counsel, Commercial and Transactional Services Group

Cinergy Corp. (now Duke Energy Corporation), Cincinnati, OH — 1989 – 2000
Senior Counsel, Regulatory, Environmental and Corporate Finance Groups

Squire, Sanders & Dempsey, Cleveland, OH — 1986 – 1989
Associate

Education

Indiana University, Kelley School of Business
M.B.A. (2001)

Case Western Reserve University School of Law
J.D., *magna cum laude*; Order of the Coif, Law Review (1986)

Albion College
B.A., Economics and Management/German (1982)
Management Internships: General Motors, Warren, MI; Hoechst AG, Bad Hersfeld, Germany

Universität Augsburg, Augsburg, Germany (1982)

Bar Admission

Ohio (1986)
Kentucky (1996)
Texas (2002)
Massachusetts (2003)
England and Wales (2011)

Professional Activities

Association of Corporate Counsel
Kentucky Bar Association
Texas Bar Association

COMMUNITY

TOWN OF SHREWSBURY, MASSACHUSETTS

Elected Town Meeting Representative (2009 – 2012)
Board of Assessors (2011 – 2012)

ALL SAINTS CHURCH

Junior Warden (2011)
Personnel Committee (2009 – 2011)
Vestry (2005 – 2008)
Finance Committee (2006 – 2009)

ST. PATRICK'S EPISCOPAL CHURCH

Vestry (2002 – 2003)

ACTIVITIES

VOLUNTEER LAWYER PROJECT

Pro Bono Attorney (1995 – 2000)

FOREIGN LANGUAGE

German

Stephen A. Bley
8285 Jordan Ridge Drive
Cleves, Ohio 45002
(513) 941-3827

EDUCATION

The University of Findlay- 1000 North Main Street, Findlay, Ohio 45840 Bachelors Degree of Science in Environmental and Hazardous Materials Management (Emphasis in Policy and Compliance) Minor in Public Administration Graduation Date: December 14, 1997

RELEVANT COURSEWORK

Emergency Management
Project Management
Risk Management
Hazardous Waste Management
Chemistry
Environmental Law and Regulations
Environmental Sampling
Properties of Hazardous Materials
OSHA 40 hour

WORK EXPERIENCE

Clean Harbors Environmental Services February 1998 to Present
Facility Compliance Manager April 2002 to Present
Major duties and responsibilities: Administrating the facility's various permits across all media (Air, Land, and Water) and directly interfaces with all regulatory authorities. Duties include RCRA Inspections, Discrepancy resolution, Training of Plant personnel, and permit modifications, facility contact for all Regulatory bodies

Clean Harbors Environmental Services April 2000 to 2002
Compliance Specialist
Major duties and responsibilities: Assisting the Compliance manager in facility compliance with all Permits. Duties include RCRA Inspections, Discrepancy resolution, Training of Plant personnel, and permit modifications

Clean Harbors Environmental Services February 1998 to April 2000
Receiving Chemist
Major duties and responsibilities: Take samples of all waste shipped to the plant, and conducted analytical tests to Fingerprint waste to determine the course of treatment for the waste.

Texo Corporation February 1995 to August 1995
Laboratory Technician
Major duties and responsibilities: Fill orders for samples by drawing on present stock or making small chemical batches.

MILITARY EXPERIENCE

June 1992 to Feb 2004 Ohio National Guard- Bravo Company 1/147 Armor

Company Executive Officer
Major duties and responsibilities: Readiness training of an Armor Company Personnel and Maintenance of all equipment
CERTIFICATONS
OSHA 40 Hour
CHMM

REFERENCES

Available upon request

Stephen Vasse | General Manager

513-932-0919
svasse@cinci.rr.com

Facility General Manager 2008-Current, *Clean Harbors Environmental, Inc*

- Responsible for all daily activities at TSDF Spring Grove Resource Recovery facility
- Manage 24 plus employees
- Accountable for all Compliance and Health regulations
- Manage Facility budget

Chemical Operations Manager 2001-2008, *Clean Harbors Environmental, Inc*

- Coordinated scheduling and processing of all material
- Directly supervised 10 employees
- Responsible for keeping facility within compliance by following EPA and DOT regulations
- Responsibilites also included waste tracking, transportation paperwork, chemical analysis and equipment operations

Plant Coordinator 1996-2001, *Clean Harbors Environmental, Inc*

- Supervised 3 people while scheduling all shipments into and out of the facility.
- Provided Cost analysis and determined profitability for final disposition of material
- Accountable that all paperwork is accurate and is in compliance with EPA and DOT regulations

Receiving Chemist 1995-1996, *Clean Harbors Environmental, Inc*

- Operate all activities related to the receipt of waste into facility
- Perform lab analysis and classify waste for treatment and disposal

Package Handler 1992-1995, *United Parcel Service, Baltimore Md 21227*

APPENDIX 6

SGRR Compliance History

On January 28, 2015, the facility self-reported that they received a waste shipment, containing nine 55-gallon drums of waste paint chips, that was incorrectly profiled and manifested as non-hazardous waste. This waste was then mixed with non-hazardous waste and shipped offsite for disposal as non-hazardous. According to the non-compliance report, the generator contacted the facility questioning if the waste should have been classified as hazardous. The facility determined that the original data was misinterpreted and the nine drums were actually hazardous for chromium. A Final Findings and Orders was issued March 3, 2016 requiring a penalty of $11,200.

On April 7, 2014 the facility self-reported that they had accepted a hazardous waste as non-hazardous and had solidified that waste on-site and then improperly disposed of the waste at a Subtitle D (non-hazardous) landfill. The waste was originally sent to the facility identified as a non-hazardous waste (on a hazardous waste manifest). On April 28, 2014 the Facility received a NOV from the OEPA for this self-reported violation. The facility was not required to excavate the waste and no further enforcement action was taken. There was no fine.

The OEPA inspected the facility on September 13, 2012. The facility was issued a NOV for not submitting an unmanifested waste report and improper labeling. During the inspection it was noted the facility received two hazardous waste shipments on non-hazardous waste manifests and one hazardous waste shipment on a hazardous waste manifest that did not properly denote the waste as hazardous. The facility subsequently improperly stored the waste as non-hazardous. It was also noted during the inspection that four hazardous waste containers were improperly marked as non-hazardous. The items were reportedly corrected (the improper labeling was corrected during the inspection). No further enforcement action was taken.

In March 2013 the facility reported an excursion on a split sample (with the MSD) of their wastewater discharge. Their analysis was over for zinc, copper and lead. This batch passed prior to discharge so the facility speculated the excursions were related to old piping which was used for this discharge (the facility used piping that had not been used in five years). These excursions were reported to the MSD and the facility subsequently received a Notice of Violation. There was no fine.

The OEPA inspected the facility on August 19, 2011 which resulted in a NOV for not following their waste analysis plan. Specifically three profiles did not have sufficient information. This did not result in any enforcement action.

The OEPA inspected the facility on March 15, 2011 which resulted in a NOV for not following their waste analysis plan. Specifically the facility is not providing sufficient information on the profiles and identifying this as generator knowledge.

The OEPA inspected the facility on August 4, 2010 and found violations for failure to properly label several containers and failure to properly sign and date one manifest. This was corrected during the inspection.

The OEPA inspected the facility on August 13, 2008 and found a violation for failure to properly label several containers. This was corrected during the inspection.

Notice of Violation letter dated December 13, 2005 for issues of Central Profiling Group's management of SGRR's profiling of wastes. This was followed with letters dated May 27, 2008, September 2, 2008, November 25, 2008, and February 4, 2011. This resulted in a fine and SGRR's agreement to add the Central Profile Group to the facility permit.

APPENDIX 7 HAS BEEN REMOVED

APPENDIX 8

Spring Grove Resource Recovery, Inc.
TSCA Closure Plan

July 26, 2016

TABLE OF CONTENTS

LIST OF FIGURES

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1.0 Introduction

1.1 Current Regulatory Status

Spring Grove Resource Recovery, Inc. (SGRR) owns and operates an existing hazardous waste storage and treatment facility at 4879 Spring Grove Avenue in Cincinnati, Ohio. The EPA I.D. number for the facility is OHD 000816629. The existing facility operates under a RCRA Part B Permit issued by the Ohio Environmental Protection Agency (OEPA) on March 6, 2013. In addition, SGRR facility holds TSCA interim authorization as a Commercial Polychlorinated Biphenyl (PCB) Storage facility.

1.2 RCRA Facility Investigation

As a RCRA Part B permitted facility, SGRR is responsible for conducting a RCRA Facility Investigation (RFI) and performing any necessary Corrective Actions (CA's) on the facility property. Under the RFI/CA process, SGRR is required to identify those areas of the site which are "solid waste management units" (SWMU's) from which there may have been a release of hazardous constituents, including PCBs. Any former PCB management areas or other part of the property which is found to be contaminated with PCB's would be considered a SWMU for the purposes of the RFI/CA program.

2.0 Purpose of the Closure Plan

In accordance with the regulatory requirements set forth by the U.S. Environmental Protection Agency (EPA) in 40 CFR 761.65(e) (3), SGRR has developed this TSCA Closure Plan as part of its commercial PCB storage facility permit application.

This Plan identifies all activities that are necessary to close each PCB management unit or the facility as a whole during any point or at the end of its intended operating life. For the purposes of this Plan, all units will be assumed to be fully active and operating at maximum capacity at the time of closure. The plan addresses decontamination of all units and areas of the facility used for PCB waste handling activities under the commercial PCB storage facility application.

The Closure Plan will be amended to reflect any changes in the maximum capacity occurring as the result of significant facility modifications or the closure of any of the individual PCB management units. All amendments to the Closure Plan will be submitted to USEPA for review and approval 40 CFR 761.65(e)(4).

The purpose of this Closure Plan is to ensure that the SGRR facility and the PCB management units within the facility are closed in a manner that minimizes the need for post-closure maintenance. This Plan has been carefully designed to eliminate the risk of post-closure escape of PCB wastes to groundwater, surface water, soil, or the atmosphere, and to prevent any threat to public health, safety, or welfare, or the environment. This plan is accompanied by a corresponding "Closure Cost Estimate" and a "Financial Assurance for Closure."

Changes in the design and operation of the commercial PCB storage facility will not be implemented until the appropriate modifications have been approved by USEPA. The facility Compliance Manager at SGRR has the responsibility to amend the Closure Plan whenever changes in operating plans, facility design or facility equipment affect the accuracy of the Closure Plan.

This Closure Plan will become effective upon issuance of SGRR's TSCA Commercial Storage Facility approval, and remain in effect until modified by SGRR and/or EPA. A copy of this Closure Plan will be maintained on file at SGRR. The Closure Plan will, as necessary, be amended in accordance with the requirements of 40 CFR 761.65(e) (4).

3.0 PCB Waste Handling Areas and Maximum Waste Inventory

3.1 Identification of PCB Waste Handling Areas

As described in the commercial PCB storage application, SGRR shall conduct PCB handling activities in numerous units throughout the facility, as follows:

A. TSCA Storage Areas

The following units are designated as "TSCA storage areas" that shall be designed in accordance with 40 CFR 761.65(b) standards.

1. High Bay – A fully-contained building used for the indoor storage and consolidation of PCB wastes in containers (e.g., drums);

B. Tank Storage Area

One 10,350 gallon steel tank

C. Vehicle Storage Areas

The following units are designated as "vehicle storage areas" where highway transportation vehicles (e.g., box trucks, flat bed trailers, rolloffs, tank trucks) containing PCB wastes may be stored for up to 30 days from the date the waste was received at the facility:

1. Rolloff Pad – five (5) vehicles and

2. Tanker Loading/Unloading Area – Two (2) vehicles

3. Truck Loading/Unloading Area (Stabilization Building) – two (2) vehicles

D. Shipping/Receiving Areas

The following units are designated as "shipping/receiving areas" for PCB waste in bulk and non-bulk form. Inbound or outbound waste may be "staged" in these areas for up to 10 days without being considered in storage:

1. High Bay Receiving Dock – A roofed dock on the northern side of the High Bay building which is used for receiving, shipping, and staging of RCRA and PCB wastes in containers; and

2. Building F Receiving Dock – A roofed dock on the northern side of Building F which is used for receiving, shipping, and staging of RCRA and PCB wastes in containers.

SGRR notes that the Truck Loading/Unloading Area (Stabilization Building H), the Rolloff Pad, and the Tanker Loading/Unloading Area identified above function as active loading and offloading areas for vehicle transporters hauling PCB wastes.

E. Other Areas

SGRR has identified several "other areas" of the facility in which PCB's may be present. These "other areas" are assets or structures that may provide support services related to SGRR's management of PCB's at the facility (e.g., a laboratory used to test samples to determine PCB concentration, etc.), but are not PCB waste storage, treatment or disposal units or processes which require a USEPA TSCA permit. The "other areas" are identified under this application so that they may be included in confirmatory PCB sampling at the time of facility closure. The "other areas" include the following units:

1. Laboratory – An analytical testing laboratory for onsite waste analysis;

2. Transportation/Receiving Building – The security checkpoint and waste shipment entrance to the facility;

3. Roadway System – An asphalt-paved roadway system on which all highway vehicles carrying PCB and RCRA waste move about the facility; and

4. "Transfer Facility" – All transportation-related areas (e.g., roadways, parking areas) at the facility. These areas are used for stoppage of highway vehicles which are "in-transit" (i.e., carrying TSCA waste that is not manifested to or from SGRR) for a period of time not to exceed 10 days in accordance with the 40 CFR 761.3 definition for "transfer facility".

3.2 Maximum Inventory of PCB Waste

The maximum waste inventory for the facility is presented in Table 1. The "maximum inventory" shall be used as the daily inventory limit for PCB waste at the site and as the basis for the TSCA closure cost estimate calculations.

SGRR notes that for the purposes of the daily inventory, any waste present in the "shipping/receiving areas" shall be counted against the "maximum inventory" for the facility. SGRR notes that PCB waste in the designated "other areas" of the facility (e.g., samples in the laboratory, in-transit vehicles) is incidental or not subject to TSCA commercial storage facility licensing requirements, and shall not be counted against the daily inventory limit.

4.0 General Closure Activities

4.1 Closure Schedule

SGRR will submit a written notice of intended closure to the USEPA at least 60 days prior to the date on which closure is expected to begin. The expected beginning closure date shall be no later than 30 days after the date on which the PCB unit receives the known final volume of PCB waste. Generators that utilize the commercial PCB storage facility will to the extent practicable, be notified at least 30 days in advance of the date that PCB waste will no longer be accepted at the unit or facility. Within ninety (90) days after the facility receives the final volume of PCB waste, all PCB waste in storage or in treatment will be removed from the site in compliance with the approved Closure Plan. All closure activities will be completed within 180 days after receiving the final volume of PCB waste at the PCB management unit or facility. Within 60 days of the completion of closure, SGRR will certify completion of closure in a written notice to USEPA. The certification of closure will be signed by SGRR and an independent professional engineer.

A closure timeline graph illustrating the relationship of these activities during the closure process is presented in Figure 1. Upon closure of the facility, all equipment and structures that have been in contact with PCB wastes will be decontaminated or demolished and transported for secure land disposal in accordance with 40 CFR Part 761. Decontamination of the facility and removal of all wastes for off-site disposal at the time of closure will eliminate the need for post-closure care. The closure schedule is for planning purposes, and intermediate time frames and completion dates may vary from those given in the schedule. The time required for completion of all closure activities for a final facility closure is estimated to be 90 days.

4.2 Inventory Removal

At closure, all PCB wastes in inventory will be prepared for transport and shipped to offsite treatment and disposal facilities in accordance with 40 CFR 761 record keeping and container standards.

The waste inventory removal methods to be utilized during all closure actions are identical to SGRR's daily operating procedures for pumping liquid, handling sludge and

Table 1
Maximum PCB Waste Inventory at Closure

A. TSCA STORAGE AREA

PCB ITEM	MAXIMUM CONTAINER/ARTICLE	VOLUME
1. Container Management Building (High Bay)		
liquid PCB, solid PCB, PCB capacitors, PCB transformers (drained)	194 55-gallon drum equivalents	10,670 gallons
2. Tank Storage Area		
Liquid PCB		10,350 Gallons

B. Vehicle Storage Areas

1. Rolloff Pad		
solid CPB	five 30 CY rolloff containers	30,295 gallons
2. Tanker Loading/Unloading Area		
liquid PCB	two 7,200 gallon bulk transporters or equivalent	14,400 gallons
3. Truck Loading/Unloading Area (Stabilization Building)		
solid PCB	two 30 CY rolloff containers	12,118 gallons
TOTAL		77,833 GALLONS

NOTE: PCB CONCENTRATION OF EACH ITEM WILL VARY. MAXIMUM CONCENTRATION IS ASSUMED TO BE 100% IN LIQUIDS AND LESS THAN 100% IN SOLIDS. SOLID PCB'S ARE DEBRIS, SAND, RAGS, SOIL, ETC.

solids, consolidating waste streams and loading bulk trailer/tanker transport vehicles. Free flowing PCB liquids in transformers will be drained and transferred to other PCB containers (e.g., drums, bulk transport vehicles, tote tanks, etc.). Similarly, drummed solids (e.g., soil, debris) shall be consolidated into rolloff containers for bulk shipment purposes. Empty drums that are no longer usable will be disposed of at authorized offsite waste disposal facilities. Emptied transformers will be shipped to a TSCA landfill or scrap metal reclaimer depending on the concentration of PCB's in the unit.

Following inventory removal, all dust and other residues will be swept or otherwise cleaned up and handled as PCB waste. Pallets used for container staging purposes will be broken down and disposed of as PCB debris.

The specific types of offsite PCB waste management facilities to be used for the disposal of SGRR's waste inventory will be based on the availability of such facilities and any advancement in PCB treatment technologies. For the purposes of cost estimation, the disposal or treatment options to be considered will include:

1. For PCB liquids, including PCB oils, solvent flush and aqueous PCB mixtures- incineration at Onyx in Port Arthur, TX.

2. For drummed capacitors, ballasts and other electrical equipment- Incineration at Onyx in Port Arthur, TX.

3. For empty transformers (>500 ppm PCB) and all PCB solids and debris (>50 ppm) – Secure chemical landfill at EQ in Belleville, MI

4. For empty transformers (<500 ppm PCB and non TSCA regulated) Scrap metal reclamation at TCI, Incorporated in Hudson, NY.

Decontamination of a PCB management unit will begin as soon as the unit is cleared of all inventory. Decontamination procedures are described in Section 5.0 below.

5.0 Description of Closure/Decontamination Activities

In Sections 5.1 through 5.4, SGRR describes the procedures and decontamination objectives for the various types of PCB handling units/structure in operation at the facility, including:

- Equipment such as tanks, pipes, pumps, and other associated Equipment (e.g., filter baskets) are used for liquid transfer activities such as drum pumping (Section 5.1);

Figure 1
Closure Schedule for Final Closure of the Facility

Day

-45 -30 0 30 60 90 120 150 180 240

Notify to OEPA/USEPA <-------------x

NOTIFICATION TO OEPA INSPECTORSX---→

Notification to Generators of Date of Last Waste Receipt <----x

Last Date of Waste Receipt x

Removal/On-site Treatment of All Hazardous Waste Inventory x --------------------→

Closure of Container Storage Areas x ------------------------------→
- Building F
- High Bay
- Building D
- Flammables Pad
- Building H

Closure of Tanker Load/Unload Area x ------------------------------→

Closure of Truck Dock Area x ------------------------------→

Closure of Tanks 5, 6, 7, 8, 9, 10 x ------------------------------→

Closure Dispersion Unit and Tank 11 x ------------------------------→

Decontamination of Compaction Unit x ------------------------------→

Decontamination of Lab x ------------------------------→

Decontamination of Wastewater Treatment System x ------------------------------→

SAMPLING AND ANALYSIS X---------→

Closure inspection and certification x --→
BY PROFESSIONAL ENGINEER

PE Certification to OEPA/USEPA x —→

- Concrete floor surfaces found in the container storage buildings (i.e., High Bay and Building F), the vehicle storage areas, and the Shipping/receiving areas (Section 5.2);

- Contaminated soil/asphalt from roadways and other non-contained Areas used for PCB management activities such as in-transit vehicle parking (Section 5.3); and

- Miscellaneous units, structures, and equipment not otherwise addressed in Sections 5.1 through 5.3 (Section 5.4).

5.1 Tank, Piping, Pumps, and Ancillary Equipment

5.1.1 Equipment and Areas to be Decontaminated

Equipment such as tanks, pipes, pumps, and other associated equipment (e.g., filter baskets) are used for liquid transfer activities such as drum pumping.

5.1.2 Decontamination/Closure Standards

Specific decontamination/closure standards which apply to the piping and ancillary equipment are as follows:

1. Pursuant to 40 CFR 761.60 (b)(6), the piping and ancillary equipment (which meet the definition of "PCB article") may be disposed at a TSCA landfill operating under 40 CFR 761.75 provided that all free flowing liquid is removed and incinerated in a TSCA incinerator operating under 40 CFR 761.70. Under this option, the pipelines, pumps, and other equipment would be disconnected, inspected for the presence of free liquids, drained if free liquids are found, and then sent offsite for disposal at a TSCA landfill.

2. If a scrap metal or non-PCB reuse option is identified, the piping and other equipment shall first be decontaminated to meet a TSCA decontamination procedure as required by USEPA regulations or USEPA Region V policy. The internal and external surfaces of all pipelines and other impervious equipment would be triple rinsed with a solvent capable of dissolving PCB's as required by 40 CFR 761.79(c). Any piping or other equipment would be drained for 15 hours. All surfaces would then be soaked with a sufficient amount of diesel fuel or kerosene (containing <2 ppm PCBs) for at least 15 hours at $\geq 20^{\circ}C$. A sufficient amount is at least 800 ml for each 100 cm^2 of surface. The diesel fuel or kerosene will then be

drained from the surfaces. All surfaces would again be soaked with a sufficient amount of diesel fuel or kerosene (containing <2 ppm PCBs) for at least 15 hours at $\geq 20^{o}C$. The diesel fuel or kerosene will then be drained from the surfaces.

3. All porous materials contaminated with PCB's such as wood, gasket material, and rubber shall be disposed at a TSCA incinerator per 40 CFR 761.70, or a TSCA landfill per 40 CFR 761.75. Contaminated porous materials will include all materials with visible staining or porous materials present in a PCB storage area.

4. All solvents and cleanup material (rags, absorbent pads, etc.) contaminated with solvent shall be incinerated at a facility in compliance with 40 CFR 761.70.

5. All tank (s) will be decontaminated per 40 CFR b761.79 ©(1).

5.1.3 Materials and Procedures for Decontamination

In all cases, the piping, pumps and other equipment shall be dismantled using wrenches and other standard hand tools. The piping and other equipment shall be visually inspected for signs of free flowing liquid. Any free liquids inside the piping or other equipment shall be containerized and shipped for offsite disposal at a TSCA incinerator.

Equipment decontamination shall be conducted inside Hig Bay or the Loading/Unloading Area (Stabilization Building). In all cases, SGRR shall take all appropriate precautions to reduce PCB contamination during closure such as lining the floor of the building with plastic sheeting.

No TSCA decontamination standard is applicable if the equipment is intended to be shipped for TSCA disposal. If a non-TSCA reuse option is selected, or if the piping and other equipment are intended fot scrap metal reclaim, it must first meet a TSCA decontamination procedure as required by USEPA regulations or by USEPA Region V policy.

5.2 Concrete Floors and Walls

5.2.1 Equipment and Areas to be Decontaminated/Closed

The equipment and area in this phase includes concrete floors and walls (up to 5' from the floor) of units such as the receiving/shipping areas, container storage building (High Bay and Building F), and vehicle storage areas.

5.2.2 Decontamination/Closure Standards

Specific closure/decontamination standards which apply to concrete floors and walls are as follows:

1. Concrete floors and walls shall be decontaminated to comply with the cleanup standard for "other restricted access areas" in 40 CFR 761.61 (a)(4)(i)(B), specifically to a TSCA cleanup level of 1 ppm PCB's by weight.

2. All solvents and cleanup material (rags, absorbent pads, etc.) contaminated with solvent shall be incinerated at a TSCA incinerator per 40 CFR 761.70. All sandblast grit and other porous residuals contaminated with PCB's at a detection limit of 1 ppm PCB shall be disposed at a TSCA incinerator per 40 CFR 761.70, or a TSCA landfill per 40 CFR 761.75.

3. Destructive sampling will be done for concrete.

5.2.3 Materials and Procedures for Decontamination/Closure

SGRR may elect to conduct pre-cleaning sampling of concrete floors and walls to determine if, in fact, they are contaminated with PCB's and require TSCA decontamination. Samples shall be collected in accordance with the grid sampling procedures described in Section 6.1 below. If the samples show a PCB concentration of less than 1 ppm, the piece shall be deemed clean and not subject to further decontamination procedures.

If necessary, TSCA decontamination shall be conducted using a solvent soak and a thorough scrub down with hard bristle brushes and brooms. Hardened residual shall be scraped off using common hand tools, and following the initial scrub down, the walls/floors shall be rinsed with clean solvent. Grid samples will be taken from the floor and walls to confirm compliance with the TSCA cleanup level of 1 ppm.

If necessary, TSCA decontamination may also be conducted by sandblasting the exposed floor/wall surfaces, and disposing of the spent abrasive grit which contains greater than 1 ppm PCB in a TSCA landfill per 40 CFR 761.75. Samples shall be taken from the floor and walls in accordance with the grid sampling procedures described in Section 6.1 below to confirm compliance with the TSCA cleanup level of 1 ppm. Because concrete is a porous surface and decontamination to a cleanup level may not be possible, it may be necessary to remove the concrete and dispose of it as a PCB remediation waste.

5.3 Soil/Asphalt

5.3.1 Areas to be Decontaminated/Closed

The facility roadway system, parking areas, and other soil/asphalt areas that are outside of concrete-lined and sealed secondary containment structures shall be included in the facility closure plan. Should a PCB spill take place on the plant traffic routes during transportation within the facility boundary line, cleanup immediately begins pursuant to 40 CFR 761.61 (a). Under this potential spill management practice, the plant traffic routes are maintained free from PCB contamination. At the closure of this facility, Clean Harbors will perform destructive random sampling from ten (10) locations as indicated on drawing 5384-C-21.

5.3.2 Investigative Sampling to Confirm PCB Contamination

Soil/asphalt areas which have been identified as having handled PCB's shall be pre-sampled to determine if PCB contamination is actually present. Ten (10) random samples will be collected in the traffic routes. Refer to drawing 5384-C-21. All soil contaminated with less than 1 ppm PCB's shall be considered to be clean and not requiring further decontamination/closure. Any soil/asphalt results which show a PCB concentration equal to or greater than 1 ppm shall be considered to be PCB contaminated and shall be excavated and disposed as described in Section 5.3.3 below.

5.3.3 Excavation of PCB Contaminated Soils

5.3.3.1 Decontamination Criteria

Specific decontamination/closure standards which apply to the soil are as follows:

1. In accordance with 40 CFR 761.61 (a)(4)(B) soil contaminated with PCB's shall be excavated to 1 ppm PCB's by weight. All soil contaminated with less than 1 ppm PCB's shall be considered non-TSCA regulated.

5.3.3.2 Materials and Procedures for Decontamination/Closure

The nonimpervious asphalt topping and the first ten inches of underlying soil within the outdoor container storage areas shall be excavated, removed, and disposed in a TSCA landfill per 40 CFR 761.75 if the PCB concentration is greater than 1 ppm PCB's. Following the excavation, SGRR shall collect soil samples taken inside each construction area to confirm compliance with the cleanup standard of 1 ppm PCB's by weight. If the 1 ppm cleanup level is not achieved after removal of the top ten inches of soil, soil excavation and sampling shall be repeated in 6-inch lifts until 1 ppm or less is met.

The asphalt topping and the first ten inches of underlying soil within designated construction areas shall be excavated, removed, and disposed at a properly licensed waste management facility. Excavation in each area shall continue to the depth required to complete the intended construction activity. Any "hot spots" identified during subsequent excavation activities shall also be removed and disposed. Excavation of "hot spots" shall be deemed complete when no further visual evidence of a "hot spot" is encountered.

5.4 Decontamination/Closure

For the designated "other areas" where PCB's are to be handled, the following decontamination/closure procedures shall apply:

- Laboratory: Removal and disposal of all PCB samples, contaminated glassware and debris, followed by a solvent washdown of the walls, floors, And workbenches similar to the procedures for floors and walls described in Section 5.1 above. The washdown will be followed by sampling of the cleaned surface in accordance with the sampling procedures described in Section 6.2 below.

- Roadway System: Shall be decontaminated/closed as described in Section 5.3 above.

Any remaining area, structure, piece of equipment, or other device that is contaminated with PCB's shall be subject to decontamination and closure using the procedures analogous to described in Section 5.1 through 5.3 above, in accordance with 40 CFR Part 761, and/or as directed by USEPA Region V.

6.0 Sampling Procedures

6.1 Statistical Sampling Program for PCB's

A PCB Sampling Program will be conducted after removal of PCB wastes and waste containers from the site (per 40 CFR 761, Subparts N and P) and prior to initiating PCB cleanup activities. Where the initial samples exceed the appropriate levels for high occupancy areas (40 CFR 761.6 1 (a)(4)), cleanup and/or demolition and removal of materials will be conducted, until cleanup objectives are met. After each cleanup of an area, additional sampling will be conducted, per requirements of 40 CFR 761, Subpart 0, to verify that cleanup objectives have been met.

All floor and wall surfaces, as well as all containment structure surfaces, will first be visually inspected to identify any potential hot spots. This visual inspection will include both PCB storage and processing areas, areas through which PCB's are transported, and areas that might have inadvertently been contaminated by workers (restrooms, lunch rooms, etc.). This, along with the physical sampling program described below, will assist in identifying those areas or structures requiring cleaning or removal to achieve a clean closure of the PCB storage and associated areas. Locations exhibiting suspicious stains will be marked for sampling, cleanup, or removal.

The pre-cleanup sampling program will include the following:

A. PCB storage and processing areas.

Initial sampling will be conducted on a three-meter grid of all concrete surfaces, per 40 CFR 761, Subpart N (any re-sampling will be conducted in accordance with 40 CFR 761, Subpart 0). The sampling and quality assurance procedures described in USEPA Region 1 publication, "Draft Standard Operating Procedure for Sampling Concrete in the Field", 12/1/97, will be followed in conducting the bulk sampling. As suggested by this procedure, a sampling depth of ½ inch will be used, so that the sample taken at each sampling location may be considered a 'surface sample' (i.e., the concrete between 0 and ½ inch will be removed for analysis). In order to get sufficient sample material in each sample for analysis, each sample may be a composite of cores drilled at the sampling location to a depth of ½ inch - a total sample volume of about 35 cm^3 will be produced at each sample location. Each composite sample will be sufficiently large to allow analysis to the levels specified in 40 CFR 761.61 (a)(4). An equipment blank and field duplicate will also be produced, along with the samples taken in each storage/processing area to assure the integrity and accuracy of the sampling procedures.

Sampling of soil surfaces in PCB storage/processing areas will also be conducted on a 3 meter grid, per Subpart N (re-sampling will be conducted per Subpart 0). The soil will be sampled to a depth of 12". As in item 1 above, the soil removed will be composited to produce a sample large enough to meet the required analytical level. An equipment blank and field duplicate will also be produced, along with the samples taken in each storage/processing area to assure the integrity and accuracy of the sampling procedures.

Any non-porous surfaces in the PCB storage/processing areas will be sampled per 40 CFR 761, Subpart P. Large, nearly flat surfaces will be divided into 1 meter grids and each 1 meter square samples via a wipe sample of 100 cm^2 within the 1 meter square (761.302(a)). The location of the sample location in each 1-meter square will be determined per 761.304. Small, irregular surfaces will be sampled via wipe sample, also be produced along with the samples taken in each storage/processing area to assure the integrity and accuracy of the sampling procedures.

B. Traffic areas and other potentially contaminated areas in and around each building.

1. Thirty-seven (37) wipe samples and thirty-seven (37) solid samples will be taken in the potentially contaminated areas (loading/unloading, traffic areas to/from PCB storage areas, and employee areas such as restrooms, locker rooms and lunchrooms) within and around each building where PCB's

are stored/processed. Resampling will be conducted as necessary to verify cleanup of contaminated areas previously identified. An equipment blank and field duplicate will also be produced along with the samples taken in each storage/processing area to assure the integrity and accuracy of the sampling procedures.

All sampling and analysis documentation will be maintained by SGRR for a period of at least three years from the sampling date. If the sample results are equal to or below the cleanup levels specified in 40 CFR 761.61(a)(4) for high occupancy areas (10 micrograms/ 100 cm^2 for surface wipe samples and 1 ppm for the bulk samples), no further actions will be taken. Where these levels are not met, the areas will be cleaned and/or material removed for offsite disposal; until resampling of the area indicates that these levels have been met.

6.2 Wipe Testing Protocol

Wipe testing shall be performed and interpreted as follows:

1. Wipe samples should be taken of smooth, relatively non-porous surfaces (metal, glass) and concrete for conformance testing.
2. A 100 cm^2 template shall be placed on the area to be tested (except for interior pipe sampling).
3. The wiping medium shall be a gauze pad, glass wool or filter paper which has been saturated with hexane.
4. Collection and testing of field blanks and replicates shall be carried out in accordance with standard laboratory practices.
5. The analytical procedures to be used are SW 846 8082A & 3540.
6. Results from wipe tests must be less than 10 micrograms per 100 square centimeters (except for interior pipe sampling).
7. If results are higher than 10 micrograms per 100 cm^2, the areas must be re-cleaned and testing repeated until contamination levels are less than 10 micrograms per 100 cm^2 unless USEPA Region V approval is given to encapsulate these areas.

6.3 Destructive Sampling Protocol

Destructive sampling of solid samples shall be performed and interpreted as follows:

1. Destructive samples should be taken of hard porous surfaces (e.g., concrete, brick, asphalt) and soil/gravel.

2. Samples should be obtained using hammer, chisel, drill or hole saws and piston core, bulb planter, hand auger or King-tube sampler for soil/gravel.

3. Concrete cores should be taken to a depth of 0.5 inches. The sample size should be approximately 35 cm^3. Soil samples should be taken to a depth of 12 inches. The soil will be composited to produce a sample large enough to meet the required analytical level.

4. Collection and testing of field blanks and replicates shall be carried out in accordance with standard laboratory practices.

5. Results from destructive tests must be less than 1 miligram per kilogram.

6. If results are higher than 1 miligram per kilogram, the areas will be disposed in a TSCA landfill until results below 1 miligram per kilogram are found.

6.4 Analytical Methodology

1. A measured volume or weight of sample is extracted using the appropriate matrix specific sample extraction technique.

2. Liquid samples may be extracted at neutral pH with methylene chloride using either Method 3510 (separatory funnel), Method 3520 (continuous liquid-liquid extractor), Method 3535 (solid-phase extraction), or other appropriate technique or solvents.

3. Solid samples may be extracted with hexane-acetone (1:1) or methylene chloride-acetone (1:1) using Method 3540 (Soxhlet), Method 3541 (automated Soxhlet), Method 3545 (pressurized fluid extraction), Method 3546 (microwave extraction), Method 3550 (ultrasonic extraction), Method 3562 (supercritical fluid extraction), or other appropriate technique or solvents.

4. Tissue samples may be extracted using Method 3562 (supercritical fluid extraction), or other appropriate technique. The extraction techniques for other solid matrices may be appropriate for tissue samples.

5. Extracts for PCB analysis may be subjected to a sequential sulfuric acid/potassium permanganate cleanup (Method 3665) designed specifically for these analytes. This cleanup technique will remove (destroy) many single component organochlorine or organophosphorus pesticides. Therefore, this method is not applicable to the analysis of those compounds. Instead, use Method 8081.

6. After cleanup, the extract is analyzed by injecting a measured aliquot into a gas chromatograph equipped with either a narrow- or wide-bore fused-silica capillary column and either an electron capture detector (GC/ECD) or an electrolytic conductivity detector (GC/ELCD) (SW 846 8082A).

6.5 Health & Safety

All sampling activities will be conducted within the context of the facility's Health and Safety Plan, Training Plan and Contingency Plan to ensure that appropriate levels of personnel training, monitoring and protective equipment are maintained throughout pre-closure sampling process. All contaminated sampling debris and residuals will be containerized and disposed as PCB waste along with the PCB waste inventory.

6.6 Decontamination Criteria

The PCB management units are more than 0.1 kilometers away from a residential/commercial area and are surrounded by a manmade barrier (chain link fence). The units contain both low-contact and high-contact industrial surfaces. The surfaces which will undergo decontamination (e.g.: floors, walls, curbing) are non-impervious solid surfaces such as concrete and gravel.

All PCB storage areas will be decontaminated in accordance with 40 CFR 761.61 (a)(4) standards. All solid surfaces shall be cleaned to a level of 1 ppm. If at any time after closure, this area is converted to a low occupancy area as a result of decreased exposure of people or animals in or at this site, an owner of this area must clean up the site, meeting the low occupancy area cleanup level in compliance with 40 CFR 761.61 (a)(4)(i) and (ii).

The verification cleanup standard for nonporous surfaces is less than 10 micrograms per 100 cm^2 as measured by a standard wipe test (40 CFR 761.123).

7.0 Certification of Closure

Within 60 days of the completion of closure activities for a particular unit or the facility in general, SGRR shall, by certified mail or by hand-delivery, submit in writing to EPA a certification signed by SGRR and an independent professional engineer that the facility has been closed in compliance with the requirements of this Closure Plan.

8.0 Closure Cost Estimate

SGRR has prepared a detailed cost estimate for the TSCA closure activities described in this Plan. A copy of the TSCA Closure Cost Estimate is included in Appendix 9 of the Commercial PCB Storage Facility Application.

Per 40 CFR 761.65 (f)(2), the TSCA closure cost estimate will be revised annually to account for inflation. The closure cost estimate will also be adjusted following any modification to the closure plan which increase the cost for closure.

9.0 Financial Assurance for Closure

SGRR will provide suitable financial assurance for TSCA Closure Cost Estimate prior to final issuance of the facility's Commercial PCB Storage Facility Permit. The TSCA financial assurance mechanism shall, at a minimum be valued to reflect any cost TSCA closure which is in addition to any RCRA closure cost estimate. A copy of the TSCA financial assurance mechanism is included in Appendix 10.

Appendix 9

Spring Grove Resource Recovery, Inc.
TSCA Closure Cost Estimate

July 26, 2016

1.0 TSCA Units Undergoing Closure

Individual cost estimates are presented in Section 3.0 for the following TSCA management units proposed for PCB management activities at Spring Grove Resource Recovery, Inc. (SGRR):

Section / Unit

3.1 Building B (High Bay) Container Storage Area (Annex III)
3.2 Building H (Stabilization Building) Truck Storage Area
3.3 Tank Truck Loading/Unloading (30-day Area)
3.4 Rolloff Pad (30-day Area)
3.5 Building F Containment Structure
3.6 Building B (High Bay) Containment Structure (& Future Storage)
3.7 Other Areas - Roadway System & Laboratory
3.8 Tank storage Area

2.0 Pricing and Assumptions

2.1 Disposal Facilities/Pricing

The following disposal facilities and costs are used to calculate closure cost estimates. These figures represent third-party transportation and disposal costs as of September 2015.

Disposal Facility	Disposal	Transportation	Total
a. Onyx—Port Arthur, TX TSCA Incineration			
- PCB oils, solvent flush, aqueous PCB mixtures	\$2.12/gal	\$0.53/gal	\$2.65/gal
- drummed capacitors, ballasts, electrical equipment	\$1.27/lb	\$0.06/lb	\$1.33/lb
b. EQ—Belleville, MI TSCA Secure Chemical Landfill			
- PCB solids/debris	\$115/cy	\$32/cy	\$147.00/cy
- PCB transformers	\$8.97/cf	\$2.28/cf	\$11.25/cf

2.2 Labor, Equipment, and Analytical Charges

The following labor cost and equipment costs represent charges that would be incurred during a third-party closure of SGRR. The figures reflect August 2002 costs for labor and equipment in the greater Cincinnati, OH area.

Labor

a. work crew (1 supervisor @$680/day, 3 laborers @ 440/day/man) = $ 2,000/day

Equipment

a.	Miscellaneous Supplies (Brooms, squeegees, shovels, protective clothing, etc.)	= $ 128/day
b.	Portable Drum Crusher	= $ 128/day
c.	vacuum truck with operator	= $ 1025/DAY
d.	Rolloff Container (30 cubic yards)	= $ 128/day

Analytical

a.	wipe samples	= $ 64/sample
b.	soil/solid/liquid samples	= $ 141/sample

2.3 General Assumptions

1. Where possible, all wastes will be consolidated onsite and shipped to the ultimate treatment/disposal facility in bulk form. The rate of repacking/consolidation is approximately 100 55-gallon drums per work crew per day.

2. The floors and walls of the containment basin/pad undergoing decontamination will be cleaned using a suitable solvent (e.g., hexane, diesel fuel, No. 2 heat oil, etc.) and scrubbing brooms, followed by a solvent rinse. All cleaning residues and rinsate waters will be collected and shipped offsite for treatment/disposal. The total volume of solvent used in the cleaning and rinsing process is equal to 1% of the containment volume of the unit undergoing decontamination.

3. All empty drums will be crushed onsite using a portable drum crusher unit and shipped offsite in 30-CY rolloff containers. For cost estimation purposes, it is assumed that 1 crushed drum occupies a volume of 3 cubic feet or 0.11 cubic yards.

4. All pallets will be broken down and shipped offsite in 30-CY rolloff containers. For cost estimation purposes, it is assumed that 1 pallet occupies a volume of 4 cubic feet or 0.15 cubic yards.

5. All materials and equipment used as part of onsite decontamination activities (e.g., pumps, hoses, drum crusher, etc.) shall be adequately decontaminated after use. The cost for such decontamination is assumed to be $3,200 per PCB unit.

6. Sampling costs are included in labor costs. Analytical costs are separately accounted.

7. Liquid density is assumed to be 9.0 lb/gal. Solid density is assumed to be 2000 lb/yd3

3.0 Unit-Specific Closure Costs

3.1 Building B (High Bay) Container Storage Area (Annex III)

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Consolidation and Preparation for Shipment				
Labor	1 crew	2 days	2000 $/day	4000
Equipment				
- Vacuum truck	1 unit	2 days	1025 $/day	2050
- Rolloff	1 unit	2 days	128 $/day	256
- Drum Crusher	1 unit	2 days	128 $/day	256
- Miscellaneous	1 unit	2 days	128 $/day	256
Labor and Equipment Subtotal				6818
B. Disposal				
Liquids				
- bulk	49 drums	55 gal/dr	2.65 $/gal	7150
Solids				
- transfer/sol	114 drums	7.35 cf/dr	11.25 $/cf	9431
- drum caps/bal	31 drums	440 lb/dr	1.33 $/lb	18184
Debris				
- crushed drums	194 drums	0.11 cy/dr	147.00 $/cy	3147
- pallets	49 units	0.15 cy/unit	147.00 $/cy	1085
Disposal Subtotal				38997
C. Storage Bay Decontamination				
Labor	1 crew	1 day	1984 $/day	1984
Equipment				
- Miscellaneous	1 unit	1 day	128 $/day	128
- Decontamination	1 unit	1 unit	3200 $/unit	3200
Analytical				
- Pre-Cleanup	1 bay	84 sample/bay	141 $/sam	11844
- Wipe Samples	1 bay	37 sample/bay	64 $/sam	2368
- destructive	1 bay	37 sample/bay	141 $/sam	5217
- disposal	34 gallons	1 unit	2.65 $/gal	90
Decontamination Subtotal				24831
GRAND TOTAL				70646

Notes:

1. The TSCA storage area is designed to hold up to 194 55-gallon drums. At closure, drums containing free-liquids or bulk solids will be consolidated into bulk liquid tanks or rolloff containers, while drums containing capacitors/ballasts or other types of electrical equipment will be shipped in their original container.

For cost estimation purposes, it is assumed that the distribution of drums among the various categories of PCB waste (i.e., liquid, solid/transformers, capacitors/ballasts) at SGRR's sister facility, Clean Harbors of Braintree, Inc. in Braintree, MA as follows:

Category	% of all PCB received	Assumed number for Closure estimate (based on 194 total)
Liquid	25	49
Solids/Transformers	59	114
Capacitors/ballasts	16	31
Total	100	194

2. The floor and wall surfaces of each storage unit are adequately decontaminated through solvent wash and a thorough scrub down with hard bristle brushes and brooms.

3. The amount of solvent for the floors and walls is equal to 1% of the total containment volume of the structure. Per the calculations shown on SGRR Drawing No. 5384-S-03, the containment volume for the Building B (High Bay) storage bay is 3,374 gallons. Therefore, the solvent used is 34 gallons [(.01)(3374)= 34].

4. Emptied liquid/solid drums will be crushed onsite and placed into three 30 cubic yard roll off containers along with wooden pallets (194/4 = 49) and decontamination residuals (e.g.: brooms, squeegees, protective equipment, etc.)

5. Post-closure analysis consists of 37 random wipe samples and 37 random destructive samples taken in conformance with the USEPA "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup", May 1986.

3.2 Building H (Stabilization Building) Truck Storage Area

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Truck Consolidation and Preparation for Shipment				
labor	1 crew	1 day	2000 $/day	2000
Equipment				
- Miscellaneous	1 unit	1 day	128 $/day	128
Consolidation And Preparation Subtotal				2128
B. Truck Disposal				
solids	2 rolloffs	30 cy/rolloff	147 $/day	8845
Disposal Subtotal				8845
C. Truck Decontamination				
Labor	1 crew	1 day	2000 $/day	2000
Equipment				
- Miscellaneous	1 unit	1 day	128 $/day	128
- Decontamination	1 unit	1 unit	3200 $/unit	3200
Analytical				
- Pre-Cleanup	1 bay	299 sample/bay	141 $/sam	42159
- floor	1 bay	37 sample/bay	64 $/sam	2368
- destructive	1 bay	37 sample/bay	141 $/sam	5217
- disposal	148 gallons	1 unit	2.65 $/gal	392
Decontamination Subtotal				50136
GRAND TOTAL				61109

Notes:

1. Truck Storage Area is designated as a waste vehicle storage area used for the storage of up to 2 bulk solids rolloff containers for PCB solids.

2. The floor of Truck Storage Area is impervious concrete which can be decontaminated through a solvent soak and a thorough scrub down with hard bristle brushes and brooms. The amount of solvent used to decontaminate the unit is equal to 1% of the total containment volume of the structure.

3. Post-closure analysis consists of 37 radom wipe samples and 37 random destructive samples taken in conformance with the USEPA "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup", May 1986.

4. Decontamination of Rolloffs and Tankers will be triple rinsed per 40 CFR 761.79(c)(1). The same diesel rinse will be used for all rolloffs and tankers. Costs for sampling and decontamination in 3.2, 3.3 and 3.4 are included in 3.4.

3.3 Tank Truck Loading/Unloading (30-day Area)

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Consolidation and Preparation for Shipment				
labor	1 crew	1 day	2000 $/day	2000
Equipment				
- Miscellaneous	1 unit	1 day	128 $/day	128
Consolidation And Preparation Subtotal				2128
B. Disposal				
Liquid				
- bulk	2 trucks	7200 gal/truck	2.65 $/gal	38160
Disposal Subtotal				38160
C. Decontamination				
Labor	1 crew	1 day	2000 $/day	2000
Equipment				
- Miscellaneous	1 unit	1 day	128 $/day	128
- Decontamination	1 unit	1 unit	3200 $/unit	3200
Analytical				
- Pre-Cleanup	1 bay	272 sample/bay	141 $/sam	38352
- Wipe Samples	1 bay	37 sample/bay	64 $/sam	2368
- destructive	1 bay	37 sample/bay	141 $/sam	5217
- disposal	128 gallons	1 unit	2.65 $/gal	339
Decontamination Subtotal				51604
GRAND TOTAL				91892

Notes:

1. Tank Truck Loading/Unloading 30-Day Area is a designated waste vehicle storage area used for the storage of up to 2 of the following: (i) bulk liquid transport vehicles, each with a capacity of 7,200 gallons, (ii) flat bed trailers, each holding 100 transformers of various sizes, and/or (iii) bulk solids rolloff containers for PCB solids. For "worst case" closure cost estimation purposes, SGRR has assumed that the area contains 2 bulk liquid transporters containing 7,200 gallons of PCB liquids requiring TSCA incineration.

2. The floor of Tank Truck Loading/Unloading 30-Day Area is impervious concrete which can be decontaminated through a solvent soak and a thorough scrub down with hard bristle brushes and brooms. The amount of solvent used to decontaminate the unit is equal to 1% of the total containment volume of the structure. As shown in SGRR Drawing No. 5384-S-03, the total containment volume of the Tank Unloading Area is 12,741 gallons. Therefore, the total solvent used is 128 gallons [(0.01)(12,741)= 128 gals].

3. Post-closure analysis consists of 37 random wipe samples and 37 random destructive samples taken in conformance with the USEPA "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup", May 1986.

4. Decontamination of Rolloffs and Tankers will be triple rinsed per 40 CFR 761.79(c)(1). The same diesel rinse will be used for all rolloffs and tankers. Costs for sampling and decontamination in 3.2, 3.3 and 3.4 are included in 3.4.

3.4 Rolloff Pad (30-day Area)

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Consolidation and Preparation for Shipment				
labor	1 crew	1 day	2000 $/day	2000
Equipment				
- Miscellaneous	1 unit	1 day	128 $/day	128
Consolidation And Preparation Subtotal				2128
B. Disposal				
solids	5 rolloffs	30 cy/rolloff	147 $/day	22050
Disposal Subtotal				22050
C. Storage Bay Decontamination				
Labor	1 crew	1 day	2000 $/day	2000
Equipment				
- Miscellaneous	1 unit	1 day	128 $/day	128
- Decontamination	1 unit	1 unit	3200 $/unit	3200
Analytical				
- Pre-Cleanup	1 bay	368 sample/bay	141 $/sam	51888
- destructive	1 bay	37 sample/bay	141 $/sam	5217
- disposal	128 gallons	1 unit	2.65 $/gal	339
Decontamination Subtotal				62772
D. Rolloff and Tanker Decontamination				
Labor	1 crew	1 day	2000 $/day	2000
Equipment				
- Miscellaneous	1 unit	1 day	128 $/day	128
Diesel		800 gal	$1.92/gal	1536
Diesel Trans and Disposal		800 gal	$2.65/gal	2120
Analytical	27	3/vehicle	$141/sam	3807
Subtotal				9591
GRAND TOTAL				96541

Notes:

1. Rolloff Pad 30-Day Storage is a designated waste storage parking areas used for the storage of up to five (5) bulk solids rolloff containers for PCB solids.

2. The floor of Rolloff Storage Area is impervious concrete which can be decontaminated through a solvent soak and a thorough scrub down with hard bristle brushes and brooms. The amount of solvent used to decontaminate the unit is equal to 1% of the total containment volume of the structure. As shown in SGRR Drawing No. 5384-S-03, the total containment volume of the Rolloff Pad is

12,741 gallons. Therefore, the total solvent used is 128 gallons [(0.01)(12,741)= 128 gals].

3. Post-closure analysis consists of 37 random wipe samples taken in conformance with the USEPA "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup", May 1986.

4. Decontamination of Rolloffs and Tankers will be triple rinsed per 40 CFR 761.79(c)(1). The same diesel rinse will be used for all rolloffs and tankers. Costs for sampling and decontamination in 3.2, 3.3 and 3.4 are included in 3.4.

3.5 Building F Containment Structure

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Waste Consolidation and Disposal - Not Applicable; see Note 1.				
B. Decontamination				
Labor	1 crew	3 days	2000 $/day	6000
Equipment				
- Miscellaneous	1 unit	3 days	128 $/day	384
- Decontamination	1 unit	3 days	3200 $/unit	9600
Analytical				
- Pre-Cleanup	1 bay	272 sample/bay	141 $/sam	38352
- floor	1 bay	37 sample/bay	64 $/sam	2368
- destructive	1 bay	37 sample/bay	141 $/sam	5217
- disposal	94 gallons	1 unit	2.65 $/gal	249
Decontamination Subtotal				62170
GRAND TOTAL				62170

Notes:

1. Building F is not intended for future storage and handling activities involving containers of PCB's. Since Building F is not an active PCB storage unit, the closure cost estimate does not reflect the cost associated with inventory removal. However, since the unit was previously used for the storage of PCB's, the closure cost estimate includes the cost for decontamination of the secondary containment structure in which containers of PCB waste are staged.

2. Per the containment calculations shown in Appendix 11 of the TSCA Application, the total secondary containment volume of Building F is 9,324.5 gallons. Therefore, the volume of rinsewater is (0.01)(9,324.5 gal.) or 94 gallons.

3. Post-closure analysis consists of 37 random wipe samples and 37 random destructive samples taken in conformance with the USEPA "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup", May 1986.

3.6 Building B (High Bay) Containment Structure (& Future Storage)

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Waste Consolidation and Disposal - Not Applicable; see Note 1.				
B. Floor Space Decontamination - See Note 2				
Labor	1 crew	7 days	2000 $/day	14000
Equipment				
- Miscellaneous	1 unit	7 days	128 $/day	896
- Decontamination	1 unit	7 days	3200 $/unit	22400
Analytical				
- Pre-Cleanup	1 bay	272 sample/bay	141 $/sam	38352
- floor	1 bay	37 sample/bay	64 $/sam	2368
- destructive	1 bay	37 sample/bay	141 $/sam	5217
- disposal	125 gallons	1 unit	2.65 $/gal	331
Decontamination Subtotal				83564
GRAND TOTAL				83564

Notes:

1. Building B (High Bay) is intended to be used for storage and handling activities involving containers of PCB's. However, the active PCB storage and handling activities inside High Bay shall be limited to no more than 194 55-gallon drums (or equivalent) within the designated PCB area on the east side of High Bay until such time that: (i) SGRR notifies U.S. EPA Region V of its intent to utilize additional part of High Bay for PCB storage and (ii) additional closure costs (for the disposal of additional inventory) are estimated and secured by an appropriate financial assurance mechanism.

2. Since the High Bay expansion is a future (not active) PB storage unit, the closure cost estimate need not reflect the cost associated with inventory removal. However, since te entire floor area of High Bay was previously used for the storage of PCB's the closure cost estimate includes the cost for decontamination of the secondary containment structure in which containers of PCB waste are staged.

3. Per the containment calculations shown in Appendix 11 of the TSCA Application, the total secondary containment volume of Building B is 12,445 gallons. Therefore, the volume of rinsewater is (0.01)(12,445 gal.) or 125 gallons.

4. Post-closure analysis consists of 37 random wipe samples and 37 random destructive samples taken in conformance with the USEPA "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup", May 1986.

3.7 Other Areas - Roadways & Laboratory

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Waste Consolidation and Disposal - Not Applicable; see Note 1.				
B. Roadway Decontamination - See Note 2				
Labor	1 crew	2 days	2000 $/day	4000
Equipment				
- Miscellaneous	1 unit	2 days	128 $/day	256
- Decontamination	1 unit	2 days	3200 $/unit	6400
Analytical				
- soil/asphalt	2 zones	37 sample/zone	141 $/sam	5217
Decontamination Subtotal				15873
C. Laboratory Decontamination - See Note 3				
Labor	1 crew	1 day	2000 $/day	2000
Equipment				
- Miscellaneous	1 unit	1 days	128 $/day	128
- Decontamination	1 unit	1 unit	3200 $/unit	3200
Analytical				
- wipe	1 round	37 sample/rnd	64 $/sam	2368
- solid	1 round	37 sample/rnd	141 $/sam	5217
Decontamination Subtotal				12913
GRAND TOTAL				28786

Notes:

1. The Roadway System and Laboratory are not TSCA storage units. There is no inventory of PCB waste to be disposed.

2. The exact number and location of PCB samples for the roadway system will be taken in conformance with the USEPA "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup", May 1986. Given the size of the roadway system, the cost estimate provides for 2 zones of sampling.

3. The exact number and location of PCB samples for the laboratory will be taken in conformance with the USEPA "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup", May 1986. Given that the nature of the floors, walls, and other surface areas in the laboratory are both pervious/impervious, the cost estimate provides sampling for both types.

3.8 Tank Storage Area

Item	Number	Time/Quantity	Unit Rate	Item Cost
A. Consolidation and Preparation for Shipment				
labor	1 crew	0.5 day	2000 $/day	1000
Equipment				
- Miscellaneous	1 unit	1 day	128 $/day	128
Consolidation And Preparation Subtotal				1128
B. Disposal				
Liquid				
- bulk	2 trucks	10350 gal	2.65 $/gal	27427
Disposal Subtotal				27427
C. Decontamination				
Labor	1 crew	0.5 day	2000 $/day	1000
Equipment				
- Miscellaneous	1 unit	1 day	128 $/day	128
- Decontamination	1 unit	1 unit	3200 $/unit	3200
Analytical				
- decon solvent	1 tank	3/tank	141 $/sample	423
- Pre-Cleanup	1 bay	444 sample/bay	141 $/sam	62604
- destructive	1 bay	37 sample/bay	141 $/sam	5217
- disposal	1035 gallons	1 unit	2.65 $/gal	2742
Decontamination Subtotal				75314
GRAND TOTAL				103869

Notes:

1. The tank is used for the storage of up to 10,350 gallons of PCB liquid. For "worst case" closure coist estimation purposes, SGRR has assumed that the tank contains 10,350 gallons of PCB liquids requiring TSCA incineration.

2. Closure per 40 CFR 761.79(c)(1) involves triple washing with a suitable solvent. SGRR intends to use diesel fuel. Therefore 10% of 10,350 gallons is 1,035 gallons. It is assumed that the same 1,035 gallons can be used for each of the three washes required (i.e., PCB < 50 ppm).

4.0 Inspection and Certification by Professional Engineer

SGRR will retain an independent Professional Engineer (P.E.) to inspect and certify that the closure activities have been completed in accordance with the approved Closure Plan. It is assumed the cost for the P.E. will be 40 hours at $128 per hour or $5,120.

5.0 Summary of Closure Costs

5.1 TSCA Closure Cost Estimate

Using the unit-specific cost estimates calculated above, the total cost for full TSCA closure (i.e., removal of maximum PCB inventory and decontamination of PCB storage units) at SGRR is:

Unit		Unit Cost
3.1	Building B (High Bay) Container Storage Area (Annex III)	70646
3.2	Building H (Stabilization Building) Truck Storage Area	61109
3.3	Tank Truck Loading/Unloading (30-Day Area)	91892
3.4	Rolloff Pad (30-Day Area)	96541
3.5	Building F Containment Structure	62170
3.6	Building B (High Bay) Containment Structure (& Future Storage)	83564
3.7	Other Areas - Roadway System & Laboratory	28786
3.8	Tank Storage Area	103869
4.0	Professional Engineer Certification	5120
Subtotal		603697
Contingency Factor (5%)		30185
Grand Total		633882

APPENDIX 10

CleanHarbors
ENVIRONMENTAL SERVICES®

Clean Harbors Environmental Services, Inc.
221 Sutton Street
North Andover, MA 01845
978.683.1002
www.cleanharbors.com

VIA FEDERAL EXPRESS (TRN 777168218864)

September 7, 2016

Ms. Lisa Graczyk
RCRA/TSCA Programs Section
U.S. EPA Region 5
77 W. Jackson Blvd. (LR-8J)
Chicago, IL 60604

RE: Insurance Policy Renewal / Annual Inflation Increases

Clean Harbors PPM, LLC, Ashtabula, OH	EPA ID # OHD981093420
Clean Harbors PPM, LLC, Twinsburg, OH	EPA ID # OHD986975399
Spring Grove Resource Recovery, Inc., Cincinnati, OH	EPA ID # OHD000816629
Clean Harbors Pecatonica, LLC, Pecatonica, IL	EPA ID # ILD980502744

Dear Ms. Graczyk:

Enclosed please find two (2) original signed Certificates of Insurance issued by Indian Harbor Insurance Company for the above-referenced Clean Harbors facilities. The policy under which the certificates are issued, PEC0042030, has been renewed effective September 6, 2015 for one (1) year. The renewed policy number is PEC004203003.

Additionally, the TSCA closure coverages provided by the insurance policy have been increased for inflation, effective September 6, 2016. The inflation increases were calculated by multiplying each current cost estimate by the inflation factor 1.010. This inflation factor was calculated by dividing the annual Implicit Price Deflator (IPD) for Gross National Product (GNP) for 2015 (109.868) by the annual IPD for GNP for 2014 (108.800). These IPDs were obtained on July 13, 2016 from Table 1.1.9 (Implicit Price Deflators for Gross Domestic Product) published by the U.S. Department of Commerce's Bureau of Economic Analysis.

Clean Harbors PPM, LLC (Ashtabula, OH)

TSCA Closure: $ x 1.010 = $1,454,452

Clean Harbors PPM, LLC (Twinsburg, OH)

TSCA Closure: $ x 1.010 = $761,110

Spring Grove Resource Recovery, Inc.

TSCA Closure: $ x 1.010 = $356,736

Clean Harbors Pecatonica, LLC

TSCA Closure: $ x 1.010 = $129,144

If you have any questions or require any additional information regarding this submittal, please feel free to contact me at 978-687-5042 or at bellm@cleanharbors.com.

Sincerely,

Wallace M Bell

Wallace M. Bell
Compliance Manager
Clean Harbors, Inc.

Enclosures

OHIO CERTIFICATE OF INSURANCE
FOR CLOSURE OR POST-CLOSURE CARE

Name and Address of Insurer (herein called the "Insurer"):	Indian Harbor Insurance Company Seaview House 70 Seaview Avenue Stamford, CT 06902-6040
Name and Address of Insured (herein called the "Insured"):	Clean Harbors, Inc. 42 Longwater Drive Norwell, MA 02061
Facilities Covered:	EPA Identification No. OHD 981-093-420 Clean Harbors PPM, LLC 1302 West 38th Street Ashtabula, OH 44004 TSCA Closure Costs: $1,454,452 EPA Identification No. OHD 986-975-399 Clean Harbors PPM, LLC 1672 E. Highland Road Twinsburg, OH 44087 TSCA Closure Costs: $761,110 EPA Identification No. OHD 000-816-629 Spring Grove Resource Recovery, Inc 4879 Spring Grove Ave, Cincinnati, OH 45232 TSCA Closure Costs: $356,736
Face Amount:	$22,088,858
Policy Number:	PEC004203003
Effective Date:	September 6, 2016

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for closure for the facility (ies) identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of 40 CFR 761.65(g)(5), 264.143(e), and 264.151(e) as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Regional Administrator of the U.S. Environmental Protection Agency (EPA), the Insurer agrees to furnish to the EPA Regional Administrator a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is substantially equivalent to the wording specified in 40 CFR 264.151(e) as such regulations were constituted on the date shown immediately below.

MaryAnn Susavidge
Vice President

Authorized Representative of: Indian Harbor Insurance Company
Seaview House
70 Seaview Avenue
Stamford, CT 06902-6040

Signature of witness or notary: Lynda A. Sergeant

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Lynda A. Sergeant, Notary Public
Uwchlan Twp., Chester County
My Commission Expires June 19, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Date: 9-2-16

CERTIFICATE HOLDER

Regional Administrator
U.S. Environmental Protection Agency Region V
77 West Jackson Blvd.
(DT-8J)
Chicago, IL 60604-3590

Bell, Wallace M

From:	trackingupdates@fedex.com
Sent:	Thursday, September 08, 2016 11:50 AM
To:	Bell, Wallace M
Subject:	FedEx Shipment 777168218864 Delivered

Your package has been delivered

Tracking # 777168218864

Ship date:		Delivery date:
Wed, 9/7/2016		Thu, 9/8/2016 10:45 am
Wallace Bell Clean Harbors Env Services North Andover, MA 01845 US	Delivered	**Ms. Lisa Graczyk** U.S. EPA - Region 5 77 W. Jackson Blvd. (LR-8J) RCRA/TSCA Programs Section CHICAGO, IL 60604 US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	777168218864
Status:	Delivered: 09/08/2016 10:45 AM Signed for By: R.WEEKS
Signed for by:	R.WEEKS
Delivery location:	CHICAGO, IL
Delivered to:	Mailroom
Service type:	FedEx Standard Overnight
Packaging type:	FedEx Envelope
Number of pieces:	1
Weight:	0.50 lb.

APPENDIX 11

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
(SPCC Plan)

For

SPRING GROVE RESOURCE RECOVERY INC.
CLEAN HARBORS INC.
4879 Spring Grove Ave.
Cincinnati, Ohio 45232-1975

Note: This plan supercedes the existing plan dated March 2009 and incorporates the requirements of the SPCC Rules 40 CFR 1 12, as amended to be effective January 14, 2010.

Prepared for :
Spring Grove Resource recovery, Inc.
Clean Harbors Inc.
4879 Spring Grove Ave.
Cincinnati, Ohio 45232

Reviewed by:
Arun Lakhani, P.E.
Clean Harbors Environmental Services, inc.
2605 Egypt Road
Trooper, PA 19403

Certification

I hereby certify that I have examined the facility, and being familiar with the provisions of 40 CFR, Part 112, and attest that the SPCC Plan has been prepared in accordance with good engineering practices.

J.W. CALDWELL
Printed Name of registered Engineer

Signature of Registered Engineer

Date	Registration No.	State
04/05/2013	20907	Sc

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 20907
04/05/13
JOHN WILLIAM CALDWELL

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
(SPCC Plan)

For

SPRING GROVE RESOURCE RECOVERY INC.
CLEAN HARBORS INC.
4879 Spring Grove Ave.
Cincinnati, Ohio 45232-1975

Note: This plan supercedes the existing plan dated July 2003 and incorporates the requirements of the SPCC Rules. 40 CFR 1 12, as amended to be effective September 5, 2008.

Prepared for :
Spring Grove Resource recovery, Inc.
Clean Harbors Inc.
4879 Spring Grove Ave.
Cincinnati, Ohio 45232

Reviewed by:
Arun Lakhani, P.E.
Clean Harbors Environmental Services, Inc.
2605 Egypt Road
Trooper, PA 19403

Certification

I hereby Certify that I have examined the facility, and being familiar with the provisions of 40 CFR, Part 112, attest that the SPCC Plan has been prepared in accordance with good engineering practices.

ARUN M. LAKHANI
Printed Name of registered Engineer

Signature of Registered Engineer

Date	Registration No.	State
3/23/09	PE-046789-E	PA

ARUN LAKHANI

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
(SPCC plan)
For

SPRING GROVE RESOURCE RECOVERY INC.
CLEAN HARBORS INC.
4879 Spring Grove Ave.
Cincinnati, OH 45232-1975

MANAGEMENT APPROVAL

This SPCC Plan has the complete support of the management at Clean Harbors Environmental Services, and will be implemented as herein described. I am at a management level with authority to commit the necessary resources.

Signature: ____________

Name: Steve Vasse

Title: General Manager

Emergency Phone numbers

Spill Prevention Control Coordinator:
Steve Vasse (Home) 513-932-0919
(Cell) 513-200-7572

Alternate:
Steve Bley (Home) 513-941-3827
(Cell) 513-616-7248

Other Telephone Numbers:

Cincinnati Fire Department	513-241-2525 911
Ohio Environmental Protection Agency	800-282-9378
National Response Center	800-424-8802
US Coast Guard	513-684-3295
Clean Harbors (Cincinnati) After hours	513-681-6242 800-343-4244

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN (SPCC PLAN)

For

SPRING GROVE RESOURCE RECOVERY INC.
CLEAN HARBORS INC
4879 Spring Grove Avenue
Cincinnati, OH 45232-1975

Part I **SPCC Plan**

The information contained in this SPCC Plan has been developed in accordance with the "General Requirements for Spill Prevention, Control, and Countermeasure Plans "as described in 40 CFR 112.7 and 112.8 as amended to be effective on January 14, 2010.

112.7(a)(1) **Discussion of Facility's Conformance**

This plan has been prepared in accordance with good engineering practices and is subject to the full approval of management at a level of authority to commit the necessary resources to fully implement the Plan. The information is presented in the same alphanumeric sequence as specified in 40CFR 112.7 and 112.8

112.7(a)(2) **Compliance with Requirements**

This plan complies with the applicable rule requirements including those for secondary containment.

121.7(a)(3 **Facility Description**

Name and Location:

Spring Grove Resource Recovery, Inc.
4879 Spring Grove Avenue
Cincinnati, OH 45232-1975
Tel. (513) 681-6242

Owner:

Clean Harbors Environmental Services, Inc.
42 Longwater Drive
Norwell, MA 02061
Tel. (781) 792-5000

<u>Facility Description</u> (Cont.)
Spring Grove Resource Recovery Inc., (SGRRI), is a hazardous waste storage and treatment facility located in the community of Winton Place under jurisdiction of Cincinnati, Ohio located at 4879 Spring Grove Avenue. The facility resides on approximately 8 acres of land owned by Clean Harbors at the intersection of Spring Grove Avenue (to the east) and Chickering Avenue (to the north). The nearest body of water is located approximately ¼ mile to the west, identified as the Mill Creek. (The Mill Creek is not known to be a navigable waterway).

SGRRI's facility is located on land owned by Clean Harbors. A plot plan is shown as Figure 1 with the areas where oil/PCBs may be stored. Fixed storage, relative to this SPCC Plan, is all above ground and specifications on each tank are attached.

Operations at SGRRI consist of organic fuels blending, wastewater treatment, stabilization/solidification, transfer, storage, and consolidation of drummed waste and bulk chemicals, including PCB's for bulk shipment to off-site licensed facilities for ultimate disposal.

112.7(a)(3)(i) <u>Type of Oil & Storage Capacity</u>

There are a total of 17 above-ground storage tanks located in five different areas throughout the facility. All 17 above-ground storage tanks are currently in service.

Many storage tanks contain products that are not oil or oil-related. These tanks are included in the tables for informational purposes only, and do not fall under the SPCC Plan regulations.

Drummed waste is also temporarily stored in several warehouses throughout the property. These containers are all in the process of being received or being shipped off site as part of Clean Harbors Environmental Services' normal course of business. No drums are permanently stored at the facility. All drums, while at the facility, are either stored within buildings that provide containment, or are stored on pallets providing containment.

Drummed waste is also temporarily stored in trailers parked around the facility. These containers are all in the process of either being received, or shipped off site, as part of Clean Harbors Environmental Services' normal course of business. Because these trailers leave the property in the course of business at the facility, they are considered transportation related, and do not fall within the SPCC regulations. No trailers containing drummed waste are permanently stored at the facility.

All bulk tanks, which are the focus of this SPCC Plan, have either secondary containment dikes or are located within buildings with concrete floors and berms at the doorways.

The designed tank capacities for each area are as follows:

AREA A – Frac Tank Located On the Tanker Pad

Tank	Contents	Maximum Tank Volume	Material of Construction
Frac	water/oil	20,000 gal	Carbon Steel

Secondary Containment volume 8450 gallons

Total: 1 tank 20,000 gal

AREA B – Fuel Tank/drums Located in Highbay – Building B

Tank Contents	Maximum Tank Volume	Material of Construction
Diesel Fuel	275 gal	Carbon Steel
Oil/Water/PCBs	55 gal	Carbon Steel or Polyethylene

Secondary Containment volume 13,180 gallons

Total: 1 Tank 275 gal
Up to 2395 55-gal Drums

AREA C – Drums Located on the Flammables Pad – Building H

Tank Contents	Maximum Tank Volume	Material of Construction
Oil/Water	55 gal	Carbon Steel or Polyethylene

Secondary Containment volume 27,150 gallons

Total: Up to 4936 55-gallon drums

AREA D. Drums Located in Building F

Tank	Contents	Maximum Tank Volume	Material of Construction
Oil/Water		55 Gal	Carbon Steel or Polyethylene

Secondary Containment volume 35, 124 gallons

Total: Up to 6384 55-gallon drums

AREA E – Tanks Located Within Diked Tank Farm

Tank	Contents	Maximum Tank Volume	Material of Construction
TK1	water/leachate	10,500 gal	Carbon Steel
TK2	water/leachate	10,500 gal	Carbon Steel
TK3	water/leachate	10,500 gal	Carbon Steel
TK4	water/leachate	10,500 gal	Carbon Steel

Total: 42,000 gallons

Secondary Containment volume 143,368 gallons

AREA F – Fuel Tank Located in Yard

Tank	Contents	Maximum Tank Volume	Material of Construction
Diesel Fuel		275 gal	Carbon Steel
Diesel Fuel		10,000 gal	Double-Wall Carbon Steel
Total:	1 Tank	275 gal.	

Secondary Containment volume 275 gallons

112.7(a)(3)(ii) Discharge Prevention Measures

Truckloads entering the facility are directed to the loading/offloading area that is designed to contain the maximum volume that could be spilled from any tank truck compartment. Loading/unloading only takes place at designated places, where containment is provided, and only by or under the supervision of trained CHES employees. The facility will follow loading/unloading procedures that meet the DOT regulations, at a minimum. Tank trucks are not to be filled at such an extent that sudden bumps or swerves will cause oil spillage. Prior to filling and departure of any tank truck, the lower most drain on all outlets of such vehicles are closely examined for leakage while in transit. All drivers inspect the truck and tank level for sufficient volume to handle the load.

Tank mounted level monitoring and level indication equipment is present on all bulk tanks, and will be addressed by storage area, in the following section.

No buried piping is in use at this facility.

Pipelines leading to tanks that are wither not in service, or that are in standby service for an extended time, are closed off by a manual ball valve, whose handle is then removed, to prevent accidental transfer.

All exposed pipes and their supports are adequately designed to minimize abrasion and corrosion and allow for expansion and contraction.

All valves and pipelines are visually inspected as part of the daily inspection plant conducted by the compliance department and operations personnel.

There is no exposed piping that can be inadvertently damaged by vehicular traffic.

112.7(a)(3)(iii) <u>Discharge or Drainage Controls</u>

There is no hard piped or "engineered" drainage system from any of the facility's containment areas/process area. There are no flapper type drain valves used to drain diked areas of the facility. Rainwater collected in containment areas is removed via manual controlled pumps no later than 24 hours after the cessation of a rainfall event. In most cases, the rainwater will be processed in the on site wastewater treatment plant.

Rainwater that does not fall in a processing area (i.e. Parking Lot) is not collected and thus is allowed to naturally run-off or flows to storm water sewers on site. The storm sewers (combined system) flow to the same Cincinnati Metropolitan Sewer District for treatment. These outfalls are fitted with manually controlled valves that are normally in the closed position to prevent spilled materials from entering the storm sewer.

There is no direct discharge into open watercourses. All water is visually inspected to assure no oil is present prior to opening the valve.

The tanker Pad, Area A, is a bermed area sloped toward a blind sump. In the event of a spill exceeding the volume of the sump, the liquid overflows to a pit with a capacity of 8,450 gallons. Storm water entering this pit is manually pumped out and treated through the wastewater treatment system.

Areas B, C, and D are located within bermed areas inside buildings. Any oil released in these areas would be contained within the secondary containment. Area B has four separate containment areas with a total capacity of 13,180 gallons. Area C has a secondary containment capacity of 27,150 gallons. Area D has five containment areas with a total capacity of 35,124 gallons.

The Tank Farm, Area E, is a diked area with a total secondary containment volume of 143,368 gallons. This is adequate containment for each of the tanks and the rainfall from a 25-year, 24-hour storm. Storm water entering this pit is manually pumped out and treated through the wastewater treatment system.

112.7(a)(3)(iv) <u>Countermeasures for Discharge Discovery</u>

Operating procedures of the facility are geared towards minimizing the occurrence of oil spills. However, equipment failure and/or human error can lead to oil releases. In the event of an accidental discharge or spill of oil or hazardous materials, the immediate objective is to contain the spill to the smallest possible area and to properly decontaminate the area prior to resuming operations.

In the event of a spill, facility employees who have been specially trained will form the spill response team. These personnel will respond to the situation with the necessary equipment to control the spill as quickly as possible. The general procedures for spill control and the duties and actions of the spill response team are described below.

General spill response will include the following:

a. Isolate the spill area to prevent further spill migration and surface contamination. (This isolation will also prevent surface waters from flowing from or into the spill area.)

b. Collect the spilled materials by the use of pumps and/or absorbent material.

c. Clean up the spill area by removing the absorbing agents, waste materials, and any contaminated soils. The contaminated soils, absorbing agents, and spilled materials will e managed at an appropriate on-site disposal facility.

d. All equipment employed during the spill response operations will be decontaminated and restored to its pre-emergency state.

The Spring Grove Facility has developed a Facility Contingency Plan to be followed in case of a discharge at any of the oil management areas at the facility. This plan is located on site.

112.7(a)(3)(v) Methods of Disposal of Recovered Materials

Any leaks, or minor spills that accumulate in the diked areas are removed via pump or vacuum truck and then treated.

112.7(a)(3)(vi) Contact List and Phone Numbers

In the event of a spill, discharge, fire explosion or other emergency, the following company personnel have been designated to serve as "Spill Prevention Control Coordinators". The coordinators are familiar with all aspects of this plan, the activities, operations, and layout of the Spring Grove Facility and the locations of the emergency equipment within the facility. The Coordinators are authorized to commit the full resources needed to respond to an emergency situation and are listed in the order which they are to be notified.

Spill Prevention Control Coordinator:

Steve Vasse	(Home)513-932-0919 (Cell) 513-200-7572

Alternate:

Stephen Bley	(Home) 513-941-3827 (Cell) 513-616-7248

Other Telephone Numbers:

Fire/Police/Ambulance	911
Ohio Environmental Protection Agency	800-282-9378
National Response Center	800-424-8802
US Coast Guard	513-684-3295
Clean Harbors (Cincinnati)	513-681-6242

after hours 800-343-4244

112.7(a)(4)Response Plan

A Response Plan is not required for this Facility. However, related information and requirements for mitigating and reporting a discharge are found in the Clean Harbors Spring Grove Facility Contingency Plan.

112.7(a)(5)Plan Organization

This Plan has been organized such that all appropriate personnel and their phone umbers are easily accessible to other facility personnel in the event of a spill event. All procedures are listed in the Contingency Plan should a discharge occur, and is easily accessible to all facility personnel.

112.7(b) Spill Potential

All storage tanks at the facility containing oil/PCB related products are located within diked areas. A listing of all storage tanks, grouped by location, including the tank contents and capacities is included in Section 112.7(a)(3)(i) above. A description of the spill potential from each of these areas is discussed in Section 112.7(a)(3)(iii) above. Should a failure occur which lead to a discharge beyond the containment systems, it would follow local contours and flow into locked storm drains.

112.7(c)(1)Containment and/or Diversionary Structures (Onshore Facilities)

All tanks have epoxy sealed concrete, secondary containment dikes around them. Absorbent is used to contain and remove minor spills. Larger spills, once contained by dikes, are removed with on site pumps and or vacuum trucks. Sorbent materials to contain minor spills are kept in spill control supply areas. The containment and/or diversionary structures in place at the facility are fully described to Section 112.7(a)(3)(iii) above.

112.7(c)(2)Containment and/or Diversionary Structures (Offshore Facilities)

Not Applicable

112.7(d) Practicability of Installed Containment Structures

The containment systems described herein have been designed and constructed so that any discharge from a primary containment vessel, such as a tank or pipe, will not escape the containment system before cleanup occurs. In addition, the Spring Grove Facility ahs developed a Contingency Plan.

112.7(e) Inspections, Tests, and Records

Company personnel shall make continuous visual inspection of all seams, gaskets, etc. while they are in the process of performing their routine functions. One employee is assigned to visually inspect the tanks and all related equipment (i.e., valves, pipelines) at least once a week. A signed record is kept of these inspections. See the sample Inspection Form, Attachment I

112.7(f) Personnel, Training, and Discharge Prevention Procedures

112.7(f)(1) Personnel Training

The Clean Harbors Spring Grove Facility has a SPCC Plan Log that is maintained as part of the facility RCRA inspection plan. It is signed by the inspector and kept on site for at least three years. See Attachment 3.

All plant personnel are trained to operate and maintain the plant equipment properly. This is the responsibility of the Spill Prevention Control Coordinator (Emergency Coordinator). Most important, all employees are required to call to attention of the coordinator through the supervisor, immediately all malfunctioning equipment and any other potential cause of a spill. All equipment throughout the plant is inspected for malfunction of a regular basis and recorded in the Inspection Form. Review and safety meetings are held monthly for all employees and are recorded on the training Record, Attachment 2. spill prevention briefings are held simultaneously with monthly safety meetings.

112.7(f)(2) Designated Person

The Facility Manager is responsible for ensuring that all workers complete the training program outlined above. The individual is responsible for oil spill prevention. The Current Facility General Manager is Steve Vasse.

112.7(f)(3) Discharge Prevention Briefings

All personnel receive an annual refresher course on the SPCC Plan and the Contingency Plan, spill clean-up procedures and other specific topics, which is documented on the Training Record, Attachment 2.

112.7(g) Security

Clean Harbors maintains a Site Security Plan, which is required by and included in the facility's RCRA Part B Permit. This Plan describes the general security measures taken by Clean Harbors in order to preclude unauthorized entry to the site. Specific security measures are discussed below.

112.7(g)(1) Perimeter Fencing

The site is fully fenced with a guard stationed at the main reentrance. A guard is present at the gate at all times

112.7(g)(2) Master Flow and Drain Valves

There are no master flow or drain valves that if opened would permit direct outward flow of the products stored to the surface ground, or dike floor.

112.7(g)(3) Pump Controls

Starter controls for all pumps are located in secure areas, accessible only to authorized personnel.

112.7(g)(4) Loading and Unloading Connections

All pipes that are not in service are either removed from the pipe racks or capped.

112.7(g)(5) Facility Lighting

The facility is well lit by yard floodlights to permit after sunset operations and enable discovery of spills and deter vandalism.

112.7(h) Facility Tank Truck Loading/Unloading

112.7(h)(1) Containment Systems

Tank truck loading/unloading procedures meet the minimum requirements of the Department of Transportation. Copies of the procedures are available by the appropriate company personnel. Transfer operations are to be performed only in designated areas designated for such activities. Tank truck loading and unloading activities are only conducted within areas having berms, which are designed to contain the maximum volume that could be spilled from any tank truck.

112.7(h)(2) Disconnection of Transfer Lines

All drivers are required to do a circle check of the vehicle before departing with a vehicle. This includes checking to ensure transfer lines have been disconnected.

112.7(h)(3)<u>Tank Truck Inspection</u>

Prior to filling and departure of any tank car or tank truck, the lowermost drain of all outlets of such vehicles are closely examined for leakage, and if necessary, tightened, adjusted or replaced to prevent leakage while in transit. All drivers are requi4ed to do a circle check of the vehicle before departing with a vehicle.

112.7(i)<u>Brittle Fracture Evaluation</u>

If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure due to brittle fracture, an evaluation of such risks will be made the appropriate actions taken as necessary.

112.7(j)<u>Additional Discharge Prevention and Containment Procedures</u>

In addition to the discharge prevention and containment procedures described in this Plan, a complete discussion of conformance with the applicable State and local rules and regulations may be found in the Clean Harbors Spring Grove Facility Contingency Plan.

Electronic security systems are in operation throughout the facility to aid in the discovery of potential discharges. All tanks contain monitoring systems such as ultrasonics, liquid gauge, and visual gauges to prevent discharge. The level controls and instrumentation is described in detail in section 112.8© below.

<u>Subpart B – Additional Requirements for Petroleum Oils and Nonpetroleum Oils</u>

112.8(a) <u>General Requirements for the SPCC Plan</u>

The Clean Harbors Spring Grove Facility has met the requirements for the SPCC plan under 112.7

112.8(b) <u>Facility Drainage</u>

112.8(b)(1)<u>Drainage From Diked Storage Areas</u>

No engineered or "hard piped" drainage exists from diked areas (process areas). Rainwater collected in containment areas is removed via a manual control pumps no later that 24 hours after the cessation of a rainfall event.

In most cases, the rainwater will be processed in the onsite wastewater treatment plant.

112.8(b)(2)Manual Valve Use For Diked Areas

There is no "flapper" type or automatic drain valves used to drain diked areas of the facility.

112.8(b)(3)Drainage from Undiked Areas

Facility drainage from undiked areas beyond the containment systems would follow local contours and flow into locked storm drains.

112.8(b)(4)Control of Drainage from Undiked Areas

The storm drains at the facility that collect drainage from undiked areas are equipped with valves that will prevent rainwater (or discharges) from exiting the facility. These valves are kept in the closed and locked position. Accumulated waters are inspected for the presence of oil before being opened.

112.8(b)(5)Treatment of Drainage Waters

Drainage waters collected form diked storage areas are treated on site through the waste water treatment system.

112.8(c) Bulk Storage Containers

112.8(c)(1)Compatibility

All bulk storage containers used for the storage of oil are of material and construction that is compatible with the material stored and conditions of storage, such as pressure and temperature.

112.8(c)(2)Secondary Means of Containment

Refer to 112.7(a)(3)(iii) above for complete descriptions of the secondary containment systems.

112.8(c)(3)Drainage of Uncontaminated Rainwater

112.8 (c) (i.) No uncontaminated rainwater from containment areas is drained or discharged into a storm drain, into an open lake or pond or bypassing the facility treatment system. There are no bypass valves from containment areas.

112.8 (c) (ii.)	Rainwater collected in containment areas is inspected for contamination and if clean is pumped to the on-site stormwater treatment system. If contaminated, the water is removed via a vacuum truck and then shipped "off-site" to a licensed facility for disposal.
112.8 (c) (iii.)	N/A- there are no bypass valves from containment areas.
112.8 (c) (iv.)	All records of any discharge events are filed and any records required under permits are kept in accordance with 122.41 (j) and 122.41(m)(3).

112.8(c)(4)<u>Buried Tanks</u>

There are no buried tanks at the Clean Harbors Spring Grove Facility.

112.8(c)(5)<u>Partially Buried Tanks</u>

There are no partially buried tans at the Clean Harbors Spring Grove Facility.

112.8(c)(6)<u>Tank Integrity Testing</u>

The aboveground tanks are continuously inspected by facility personnel for signs of possible deterioration, leaks that may cause a spill, or accumulation of oil inside diked areas during their normal work activities. Records of these inspections are kept in the facility operating records in the compliance department office. All valves to individual tanks are valved-off after working hours. Non-destructive thickness tests of steel bulk tanks are performed annually.

112.8(c)(7)<u>Heating Coils</u>

There are no internal heating coils at this facility.

112.8(c)(8)<u>Instrumentation</u>

Tanks within the tank farm are monitored for high level via a radar system. In addition, the tanks in the Tank Farm are tied into a Panalarm Control Panel that has an audible alarm at a high-level condition. The wastewater-receiving tank and the diesel tank each have a visual level gauge. To reduce the possibility of overfilling, the reserve of any tank to be filled must be checked before filling. A portable frac tank located on the tanker pad may also be used for temporary storage. The volume is checked manually, measuring the outage prior to filling.

The tanks located in the tank farm have high liquid levels tied to pump interlocks, shutting down pumps at a level before the tank overflows.

There is an audible alarm in the tank farm when tank levels reach a high set point.

All tanks have a fast response system for determining the liquid level of each bulk storage with direct reading gauges, radar, liquid gauges, and/or visual gauges, as described by Area in 112.7 (a) (3) (iii). In addition, all tank areas have video surveillance and recording for constantly attended operation and surveillance.

112.8(c)(9)Effluents from Treatment Facilities

The water treatment facility is monitored to detect possible system upsets that could cause a discharge.

112.8(c)(10)Visible Discharges

Any visible discharges will be promptly corrected including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts. Any accumulation of oil in diked areas will be promptly removed.

112.8(c)(11)Mobile Storage Containers

All mobile or portable oil storage containers (55 gallon drums) have a secondary means of containment by either being stored within buildings providing containment, or by being placed on containment pallets. A frac tanks used for storage (which is considered a mobile storage container) is staged in an area that provides secondary containment.

112.8(d) Facility Transfer Operations, Pumping, and Facility Process

In the event that a release from a tank had occurred, the removal of the released material from the secondary containment structure would be conducted. Major equipment maintained on-site for containment and cleanup of released materials in the event of a spill/failure consists of pumps, vacuum equipment and adsorbents. Spill control equipment will include solidification reagent, rakes, shovels and empty 55-gallon drums. Other spill equipment will include chemical resistant boots and gloves, eyewear, hard hats, respirators, safety lights, and combustible gas indicators. These materials will be used whenever a spill or leak of tank contents occurs to both control and contain the spill. The spill control equipment is located in key areas of the facility.

Clean Harbors has developed standard procedures to follow when unloading materials on the Tanker Pad. These procedures were established to decrease the likelihood of a spill caused by human error or equipment malfunction. These procedures are as follows:

a. Verify the tanker volume to be transferred.

b. Measure tank that material will be transferred to, and record starting measurement on the transfer ticket.

c. Verify by these two measurements that sufficient space exists in the designated tank to accommodate the tanker volume.

d. Ensure vehicle is braked securely.

e. Line up valves on appropriate pump to unloading tank.

f. Hook up flex hose to truck and appropriate pump.

g. Confirmation by supervisor that hose, piping, and valve configuration is correct.

h. Open valves on truck, making sure there are no leaks.

i. Activate pump and monitor flow of material to verify material is pumped.

j. Monitor tank until truck is empty.

k. Rinse truck to the same tank that material was unloaded, as appropriate, once truck is empty.

l. Disconnect flex hose and rinse with water.

m. Shut all valves

n. Take measurement on tank, record on transfer ticket. Calculate gallons and compare to manifest for accuracy.

Spills or drips that occur during this operation are collected within the spill containment trench or cleaned up by the use of adsorbents. Any material collected is properly processed for on-site or off-site disposal. A supply of absorbent materials is available for cleanup of spilled materials. Shovels and open-top drums are available for use in cleaning up chemicals, absorbent materials, and soil from the spill area.

The most likely scenario for a release would be a small leak that would spill onto the base before the personnel could completely shut off all the transfer mechanisms. Such a release would easily be contained within the confines of the truck pad.

112.8(D)(1) **Underground Piping**

There is no buried piping in use at this facility.

112.8.(d)(2) **Out of Service Piping**

See 112.7(a)(3)(ii)

112.8(d)(3) **Pipe Supports**

See 112.7(a)(3)(ii)

112.9(d)(4) **Inspection**

See 112.7(e)

112.9(d)(5) **Vehicle Warning**

There are no aboveground pipelines which would be accessible to incoming traffic associated with the oily waste tanks. The flexible vacuum hose lines used to transfer wastes from tanker trucks to the building interior are not put out or connected to the appropriate flanges/hookups until the delivery vehicle is properly positioned, parked and shut off. There is no exposed piping that can be inadvertently damaged by vehicular traffic.

END

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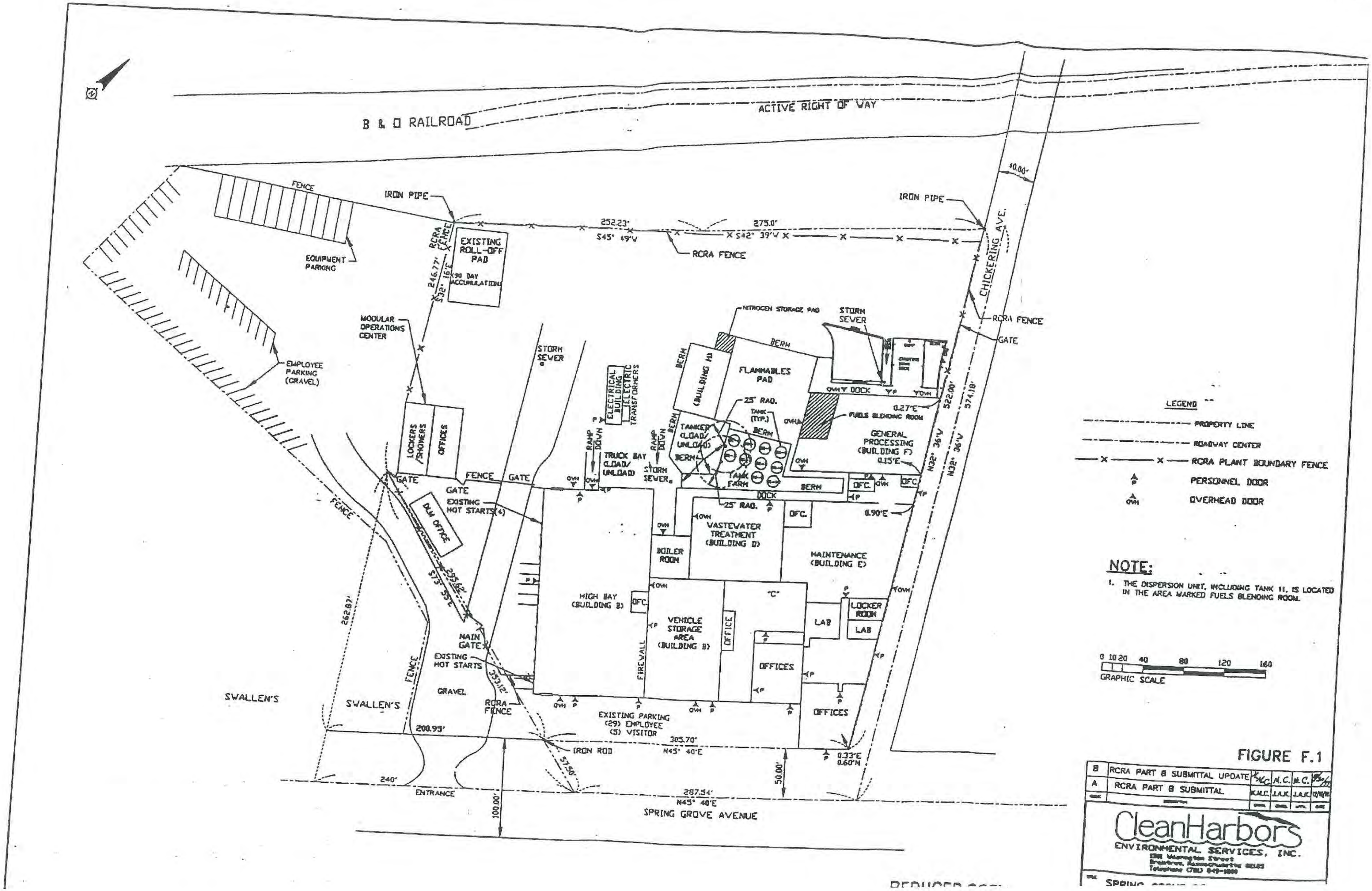
B & O RAILROAD
ACTIVE RIGHT OF WAY
CHICKERING AVE.
SPRING GROVE AVENUE
IRON PIPE
IRON PIPE
FENCE
EQUIPMENT PARKING
EMPLOYEE PARKING (GRAVEL)
RCRA FENCE
252.23'
S45° 49'W
275.0'
S42° 39'W
RCRA FENCE
EXISTING ROLL-OFF PAD
(90 DAY ACCUMULATION)
246.77'
S32° 16'E
MODULAR OPERATIONS CENTER
LOCKERS /SHOWERS
OFFICES
STORM SEWER
ELECTRICAL BUILDING
ELECTRIC TRANSFORMERS
RAMP DOWN
TRUCK BAY (LOAD/ UNLOAD)
STORM SEWER
NITROGEN STORAGE PAD
STORM SEWER
BERM
(BUILDING H)
FLAMMABLES PAD
25' RAD.
TANK (TYP.)
TANKER (LOAD/ UNLOAD)
TANK FARM
DOCK
FUELS BLENDING ROOM
GENERAL PROCESSING (BUILDING F)
0.27'E
0.15'E
0.90'E
522.00'
574.18'
N32° 36'W
N32° 36'W
RCRA FENCE
GATE
40.00'
FENCE
GATE
GATE
GATE
EXISTING HOT STARTS (4)
DLM OFFICE
295.62'
S73° 55'E
FENCE
262.87'
MAIN GATE
EXISTING HOT STARTS
353.12'
HIGH BAY (BUILDING B)
OFC.
BOILER ROOM
WASTEWATER TREATMENT (BUILDING D)
MAINTENANCE (BUILDING E)
VEHICLE STORAGE AREA (BUILDING B)
FIREWALL
OFFICE
"C"
OFFICES
LAB
LOCKER ROOM
LAB
OFFICES
SWALLEN'S
SWALLEN'S
GRAVEL
RCRA FENCE
EXISTING PARKING (29) EMPLOYEE (5) VISITOR
200.95'
305.70'
N45° 40'E
IRON ROD
57.50'
0.33'E
0.60'N
50.00'
240'
ENTRANCE
287.54'
N45° 40'E
100.00'
LEGEND
PROPERTY LINE
ROADWAY CENTER
RCRA PLANT BOUNDARY FENCE
PERSONNEL DOOR
OVERHEAD DOOR
NOTE:
1. THE DISPERSION UNIT, INCLUDING TANK 11, IS LOCATED IN THE AREA MARKED FUELS BLENDING ROOM.
0 10 20 40 80 120 160
GRAPHIC SCALE
FIGURE F.1
B RCRA PART B SUBMITTAL UPDATE M.C. M.C.
A RCRA PART B SUBMITTAL K.M.C. J.A.K. J.A.K.
CleanHarbors
ENVIRONMENTAL SERVICES, INC.
SPRING

APPENDIX A

CONTINGENCY PLAN

CONTINGENCY PLAN

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SECTION G
CONTINGENCY PLAN

1.0 GENERAL INFORMATION

Spring Grove Resource Recovery (SGRR) is a hazardous waste treatment and storage facility operating under a hazardous waste Part B permit issued by the Ohio Environmental Protection Agency (OEPA). The name, facility address, EPA Identification Number and owner/operator of the facility is:

Facility Name:	Spring Grove Resource Recovery
Facility Address:	4879 Spring Grove Avenue Cincinnati, OH 45232
EPA ID Number:	OHD000816629
Owner/Operator:	Spring Grove Resource Recovery 4879 Spring Grove Avenue Cincinnati, OH 45232

Currently, the facility offers the following services: storage of hazardous waste in containers and tanks; stabilization/ fixation and solidification of chemical wastes and shipping to approved off-site disposal facilities; blending, storing and shipping materials to approved off-site incineration facilities; treatment in containers; drum crushing; decommissioning of PCB transformers and shipment of PCB liquids and solids to approved off-site disposal facilities; and RCRA exempt wastewater treatment. **Figure G.1** provides a map describing major facility structures, and adjacent land uses and features. A detailed description of facility activities is provided in Section 2.0.

2.0 FACILITY DESCRIPTION

The SGRR facility is designed to serve small and medium-sized waste generators who require off-site recycling, bulk storage, and treatment programs. Typical process materials include paints, solvents, acids, resins, metal sludge, inks, and wash waters.

The facility is approximately 5 acres in size and 90,000 square feet of building presently exists; however, only specific portions of the property and building space are utilized for handling, treatment or storage of hazardous wastes. Non-waste management areas are presently used to house the administrative, maintenance, and laboratory departments, and store process raw materials.

2.1 Hazardous Waste Storage, Accumulation and Treatment Areas

The buildings and areas on-site where solid and hazardous waste management areas are discussed in the following sections.

2.1.1 Building F

This building is sub-divided with berms to separate potentially non-compatible wastes. Wastes managed in this area typically include inert wastes, non-reactive sludge, acids, bases or oxidizers, laboratory packaged materials (lab packs), water reactives, and organics. In addition to waste storage, Building F may also be used for treating waste in containers, consolidation, and lab pack repackaging operations. Lastly, the drum crusher may be operated in this building.

The area is equipped with fire isolation doors and a self-activating sprinkler system.

2.1.2 Flammables Pad

This area is located between Building F and Building H. It is used primarily for the storage and treatment of ignitable wastes. In addition to ignitable wastes, inert wastes and aqueous wastes may be managed in this area.

Drum compaction and all treatment in container methods can be performed in this area.

The area is bermed and equipped with fixed and portable foam systems.

2.1.3 Building H

This building is used for the storage of organic waste including aqueous wastes and inert wastes. In addition to container storage, stabilization/fixation, carbon adsorption using the portable carbon system, and solidification can be conducted in this building. Drum compaction can also be performed.

Building H is equipped with a self-activated sprinkler system.

2.1.4 Tanker Load/Unload Pad

This concrete pad is an outdoor area used for the unloading of tanker trucks carrying liquid hazardous wastes and PCBs. The pad may also be used for the storage and treatment of wastes in containers. Treatment employed at this location may include solidification, blending and other methods of treatment in containers. The pad is equipped with a portable 30-gallon fire extinguisher.

2.1.5 Truck Bays

The Truck Bays are located adjacent to the outside dock of Building F and allow room for six (6) trucks. The easternmost bay is covered and is walled on both sides, while the remaining bays are completely open. The truck bays are used for the storage of containerized waste within trailers parked at the bays. They are adjacent to a fixed foam system.

2.1.6 Tank Farm

The Tank Farm consists of ten (10) storage and treatment tanks resting within an enclosed, sealed concrete floor and containment walls. The storage and treatment tanks within this area include:

Four (4) 10,000-gallon wastewater tanks (RCRA-exempt)
Two (2) 7,000-gallon tanks for storage of liquid organic wastes
Four (4) 15,000-gallon mixing tanks for organic liquid wastes

Fire protection for the Tank Farm is provided by a nearby fixed foam system.

2.1.7 High Bay

This building is completely enclosed. Organic wastes including PCBs, ignitable wastes, aqueous wastes and inert wastes may be stored in this area. The High Bay may also be used for the treatment of hazardous wastes in containers and is also the primary location for the drum crusher. A sunken truck bay at this building is used for the loading, unloading and storage of solid and hazardous wastes. The building is equipped with a foam sprinkler system.

2.1.8 Building D

This Building houses the RCRA-exempt wastewater treatment units and is used for the processing of on-site wastewater and off-site non-flammable, non-reactive, aqueous wastes.

The treatment process includes tanks, a filter, and activated carbon beds and discharges to the Metropolitan Sewer District of Cincinnati (MSD). The wastewater treatment system is isolated from other active areas within the Building. The wastewater treatment area is equipped with a sprinkler system. This system is exempt from the requirements of the hazardous waste facility standards under 40 CFR 264.1(g)(6) and OAC 3745-54-01(G)(6) of the respective federal and state regulations.

Some hazardous wastes, which are recycled as wastewater treatment chemicals or wastes needing treatment in container, may be stored in containers in the bermed area.

2.1.9 Roll-Off Pad

This outdoor area is used for the temporary staging inbound or outbound bulk containers (e.g., roll-offs, intermodals) of solid (i.e., containing no free liquid) wastes. It is also used for the on-site accumulation of hazardous waste generated on-site by SGRR.

2.1.10 Container Storage Pads

These outdoor areas are used for the storage of waste in containers primarily on transportation equipment.

2.2 Waste Processes

Various methods of waste processing and treatment are employed at the facility. The various processing and treatment methods are briefly described below.

2.2.1 Containerized Treatment Methods

Methods of treatment in containers may include: neutralization; phase separation and decanting; stabilization/fixation; solidification; product adulteration, blending of compatible wastes, and other methods necessary for proper treatment of hazardous wastes. Lab pack repacking is another method employed. In this operation, lab packs are removed from their shipping containers and blended, solidified, otherwise treated, or repacked with compatible lab packs for off-site treatment disposal.

2.2.2 Fuel Blending

The fuels blending process is designed to separate and blend various waste solvents into acceptable fuels for incinerators or other waste burning equipment. Liquids that are acceptable for fuels are processed through a dispersion unit and pumped into one of the 7,000-gallon cone bottom tanks or 15,000 gallon tanks prior to transportation to an approved and permitted treatment facility (i.e., incinerator, cement kiln, etc.).

2.2.3 Drum Compaction

This process involves the crushing in volume of empty waste containers prior to landfill. The empty containers may have held PCB's, acute toxic hazardous wastes or other hazardous or non-hazardous wastes. The process incorporates the mechanical compaction of containers. The drum compaction unit is portable and may be on the flammable pad, Building H, Building F, or the High Bay.

2.2.4 PCB Transformer Decommissioning

In this process, PCB transformers which are full of PCB contaminated dielectric fluid are brought into the facility, drained of the PCB contaminated dielectric fluid, filled with a suitable flush solvent, stored with the flush solvent inside the transformer and then drained of the PCB-contaminated flush solvent. Once this process has taken place, the empty PCB transformer carcass is shipped to a secure chemical management facility. The PCB-contaminated dielectric fluid and flush solvent is ultimately sent to an EPA approved incinerator. This activity is not subject to RCRA; information on this process is provided for information purposes only.

2.2.5 Wastewater Treatment

The RCRA-exempt wastewater treatment process employed is designed to pre-treat various waste streams prior to discharge to the Cincinnati Metropolitan Sewer District (MSD) that complies with SGRR's industrial discharge permit. This system is capable of treating secure landfill leachate, dilute organic aqueous waste and PCB-contaminated water. Like PCB transformer decommissioning, the wastewater treatment process is not subject to RCRA. Information on this process is provided for information purposes only.

3.0 PURPOSE AND IMPLEMENTATION OF THE PLAN

3.1 Purpose of the Plan

The purpose of this Contingency Plan is to fulfill the requirements of the Resource Conservation and Recovery Act (RCRA) at 40 CFR Part 264 and the Ohio Hazardous Waste Management

Regulations (3745-54-50 of the Ohio Administrative Code). This Plan has been designed to describe the procedures SGRR will undertake to prevent or minimize the hazards to human health or the environment from fires, explosions or any unplanned, sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil or surface waters. The actions described in this Plan will be implemented immediately whenever such releases could threaten human health or the environment.

3.2 Implementation of the Plan

SGRR will implement the Contingency Plan whenever there is:

(1). A fire;

(2). An explosion; or

(3). A spill of hazardous waste from a container (e.g., drum, tanker truck, roll-off, etc.) or a tank to the environment which may present a threat to human health or the environment.

For the purpose of this Plan, the term "spill" shall mean any unplanned, uncontrolled release of hazardous waste the environment. The term "spill" shall not include: (a) "*de minimis*" amounts (e.g., drips from hoses or sampling devices) encountered during routine hazardous waste handling activities; or (b) controlled accumulation of hazardous waste into a containment device (e.g., bucket, drip pan, etc.) used to collected and control the release of waste during routine processing or maintenance activities such as draining hoses or disassembling and repairing a pump.

The term "to the environment" shall include air, water and soil. For the purpose of this Plan, spills from a hazardous waste tank or container into their secondary containment are not considered releases "to the environment" and may not require implementation of the

Contingency Plan.

3.2.1 Reportable Spills and Implementation of the Plan

The following types of releases/spills of hazardous waste must still be reported to OEPA and USEPA even though they may not present a threat to human health or the environment and may not require implementation of the Contingency Plan:

(1). Releases of hazardous wastes from tanks/tank systems to the environment that are greater than one (1) pound;

(2). Releases from tanks/tank systems to the environment that are not immediately cleaned up; and

(3). Releases from containers to the environment in excess of the established CERCLA Reportable Quantity (RQ). Refer to 40 CFR Part 302, Table 302.4.

The notification and reporting requirements for spills and releases are described in greater detail in Section 5.2 of this Plan.

3.2.2 Bulging Containers and Implementation of the Plan

Occasionally, containers of hazardous or non-hazardous waste may arrive at SGRR showing signs that their contents are under pressure (i.e., the container is bulging at the top, bottom or sides). In addition, containers may also shows signs of pressurization while in storage at the facility.

"Bulging" containers may be caused by a number of factors including, but not limited to, the freezing of an aqueous waste inside a container, reactions of the container's contents (chemical degradation, polymerization, etc.) or aerobic/biological activity.

Although this is an uncommon occurrence, SGRR has developed standard procedures for investigating and addressing bulging containers. Detailed procedures for addressing bulging containers are provided in **Appendix G.I.** In general these procedures include:

(1). A review and evaluation of the hazardous waste manifest, waste material profile, waste analysis information and/or Material Safety Data Sheet (MSDS) (if applicable) and any other information available from the waste generator or manufacturer of the material to determine the cause of the pressurized container;

(2). In the event the bulging has been caused by a container which has become frozen, placing the bulging container in an over pack drum or heating unit such as a Sahara Box to thaw its contents. Sahara boxes are metal boxes in which four (4) 55-gallon drums can be placed. Steam is passed into the boxes to thaw frozen containers;

(3). If the bulging of the container appears to have been caused by a pressurization of the container's contents, SGRR may either: (1) relieve the pressure by loosening the bung; (2) relieve the pressure within the container using a specially designed remote opening device mounting on a specially equipped forklift; or (3) depending on the material present in the container and the potential reaction that may be occurring, contact a team that has extensive experience in remotely opening highly hazardous material.

(4). If necessary based on the wastes present in the container, capturing and treating any gases that might be emitted when the container is punctured.

In most cases SGRR will address bulging containers itself using on-site staff and equipment. The decision to use specially trained and experienced "high haz" experts will be based on SGRR's assessment of the material.

Bulging drums will not require implementation of the Contingency Plan and therefore would not require notification to regulatory agencies or local emergency response organizations. In the event SGRR's evaluation of a bulging container indicates that the container holds flammable or ignitable materials or could undergo violent reaction or explosion, SGRR will immediately notify the Fire Department and discuss the situation and the need, if any, for support or assistance from the Fire Department.

4.0 CONTENT OF THE PLAN

4.1 Emergency Response Procedures

Section 5.0 of this Plan describes in detail the procedures SGRR will take in response to an event which requires implementation of the Contingency Plan.

4.2 Coordination Agreements

SGRR has and will continue to distribute copies of this Contingency Plan to the emergency response organizations noted in **Table G-1**. In addition, SGRR will, on an annual basis or more frequently as changes in the facility or plan warrant, sponsor informational meetings at the facility to provide the agencies with the opportunity to tour the facility and discuss emergency response procedures.

SGRR has contacted the emergency response organizations and requested their assistance in helping SGRR respond to Contingency Plan emergencies. Copies of all correspondence related to these emergency response coordination agreements between SGRR and the above-noted organizations, including an organization's refusal to enter into an agreement, will be maintained on file at SGRR. Copies of recent letters to the emergency response organizations are provided in **Appendix G.II**.

SGRR has provided a layout of the facility to the local Fire Chief, the Director of the Office of Civil Defense, the Cincinnati Police Chief, and the Chief of the Ohio EPA Emergency Response Team. This layout indicates working areas, locations of hazardous waste storage, treatment, and handling, evacuation routes, and emergency equipment. The facility has also provided those individuals listed above with a listing of the types of hazardous wastes handled at the facility, properties of these wastes, and potential hazards associated with them.

SGRR has requested that the Fire Department respond to fires at the facility when contacted and implement evacuation of surrounding areas if required. Additional information regarding arrangements with the fire department is described in Sections 4.6.1 and 5.0 of this Plan.

SGRR has requested that the local hospital accept and treat any persons exposed to hazardous materials or injured in any way while at the facility. SGRR has arranged to familiarize the hospital with the types of injuries, illnesses or exposures that might occur at the facility. The facility has been given a list of all hazardous wastes accepted at the facility, along with a listing of the most harmful of these wastes and a listing of those wastes managed in the greatest quantities. The hospital has been given a description of the hazardous properties of some of these wastes, including corrosivity and toxicity data, and a description of some of the specific injuries or exposures that may result, such as inhalation of harmful vapors from specific wastes, and skin damage from contact with corrosives.

4.3 Copies of the Plan

A copy of the Contingency Plan and all revisions and amendments will be maintained on-site and will be sent to the emergency response organizations listed in **Table G-1**.

4.4 Emergency Coordinators

The SGRR personnel listed in **Table G-2** have been designated to act as Emergency Coordinators. At least one person the Emergency Coordinators will, at all times, be either on-site or on call and available to respond to an emergency by reaching the facility within a short period of time. The Emergency Coordinators are responsible for coordinating all emergency response measures. The Emergency Coordinators are thoroughly familiar with all aspects of the Contingency Plan, all operations and activities at the facility, the location and characteristics of the wastes handled, the location of all records within the facility, and the facility layout. In addition, the Emergency Coordinators have the authority to commit the resources needed to carry-out the Contingency Plan. If an emergency situation develops at the facility, the discoverer should contact the Emergency Coordinator as listed in **Table G.2**. The primary Emergency Coordinator will be called first and if he is not available, the others should be called (in order listed) until someone is reached. The primary Emergency Coordinator and alternates have complete authority to commit all resources of the company in the event of an emergency. This includes staffing of all operations.

If none of the designated Emergency Coordinators are on-site, the On-duty Operations Manager will be responsible for contacting the Emergency Coordinator. The Operations Manager will assume the duties of the Emergency Coordinator until such time as one of the designated Emergency Coordinators has arrived at the scene. The responsibilities of the Emergency Coordinators are provided in greater detail in Section 5.0 of this Plan.

4.5 Emergency Response Equipment

SGRR employs several mechanisms for fire control. Internal plant areas are equipped with sprinklers and fire doors. Two (2) hydrants are present in the external areas and a fixed foam system is installed and routed to the F-Building. In addition, several portable pieces of fire suppression equipment are located throughout the facility. All extinguishers are inspected after each use and on a monthly basis. A listing of the types and locations of all fire-fighting equipment is provided in **Table G-3**.

Spill control supplies are located in the buffer zone outside of Building F. Locations of spill response equipment are shown on **Table G-4.** First-aid supplies are located at two first-aid stations. Emergency eyewash fountains and showers are located in three locations on-site.

Each unit consists of a drench shower head with "panic bar", frost-proof valve and eyewash with dust cover. A sign reading "Emergency Shower and Eyewash Station" is posted at each unit. Hose stations for the foam system are located in two areas of the process area.

Protective clothing and equipment is provided to protect employees during normal and emergency operations. Personnel protection equipment is listed on **Table G-5**.

Locations of emergency response equipment are provided in **Figure G-1.**

4.6 Evacuation Plan

4.6.1 Interaction with Local Fire Departments

SGRR will conduct facility tours for the Fire Department to familiarize them with the facility personnel, structures, equipment, types of wastes managed, the location of the various waste management units, and emergency response procedures. In addition, SGRR and the Fire Department may participate in joint training exercises. The Fire Department will also conduct regular inspections of the facility.

It is essential that an open line of communication be established and kept open between SGRR and the district fire department. Changes in operation, new processes and changes in personnel will also be provided the Fire Department.

4.6.2 Facility Evacuation Procedures

In the event of a fire, explosion, spill or other situation that is deemed by the Emergency Coordinator to be an emergency, the Emergency Coordinator will assume control and, if deemed necessary, initiate evacuation procedures to protect employee health and safety. Evacuation will be conducted by routes shown in **Figure G-2**

In the event of an emergency, an initial announcement will be made over the facility's intercom system to alert the Emergency Coordinator and emergency personnel. The words "**CODE RED**" will be announced and repeated three (3) times over the intercom for any fire or explosion and "**CODE BLUE**" announced and repeated three (3) times for a spill or release.

The announcement will also alert all plant personnel to a potential evacuation. All employees in non-operational areas will remain at their assigned work areas unless otherwise directed by the Emergency Coordinator; however, these employees should be prepared to evacuate if requested.

If the Emergency Coordinator deems it necessary, the Emergency Coordinator (or designee) will announce a general facility evacuation or evacuation of a specific area over the intercom system. All affected personnel will then evacuate by the designated routes and gather at the designated assembly points. The supervisor for each area within the facility will conduct a roll call at the assembly point designated for his/her area.

Entry into the facility is controlled by the operator/receptionist/guard. Upon evacuation, the operator /receptionist/guard will take the daily site visitor/contractor logs. The Emergency Coordinator or designee will review these records to assure that all plant personnel and visitors are accounted for after evacuation. No person shall remain or re-enter the location unless specifically authorized by the Emergency Coordinator. No attempt to find persons not accounted for will involve endangering lives of others by re-entry into emergency area.

Immediate supervisors will be held responsible for those persons reporting to them. Visitors will be the responsibility of those employees they are seeing. Contractors are the responsibility of those persons administering individual contracts. Truck drivers are the responsibility of the process foreman.

Re-entry into all plant areas will only be allowed after the Emergency Coordinator gives the clearance. At his direction, a signal or notification will be given for re-entry into the plant.

Drills will be held to practice evacuation procedures to ensure that all personnel are familiar with the alarms, evacuation routes, and designated assembly points.

5.0 EMERGENCY PROCEDURES

5.1 Activation of Alarms

Whenever there is fire, explosion, release or other an imminent or actual emergency situation, the Emergency Coordinator shall immediately:

(1). Notify affected facility personnel verbally or by using the facility intercom system;

(2). Activate internal facility alarms, if necessary; and

(3). Contact federal/sate/local agencies having designated response roles for assistance, if necessary

5.2 Notifications

5.2.1 General Notifications

If the Emergency Coordinator's assessment of the imminent or actual emergency situation determines that the facility has experienced or is likely to experience, a release, fire or explosion which requires implementation of the Contingency Plan or that external emergency response assistance is needed, the Emergency Coordinator shall immediately notify the Cincinnati Fire Department and the Ohio Environmental Protection Agency (OEPA) at the following phone numbers:

Cincinnati Fire Department
911, 513-241-2525 or 513-352-2338

OEPA Hazardous Waste Section
937-285-6357

OEPA Emergency Response
800-282-9378

The Fire Department will function as the primary response agency for all emergency situations.

For traffic control or other assistance (e.g., evacuation measures, emergency medical treatment, etc.) the Emergency Coordinator may also contact the Cincinnati Police Department, the Life Squad or local Hospital at the following numbers:

Cincinnati Police Department
911 or 513-352-3578

Life Squad
911 or 513-241-2525

Good Samaritan Hospital
513-872-1400

Other appropriate federal, state, or local agencies listed in **Table G-6** may also be notified as may be necessary. For example, if a spill from SGRR threatens to enter the Metropolitan Sewer District (MSD) sewer system, the Emergency Coordinator will contact MSD.

5.2.2 Fires or Explosions which Threaten Human Health or the Environment Off site

If the Emergency Coordinator determines that the facility has had a fire or explosion which could threaten human health or the environment outside the facility and his/her assessment indicates that an evacuation of local areas is necessary, the Emergency Coordinator shall immediately notify the following agencies:

Cincinnati Fire Department
911, 513-241-2525 or 513-352-2338

Cincinnati Police Department
911 or 513-352-3578

OEPA Hazardous Waste Section
937-285-6357

OEPA Emergency Response

800-282-9378

USEPA- Region V
513-684-7931

USEPA National Response Center
800-424-8802

5.2.3 CERCLA Reportable Release Notifications

In accordance with the requirements of the National Contingency Plan (NCP), 40 CFR Part 302, SGRR will notify USEPA and OEPA and undertake appropriate response actions in response to any reportable release or threat or release of oil and hazardous materials to the environment. A release shall be considered "reportable" under this Section if the amount of the release to the environment exceeds the Reportable Quantity (RQ) for that material as listed in Table 302.4, the List of Hazardous Substances and Reportable Quantities (CERCLA List) codified in 40 CFR Part 302.

SGRR will report a CERCLA reportable release to OEPA and USEPA National Response Center as soon as possible, but not more than two (2) hours after obtaining knowledge of a release or threat of a release. SGRR will contact OEPA and USEPA at the following numbers:

OEPA Hazardous Waste Section
937-285-6357

OEPA Emergency Response
800-282-9378

USEPA National Response Center
800-424-8802

5.2.4 SARA Emergency Planning/Notification

Notification under Section 304 of the SARA is required when:

(1). A CERCLA "hazardous substance" (listed in 40 CFR 302, Table 302.4) or a SARA "extremely hazardous substance" (listed in 40 CFR Part 355, Appendix A) is released in an amount in excess of its RQ; **and**

(2). The release threatens the environment or public beyond the boundaries of the facility.

For a release reportable under SARA, a verbal notification to the following organizations and agencies will be made as soon as possible after learning of the release:

Cincinnati Fire Department
911, 513-241-2525 or 513-352-2338

Cincinnati Police Department
911 or 513-352-3578

OEPA Hazardous Waste Section
937-285-6357

OEPA Emergency Response
800-282-9378

Hamilton County Civil Defense
513-821-1092

USEPA National Response Center
800-424-8802

5.2.5 Content of Initial Notifications

In general, as part of any notification, the Emergency Coordinator shall provide the following minimum information:

(1) Name and telephone number of the person making the report;
(2) Name and address of facility;
(3) Time and type of incident (e.g., release, fire);
(4) Name and quantity of material(s) involved to the extent known;
(5) The extent of injuries, if any; and
(6) The possible hazards to human health, or the environment, outside the facility.

In addition, if the release is being reported in accordance with SARA requirements (as discussed in Section 5.2.4), the following information is to also be provided to the extent known at the time of the initial notification:

(1) Any known or anticipated acute or chronic health risks associated with the emergency, and, where appropriate, advice regarding the medical attention necessary for exposed individuals;

(2) Proper precautions to take as a result of the release, including evacuation; and

(3) The names and phone numbers of the person or persons to be contacted for further information.

5.3 Identification of Hazardous Materials

Whenever there is a release, fire or explosion, the Emergency Coordinator will immediately take all appropriate steps to determine the character, exact source, amount and extent of any released materials. The initial determination may be made by visual observation, discussions with SGRR personnel and review of facility records including manifests, waste profile information, waste analysis and waste tracking reports. Present standard operating procedures at the facility will facilitate further evaluation because:

(1). The facility is subdivided into storage and treatment areas which process specific types of wastes.

(2). All drums are coded with process codes and product codes, which indicate material composition and properties. Furthermore, all analytical data is available on file in areas of the facility remote to the operating areas.

(3). An on-site laboratory is available to analyze samples.

Due to the nature of the activities performed at the facility, small quantities of a variety of waste types are routinely present. SGRR has developed a comprehensive program to track these wastes during routine operation. The same systems are ideal for application in an emergency situation. Waste tracking information identifies the area on-site in which specific wastes are being managed, would be used as a reference in an emergency.

5.4 Assessment of Potential Hazards

The Emergency Coordinator will assess hazards both direct and indirect to human health or to the environment to the best of his ability. Internal sources of information available to the emergency coordinator include:

(1). Knowledge and experience of facility personnel;

(2). Analytical results including air monitoring of the release area and laboratory analysis of the released waste(s);

(3) Waste profile/characterization information including MSDSs and other information;

(4). Reference Documents, including but not limited to:

- DOT emergency response guide
- NIOSH guide to chemical hazards
- ACGIH guidelines for selection of chemical protective clothing
- NFPA fire protection guide on hazardous materials
- NIOSH personnel protective equipment for hazardous materials incidents
- Merck Index
- Physicians Desk Reference
- ACGIH threshold limit values

The initial priority for the Emergency Coordinator will be to perform an assessment of the emergency situation with regards to possible hazards to the environment, human health and safety. This assessment will consider both direct and indirect effects of the release, fire or explosion. Based on this assessment, the Emergency Coordinator will determine whether the incident meets one of the criteria listed in Section 3.2 for implementing the Contingency Plan and will make all necessary notification. Furthermore, if the situation warrants the evacuation of the facility, the Emergency Coordinator will activate the evacuation plan.

5.5 Control Procedures

Incidents requiring implementation of this Contingency Plan may be grouped into two (2) broad categories: (1) fires or explosions; and (2). material spills or releases.

For purposes of clarity, these categories will be discussed separately; however, real emergency situations could result in both fires and materials release.

5.5.1 Fire and/or Explosions

All active areas are easily accessible to fire suppression equipment. All internal areas are equipped with sprinkler systems and fire doors. Some external areas as identified in **Figure G-1** are equipped with foam fire suppression systems. An internal intercom system exists in all areas to be utilized as a notification alarm in case of emergency. Copies of emergency telephone numbers are posted by all telephones in processing areas. Furthermore, the internal sprinkler system, if activated, sounds an alarm and the fire department is automatically called.

An inactive zone is designed around the processing areas to allow adequate set-up of emergency equipment depending on the scope of the fire. All process areas are individually bermed to minimize the spread of fire to adjacent areas and to reduce surface flow of contaminated firewater. All sanitary/storm sewer outlets can be plugged to prevent site run-off to the sewer system. The presence of streams or waterways in the immediate area of the plant site does not exist.

The facility has a trained emergency response team to respond to the incipient stage of a fire. Furthermore, the emergency response team members work in the active areas of the facility and are immediately available to respond. The primary object of the emergency response team is to suppress or contain the fire prior to the arrival of the Fire Department. Response time for the Fire

Department is estimated to be five minutes after notification.

The following events will take place in the event of a fire or explosion (or the threat of an explosion):

(1). Personnel discovering the fire or explosion will immediately notify the area supervisor or as the situation requires, activate the internal alarm.

(2). The supervisor will <u>immediately</u> proceed to the alarm intercom system and repeat three times "**CODE RED**" and give the plant location of the fire, explosion or potential explosion.

(3). Personnel may attempt to render assistance to injured personnel and remove the injured from further exposure or injury only if there is no risk of exposure or injury to themselves.

(4). The Emergency Coordinator and emergency response team members will proceed directly to the area to assume control. Estimated implementation time for Steps 1 through 4 is 15 to 90 seconds.

(5). After a brief assessment, the Emergency Coordinator will direct the emergency response team leader to implement Emergency Fire Control Plans A or B (as described below) and then he will designate a person to call the Fire

Department, giving the name and location of the facility, the type of fire, and the location on the entry point of the facility.

(6). If necessary, the Emergency Coordinator will implement the evacuation plan.

(7). The Emergency Coordinator will notify company officials, federal, state and local agencies as required and update these parties during the course of the fire. If the duration of the incident is prolonged, the Emergency Coordinator may appoint a qualified person to act as a liaison between the facility and the appropriate agencies to effectively remain in continuous contact to relay information.

(8). The Emergency Coordinator will work directly with the Fire Department to provide data on the nature and potential hazards of the materials involved in the fire. Data exchange will be utilized to develop a plan of action for evacuation of surrounding areas of the facility. The Emergency Coordinator will rely on the Fire Department and Police Department to effectively implement the evacuation of surrounding areas if necessary.

(9). The Emergency Coordinator will announce an "**ALL CLEAR**" signal after the fire has been extinguished and the safety of the plant personnel is no longer endangered.

(10). The Emergency Coordinator will implement cleanup procedures to return the site to operation and all emergency equipment will be decontaminated prior to removal from the affected areas. Operations will not commence in affected areas until cleanup is complete and all emergency equipment is replaced and ready to be utilized. The regulatory agencies will be notified that cleanup is complete before operations are restarted.

5.5.1.1 Emergency Fire Control Plan A.

Plan A is to be activated by the Emergency Coordinator with the objective of isolating a site fire. The emergency response team leader and members will complete the following procedures:

(1). Designate a person to proceed and open entry gate and standby to direct fire department to the source of fire and be available to locate hydrants, equipment, or any requests made by the fire department.

(2). Evacuate all non-essential personnel from area to nearest safe exit from the facility.

(3). Shut down all operations in the affected area including all process equipment, feed lines, etc.

(4). If possible without endangering themselves, remove all injured personnel to remote areas and arrange for transfer to a medical facility.

(5). Secure and plug all sanitary sewer lines in plant area.

(6). Close all fire doors in affected areas.

(7). Evacuate area and await further instructions from the Emergency Coordinator.

5.5.1.2 Emergency Fire Control Plan B.

Plan B is designated to isolate and suppress a site fire. As determined by the Emergency Coordinator and the emergency response team leader, Plan B will be activated to directly utilize site personnel in suppressing an incipient stage fire. Plan B will only be activated if active fire suppression is determined to represent a low risk to site and emergency response team personnel.

Under direction of the emergency response team leader, the team will complete the following procedures:

(1). Steps 1 - 6 of Plan A.

(2). Deploy emergency fire suppression equipment.

(3). Proceed to fire site and fight fire using foam system, portable foam, or dry chemical CO_2 extinguishers. As possible, heat-exposed containers should be kept cool with water spray. If a tank pressure disc ruptures or a container begins to discolor or expand, evacuate area.

(4). Fire suppression will proceed until:

- a). The fire is extinguished.
- b). The emergency response team leader or the Emergency Coordinator orders withdrawal due to potential risk or injury to response personnel.
- c). The Cincinnati Fire Department arrives and assumes control of fire fighting activities.

(5). The emergency response team will proceed to a safe area and await further instructions from the Emergency Coordinator.

5.5.2 Spills or Material Release

The SGRR facility has been engineered to minimize the environmental impact of spill occurrences. All drums and container storage areas have sealed concrete floors and are bordered by six-inch containment berms. Furthermore, incompatible wastes are separated in designated bermed areas as per waste type.

A concrete containment wall, capable of containing the stored materials encloses the tank farm.

All transfer lines and tank truck transfer operations are located in bermed concrete areas, or use double-walled pipe. All plant operating areas are free of drain points to the sanitary sewer system. Two access points to the sanitary system do exist outside of operating areas to channel surface rainwaters to the storm sewer system.

The facility has two (2) sewer outfalls to the rear of the building. None of these are located in an active area. The location and means of plugging is as follows:

1. Truck Bay Area - Expandable plug and butterfly valve
2. Adjacent to wastewater and Tanker Pad - Vertical sliding trapdoor

The sewer outfalls discharge to the combined system operated by Cincinnati Metropolitan Sewer District. **Appendix G.III** contains sewer diagrams showing that the water flows in the combined sewer to a point north of where the Mill Creek goes under Spring Grove Avenue and then flows southerly. Should sampling be required, several manholes could be sampled to verify any contamination.

The availability of qualified personnel and equipment to respond to any contingency is immediate. In the event of a spill or release, the area around the spill will be evacuated. Spill response personnel will congregate at the direction of the Emergency Coordinator in the spill control supply area. This area contains equipment and supplies to respond to most spill occurrences. Furthermore, a series of vacuum trucks and excavation equipment is available to the Emergency Coordinator. The Emergency Coordinator will determine a plan of action and cleanup will proceed. If the spill results in the formation of a toxic vapor cloud, a further area will be evacuated. In the event of a spill of flammable volatile materials, the Emergency Coordinator will remove any sources of ignition that could result in flashback to the spill area. The Emergency Coordinator will assess the clinical components and degree of hazard to site personnel and the public of any gas or fume emissions. Based on his assessment, the proper safety equipment will be issued to assure adequate protection to plant personnel. Emergency equipment is on standby and ranges from half-face cartridge respirator to SCBA and encapsulated suits. Also, the Emergency Coordinator will apply suppression techniques to reduce the potential of emissions. If possible, the affected area will be covered with foam or a synthetic cover to minimize gaseous release and to reduce the potential of fires resulting from remote ignition sources.

If the release requires implementation of the Contingency Plan, the Emergency Coordinator will contact federal, state, and local authorities as required by regulation and relate information to coordinate area evacuation as decided. Because winds in the area tend to vary, the National Weather Service at Wilmington Ohio (937)383-0031can be contacted for weather condition forecasts.

If the control or cleanup of a spill or release is within the capability of SGRR personnel and response teams, the OEPA Emergency Response Unit will still be contacted if:

(1). The spill discharges to the Mill Creek and the quantity of hazardous material spilled is equal to or greater than the reportable quantity specified under 40 CFR Part 117; or

(2). One thousand (1,000) gallons or more of material is spilled in a single event; or

(3). If a quantity of waste that exceeds discharge limits is spilled and enters the municipal sewer system, appropriate local and state agencies will be contacted; or

(4). The spill involves hazardous materials that pose an actual or potential hazard to human health or the environment.

If the Emergency Coordinator determines that SGRR personnel are unable to handle the spill or release, local, state, and federal authorities will be notified of the situation. Evacuation of all potentially affected plant areas will be initiated as soon as possible.

Spill waste removal and/or repair or replacement of leaking containers will be done within 24 hours of discovery.

Most minor spills and leaks are easily contained within the berms and sumps located in the drum handling and tank farm areas. Leaking drums will either be packed in over-pack drums or be transferred to another drum. Spills will be absorbed with absorbents or swept into a sump to be pumped into new containers. As required, water/detergents or solvent rinsing will remove trace residuals.

For large spills or reportable leaks, the following guidelines will be applied:

(1). If a leak develops or a spill occurs from a waste storage tank, pipeline, pump, transportation vehicle, etc., the employee discovering the discharge will immediately contact the area supervisor. The supervisor will proceed to the emergency intercom system and announce three times "**CODE BLUE**" and give the plant location of the spill.

(2). The Emergency Coordinator will proceed to the area and organize the spill response team to proceed with cleanup/containment.

(3). The Emergency Coordinator will evaluate:

a). Personnel injured and the degree of injury.
b). Location, source, direction, quantity, rate, and type of material spilled.
c). Determine if an actual or potential fire or explosion is involved.

(4). Next the Emergency Coordinator will:

a). Shut down all processes in the area and evacuate all personnel. Spill response personnel will congregate in the spill control area to await instructions from the Emergency Coordinator.
b). Obtain medical attention for any injured person(s).
c). If a fire is involved, the Emergency Coordinator will activate the fire/explosion contingency plan.
d). Contact the proper authorities if the spill or release is reportable. Local and state authorities will be contacted first to develop evacuation programs if necessary.

(5). The Emergency Coordinator will organize the spill response team to:

a). Equip with the appropriate degree of personal safety equipment and cleanup supplies, enter the area.

b). Assure evacuation of all unauthorized persons has occurred from spill area.

c). Plug all sewer drains.

d). Remove all ignition sources. Limit use of only non-spark tools and explosion proof equipment, if flammable wastes are involved.

e). Assure that reactive materials are not located in spill area.

f). Apply absorbents (clay, pads, and booms) to spill materials or direct spilled materials to sump for transfer to containers.

g). Collect and place all contaminated absorbent in appropriate containers and subsequent disposal.

h). Remove residuals by rinsing with water/detergents or solvent application.

i). Small quantities of spilled materials will be placed in containers for subsequent disposal; larger quantities may be placed in tanker trucks or roll-off boxes. All wastes may undergo laboratory evaluation to develop a disposal plan for that waste, if necessary.

j). If applicable, use on-site activated carbon system to treat aqueous wastes prior to discharge to POTW (i.e., fire suppression waters).

(6). In the event of a spill from a tank system, the Emergency Coordinator will:

a). Immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

b). Remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed. If the material released was to a secondary containment system, all released materials must be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

c). Immediately conduct a visual inspection of the release and based upon that inspection:

   i) Prevent further migration of the leak or spill to soils or surface water; and

   ii) Remove and properly dispose of any visible contamination of the soil or surface water.

d). Any release from the tank system to the environment (except a leak or spill that is less than or equal to one pound and immediately contained and cleaned up) will be reported to the OEPA director within 24 hours of detection.

Per OAC 3745-55-96(e), SGRR will:

3745-55-96(e)(2): if the cause of the release was a spill that has not damaged the integrity of the system, SGRR may return the system to service as soon as the released waste is removed and repairs, if necessary are made.

3745-55-96(e)(3): If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.

All tank systems are within secondary containment systems.

5.6 Prevention of Recurrence or Spread of Fire/Explosion

The SGRR facility is designed to isolate incidents to prevent spreading of fires or spills; however, during the activation of the Contingency Plan, the Emergency Coordinator will monitor the facility for conditions that could adversely impact the remedial actions being taken. Prior to evacuation, operators are required to shut down equipment and this shut down is re-checked by emergency personnel upon entering the area. In the case of fire, the emergency response team leader will advise the Emergency Coordinator of any changes in conditions resulting in leaks, pressure build-up, gas generation, rupture in pipes, valves or process equipment. As soon as possible depending on the situation, released waste will be contained and collected. It also may be appropriate to remove or isolate containers, and will be done at the discretion of the emergency coordinator. The Emergency Coordinator will rectify these occurrences if possible, or relate the potential hazard to emergency personnel and the fire department.

5.7 Storage and Treatment of Released Material

Immediately after the emergency, the Emergency Coordinator will provide for the treatment, storage, or disposal or recovered waste, contaminated soil, water, or any other contaminated material. Solid wastes such as fire debris or soils will be shipped to an approved off-site treatment, storage and/or disposal facility.

Material destined for off-site disposal will be manifested and packaged as required by the Department of Transportation. Liquids that may be collected during fire fighting incidents will be analyzed on-site and treated by the wastewater treatment system on-site. The wastewater treatment system should not be adversely affected by fires due to its location, and therefore should be operational for the management of liquids that may be collected. If on-site analysis determines the waste cannot be managed on-site, the waste will be shipped to an approved off-site treatment, storage and/or disposal facility for management.

5.8 Incompatible Waste

The facility is separated into subsections by a system of berms; therefore, incompatible wastes cannot be stored together. Reactive chemicals are stored away from other materials.

A complete inventory record of materials and their location on-site is on file electronically.

In the event of a spill or release, all operations in the area of the release will cease. The Emergency Coordinator is responsible for ensuring those operations cease and that no wastes will be treated, stored, or disposed until cleanup of the release is completed. Absorbent booms are maintained in the spill control area and will be immediately placed around the release in order to contain it and prevent released waste from contacting other containerized waste. Released material will be collected as soon as possible using pumps and other equipment. The efficiency with which these operations are conducted will prevent incompatible wastes from coming into contact.

In addition, berms within Building F serve to separate incompatible wastes. The containment capacity within these berms is at least 10% of the storage capacity. Thus, up to 10% of wastes can be released before incompatible wastes have a chance of mixing. In addition, the facility has procedures for inspection of container condition each workday (see Section F-2). This will ensure that only containers in good condition are used to store waste at the facility. The daily inspection procedures will also identify and correct any releases as they occur, thereby minimizing the potential for a release outside of the bermed area. The possibility of several drums (that equivalent to 10% of the total drums stored) leaking simultaneously within the same workday is very, very low.

5.9 Post Emergency Equipment Maintenance

After an emergency event, all emergency equipment used will be cleaned so that it is fit for use or it will be replaced. Before operations are resumed, an inspection of safety equipment will be conducted. The Emergency Coordinator is responsible for ensuring that all personal safety, decontamination, and emergency equipment is clean and fit for its intended use. Furthermore, the Regional Administrator and state and local authorities will be notified that post emergency equipment maintenance has been performed and prior to resuming operations. Decontamination procedures and methods are discussed in the next section.

5.10 Post Emergency Cleanup

After an emergency has been controlled (i.e. spill contained, fire extinguished, etc.), the Emergency Coordinator must insure the following steps are taken prior to resuming operations in the affected areas:

(1). All spilled partially combusted or contaminated materials (absorbent, wastes or foam used to fight fire) must be collected and placed in appropriate storage.

(2). The above material must be evaluated to determine the proper treatment and/or disposal method. This may include analytical tests (BTU's, % chlorine, pH, etc.) as well as bench scale (solidification, isotherms) testing.

(3). All floors, berms, sumps, and concrete pads will be cleaned with an appropriate cleaning agent. The cleaning agent will be chosen after testing to determine solubility, compatibility and any other parameters necessary to insure the best cleaning agent. These items will be cleaned using mops and will be rinsed until the rinsewater is clear.

(4.) The user will decontaminate all personal safety equipment. Boot covers, tyvek suits, and respirator cartridges will be discarded and managed in containers as a hazardous waste. Rubber gloves, rubber boots, safety glasses, face shields and respirators will be submerged in a solution containing an appropriate compatible cleaning agent for a length of time dependent on the degree of contamination. They will be submerged in water and rinsed three times.

(5). All contaminated emergency equipment and decontamination equipment will be placed in a roped-off area of the facility. A sign will be posted in this area which states "contaminated equipment - do not use". This equipment will be cleaned and decontaminated as soon as possible and within 24 hours of the incident. Procedures for decontamination will be partially based on the type of equipment. Small items will be submerged in cleaning agent unless this may damage the interior of the item. Items likely to be damaged by submersion will be washed off by hand. Larger items will be sprayed with a cleaning agent at high pressure. SGRR maintains a steam jenny, which can be used to steam clean equipment such as forktrucks. The steam jenny can also be used as a high-pressure sprayer.

(6). The cleaning solution and rinsewater will be sampled and analyzed in accordance with SW-846 for constituents with the potential to be present based on the types of wastes known to have been released or managed as if it was the spilled product. The cleaning agent will be collected, tested and disposed in a proper manner (e.g., incineration, wastewater treatment, landfill).

a). Extraction and/or wipe tests will be done if appropriate with analytical tests for whatever specific compounds were involved with the emergency on-site. Analytical capabilities include phenols, cyanides, % Chlorides, metal analysis via atomic absorption, gas chromatography, etc. Capabilities not available on-site will be covered by use of certified outside laboratories.

(7). The results of sampling and analysis of equipment will be recorded in the facility operating record.

(8). When all items have been successfully decontaminated, the Emergency Coordinator will certify that they are clean using the form provided in **Figure G-3**. This form will be placed in the operating record. The Emergency Coordinator will ensure that the items are inspected. Items which pass inspection will be released for use. Items which are damaged or need recharging, will be fixed, recharged, or discarded if the damage cannot be repaired.

6.0 REPORTING REQUIREMENTS

Within fifteen (15) days of any incident requiring implementation of the Contingency Plan, SGRR will submit a written incident report to the OEPA Director as described in OAC 3745-54-56(I). A similar report as required by 40 CFR 264.56(i) will be filed with the USEPA Region V Administrator. The Emergency Coordinator will supply information for the report. A copy of these reports will be maintained as part of the facility operating record.
These reports will include the following information:

(1). Name, address, and telephone number of the owner or operator;
(2). Name, address, and telephone number of the facility;
(3). Date, time, and type of incident (i.e. fire explosion);
(4). Name and quantity of material(s) involved;
(5). The extent of injuries, if any;

(6). An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

(7). Estimated quantity and disposition of recovered material that resulted from the incident.

(8). Other information as may be required by the director per OAC 3745-54-56(J)(8)

7.0 PLAN AMENDMENTS

Persons involved in this plan and persons receiving a copy of the plan will be notified immediately of any plan changes. They will receive a copy of all amendments.

Specifically, the plan will be amended any time there is a change in our facility permit, a change in facility personnel, a change in the availability of on-site emergency equipment or a change in facility operation, construction, design, maintenance, etc., which may increase the potential for fires, explosions or release of hazardous waste of hazardous waste constituents, or may affect the response necessary in an emergency. This plan will be amended if it or any portion fails during an emergency, or if implementation of the plan during an emergency shows that the plan may be improved.

The effectiveness of the plan will be re-evaluated by the Emergency Coordinator and the Environmental Department after each implementation or test-run. The plan will be amended or updated as required.

Figure G-3

Certification for Items Used during a Contingency Plan Event

Date and Time of Event: ______________________________

Date and Time of Decontamination: ______________________________

Items Decontaminated:

Items Involved	Status: Clean	Status: Not Clean	If Not Clean, State Action Taken (Discarded, etc.)
1. ________	____	____	________
2. ________	____	____	________
3. ________	____	____	________
4. ________	____	____	________
5. ________	____	____	________
6. ________	____	____	________
7. ________	____	____	________
8. ________	____	____	________
9. ________	____	____	________
10. ________	____	____	________

I certify that the items listed above are clean and can be released for use.

______________________________ ______________

Signature of Emergency Coordinator Date

Version 04102017

Table G-1

Emergency Response Organizations

Organization	Number of Copies of the Plan
Chief, District #3 Cincinnati Fire Department 301 Ludlow Avenue Cincinnati, Ohio 45232	1
Director, Hamilton County Emergency Management Agency 2377 Civic Center Drive Cincinnati, Ohio 45231	1
University Hospital Department of Occupational Health 234 Goodman Street Cincinnati, Ohio	1
Cincinnati Police Department 310 Ezzard Charles Drive Cincinnati, Ohio	1
Ohio EPA Emergency Response Lazarus Government Center, PO Box 1049 Columbus, Ohio 43216-1049	1
Hamilton County Environmental Services 250 William Howard Taft Rd. Cincinnati, Ohio 45219	1

Ohio EPA Southwest District Office 1

401 East Fifth St.

Dayton, Ohio 45402-2911

Table G-2

SGRR Emergency Coordinators

Name	Title	Office Phone	Home Phone
PRIMARY EMERGENCY COORDINATOR			
Steve Vasse	Facility Mgr.	x2285 513-200-7572 (cell phone)	513-932-0919
SECONDARY EMERGENCY COORDINATOR			
Steve Bley	Compliance	x2284 513-616-7248 (cell phone)	513-941-3827
David Cox	Ops Mgr	x2279 513-200-6192(cell phone)	513-531-7899
William McFarland	Ops Mgr	x2283 513-497-7738 (cell phone)	NA
Anthony Winrod	Facility Ops. Supr.	x2277 513-802-6862 (cell phone)	513-267-9142

Table G-3
Fire Suppression and Fighting Equipment

Fire Extinguishers

Number	Location	Weight	Type
1	Upstairs office	10 lbs	Halon 1211
2	Furnace room	5 lbs	ABC dry
3	Accounting	5 lbs	Halon 1211
4	Lunch room	20 lbs	ABC dry
5	Lab	10 lbs	Halon 1211
6	Shower, locker room	20 lbs	ABC dry
7	Lab	10 lbs	Halon 1211
8	Lab	10 lbs	ABC dry
9	FS office	10 lbs	Halon 1211
10	FS office	10 lbs	Halon 1211
11	Tool room	5 lbs	ABC dry
12	Maintenance	20 lbs	ABC dry
13	Garage	20 lbs	ABC dry
14	Garage	20 lbs	ABC dry
15	Highbay	30 lbs	Class D
16	Highbay	20 lbs	ABC dry
17	Highbay	20 lbs	ABC dry
18	Highbay	20 lbs	ABC dry
19	Boiler room	20 lbs	ABC dry
20	Wastewater	20 lbs	ABC dry
21	Building E	10 lbs	ABC dry
22	Building E	20 lbs	ABC dry
23	Building F	30 lbs	Class D
24	Building F	20 lbs	ABC dry
25	Building F	20 lbs	ABC dry
26	Building F	20 lbs	ABC dry
27	Flammables pad	10 lb	ABC dry
28	Flammables pad	20 lb	ABC dry
29	Building H	20 lb	ABC dry
30	Building L	20 lb	ABC dry
1-F	Highbay	33 gal	AFFF mobile
2-F	Highbay	33 gal	AFFF mobile
3-F	Spill supply	33 gal	AFFF mobile
4-F	Building F	33 gal	AFFF mobile
1-P	Highbay	50 lbs	ABC dry
2-P	Tool cage (on welder)	5 lbs	ABC dry
3-P	Tool cage	5 lbs	ABC dry

4-P	Building F	30 lbs	Class D
NA	Forklifts	2.5 lbs	ABC dry
NA	Bobcats	2.5 lbs	ABC dry

Sprinkler System

Location	Capability
Throughout buildings	165° F heads

Foam System

Location	Capability
Building F	10,000 ft^3 coverage
High bay	16,000 ft^3 coverage

Table G-4
Spill Response Equipment

Description	Quantity	Location	Capability
2" gear pump	1	Processing area	50 gpm @ 80 psig
1.5" air powered diaphragm pump	2	Processing area	15 gpm @ 10 ft head, 60 lbs air pressure
3" air powered diaphragm pump	1	Processing area	100 gpm @ 40 ft head, 100 lbs air pressure
2" plastic hose with fittings	100'	Bermed areas	
1.5" plastic hose with fittings	100'	Bermed areas	
Lime	1200 lbs	Spill control area	
Sodium carbonate	1200 lbs	Spill control area	
Clay absorbent	1200 lbs	Spill control area	
Empty 55 gal drums	4	Spill control area	
Large scoop shovels	2	Spill control area	
Floor brooms	2	Spill control area	
Absorbent boom	100'	Spill control area	
Forklift	1	Processing area	3000 lb lifting capacity
Sewer line plug	1	Catch basin area	Plug sewer discharge
SCBA	1	Spill control area	
SCBA	1	Adjacent to building F	

Table G-5

Personnel Protective Equipment

Description	**Location**	**Capability**
Air purifying full face respirator	Store room	Respiratory protection
Air purifying half face respirator	Store room	Respiratory protection
SCBA	Spill control	Respiratory protection
Spare air cylinders, 45ft^3	Spill control	Spare for SCBA
Respirator cartridges		
Organic vapor/acid gases	Store room	Respiratory protection
Organic vapor, dust, mists	Store room	Respiratory protection
Ammonia, methyl amine	Store room	Respiratory protection
Gloves (cotton, vinyl, neoprene, PVC)	Store room	Hand protection
Disposable coverall	Store room	Splash protection
Fully encapsulated suits	Store room	Level A protection
Aprons	Store room	Splash protection
Goggles, safety glasses	Store room	Eye protection

Table G-6

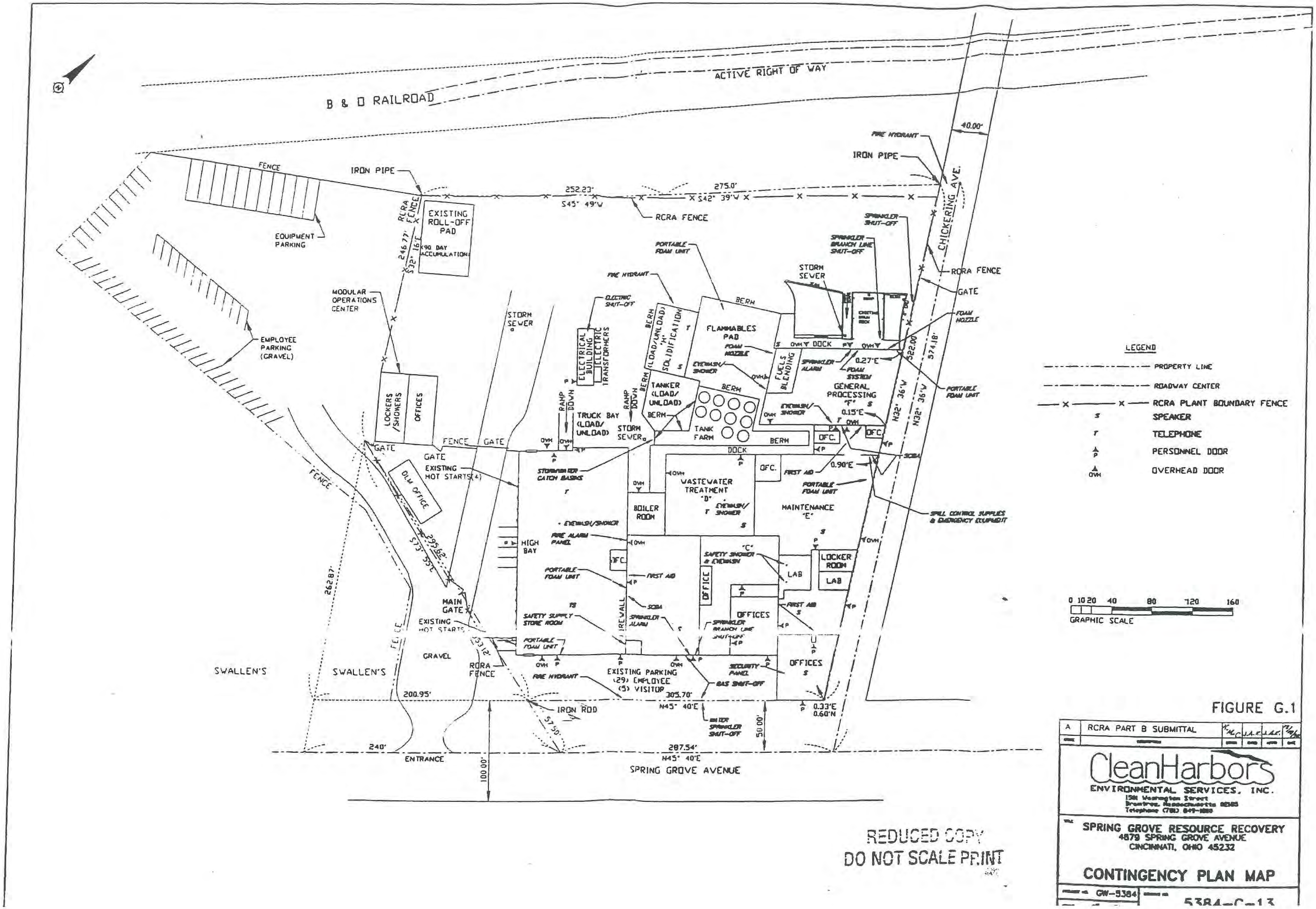
Emergency Phone Numbers

The following agencies are to be notified when, in the opinion of the Emergency Coordinator, it is proper to do so or is required under 40 CFR, Part 264.56(d) or OAC Chapter 3745-54-564.

Agency	Phone Numbers**
Life Squad	(513) 241-2525*
Fire Department	(513) 241-2525*
Engine Company 38	(513) 352-2338
Good Samaritan Hospital	(513) 872-1400
Cincinnati Police	(513) 352-3578*
Ohio EPA Emergency Response	(800) 282-9378
Hamilton County Emergency Management Agency	(513) 851-7080
Hamilton County Environmental Services	(513) 946-7777
U.S. Coast Guard	(513) 684-3295
U.S. EPA	(513) 684-7931
Ohio Disaster Services Agency	(614) 889-7150
National Response Center	(800) 424-5510
State Fire Marshall	(614) 889-7150
Cincinnati Water Works	(513) 352-2000
Metropolitan Sewer District	(513) 352-4900 or (513) 352-4800
Poison Center	(513) 872-5111
CG&E Emergency Number	(513) 381-2000
Chem-Trek	(800) 424-9300
National Weather Service	(513) 283-3195
Cincinnati International Airport	(513) 283-3616

*May also be reached by dialing 91911.

**All numbers require dialing "9" to obtain an outside phone line.



ACTIVE RIGHT OF WAY
B & O RAILROAD
FENCE
IRON PIPE
252.23'
S45° 49'W
275.0'
S42° 39'W
RCRA FENCE
EXISTING ROLL-OFF PAD
(90 DAY ACCUMULATION)
EQUIPMENT PARKING
246.77'
S32° 16'E
MODULAR OPERATIONS CENTER
EMPLOYEE PARKING (GRAVEL)
LOCKERS /SHOWERS
OFFICES
GATE
FENCE
STORM SEWER
ELECTRICAL BUILDING
ELECTRIC TRANSFORMERS
ELECTRIC SHUT-OFF
FIRE HYDRANT
PORTABLE FOAM UNIT
BERM
(LOAD/UNLOAD) "H" SOLIDIFICATION
FLAMMABLES PAD
FOAM NOZZLE
EYEWASH/SHOWER
TANKER (LOAD/ UNLOAD)
TANK FARM
RAMP DOWN
TRUCK BAY (LOAD/ UNLOAD)
DOCK
FUELS BLENDING
GENERAL PROCESSING "F"
SPRINKLER ALARM
FOAM SYSTEM
SPRINKLER SHUT-OFF
SPRINKLER BRANCH LINE SHUT-OFF
CHICKERING AVE.
40.00'
FOAM NOZZLE
PORTABLE FOAM UNIT
522.00'
574.18'
N32° 36'W
0.27'E
0.15'E
0.90'E
OFC.
FIRST AID
SCBA
WASTEWATER TREATMENT "D"
BOILER ROOM
MAINTENANCE "E"
SPILL CONTROL SUPPLIES & EMERGENCY EQUIPMENT
STORMWATER CATCH BASINS
EXISTING HOT STARTS(4)
O&M OFFICE
HIGH BAY
FIRE ALARM PANEL
SAFETY SUPPLY STORE ROOM
FIREWALL
OFFICE
"C"
SAFETY SHOWER & EYEWASH
LAB
LOCKER ROOM
OFFICES
SECURITY PANEL
GAS SHUT-OFF
295.62'
262.87'
MAIN GATE
EXISTING HOT STARTS
GRAVEL
SWALLEN'S
RCRA FENCE
200.95'
EXISTING PARKING (29) EMPLOYEE (5) VISITOR
305.70'
N45° 40'E
IRON ROD
WATER SPRINKLER SHUT-OFF
50.00'
0.33'E 0.60'N
240'
ENTRANCE
100.00'
287.54'
N45° 40'E
SPRING GROVE AVENUE
LEGEND
PROPERTY LINE
ROADWAY CENTER
RCRA PLANT BOUNDARY FENCE
SPEAKER
TELEPHONE
PERSONNEL DOOR
OVERHEAD DOOR
0 10 20 40 80 120 160
GRAPHIC SCALE
FIGURE G.1
A RCRA PART B SUBMITTAL
CleanHarbors
ENVIRONMENTAL SERVICES, INC.
SPRING GROVE RESOURCE RECOVERY
4879 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232
CONTINGENCY PLAN MAP
GW-5384
5384-C-13
REDUCED COPY
DO NOT SCALE PRINT

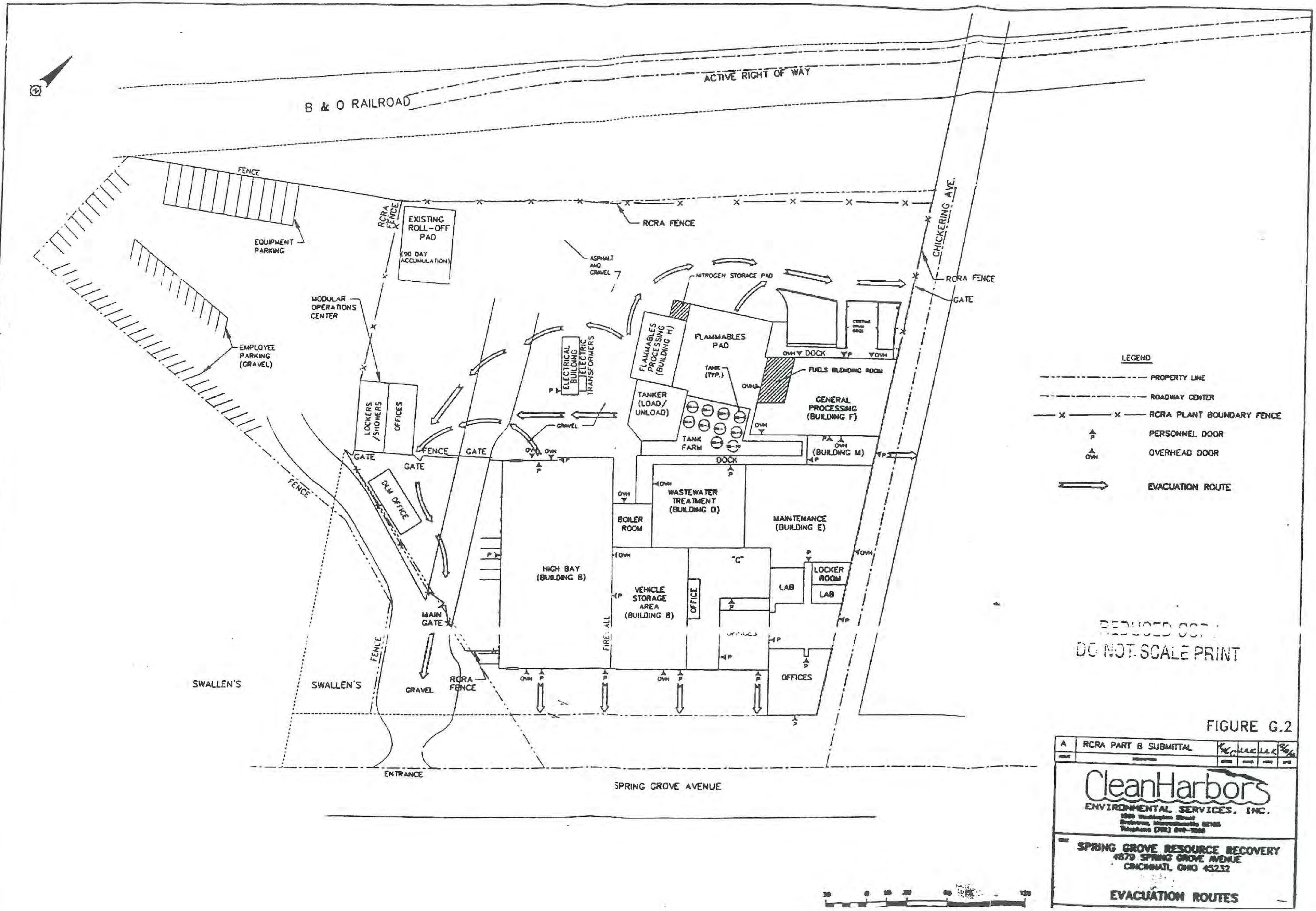


FIGURE G.2

A	RCRA PART B SUBMITTAL

CleanHarbors
ENVIRONMENTAL SERVICES, INC.

SPRING GROVE RESOURCE RECOVERY
4879 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232

EVACUATION ROUTES

Figure G-3

Certification for Items Used during a Contingency Plan Event

Date and Time of Event: ______________________________

Date and Time of Decontamination: ______________________________

Items Decontaminated:

Items Involved	Status: Clean	Status: Not Clean	If Not Clean, State Action Taken (Discarded, etc.)
1. ________	____	____	____________
2. ________	____	____	____________
3. ________	____	____	____________
4. ________	____	____	____________
5. ________	____	____	____________
6. ________	____	____	____________
7. ________	____	____	____________
8. ________	____	____	____________
9. ________	____	____	____________
10. ________	____	____	____________

I certify that the items listed above are clean and can be released for use.

______________________________ ______________

Signature of Emergency Coordinator Date

APPENDIX D-2

CONTAINMENT CALCULATIONS

Table D-1

Secondary Containment For Storage of Containers Holding Liquids

LOCATION	AREA	SECONDARY CONTAINMENT VOLUME (GALLONS)	MAXIMUM RAINFALL (GALLONS)	AVAILABLE CONTAINMENT*	MAXIMUM NUMBER OF 55-GAL EQUIVALENT CONTAINERS
High Bay	Area I	5,491	N/A	5,491	998
	Area II	1,870	N/A	1,870	340
	Area III	2,445	N/A	2,445	444
	Area IV	3,374	N/A	3,374	613
Building H		1,403	N/A	1,403	255
Building F	Area I	358	N/A	358	65
	Area II	1,730	N/A	1,730	314
	Area III	696	N/A	696	126
	Area IVA	6,540	N/A	6,540	1,189
	Area IVB	**	**	**	**
	Area V	26,036	N/A	26,036	4,733
Building D		31,537	N/A	31,537	5,734
Flammables Pad		27,150	N/A	27,150	4,936
Tanker Load/ Unload Area		8,450	8,818		1,966
Truck Dock	Ramp	21,470	6,134	15,336	2,788
	Elevated Dock	11,062	N/A	11,062	
	Truck Bays	10,700	N/A	10,700	1,958
	North Dock (P)	6,805	N/A	6,805	1,245

Notes:

* Represents the size of the largest container holding free liquids that may be stored in each area.
** The containment and storage capacities listed for Area IVA includes the capacity of Area IVB.

(P) Proposed area.

The total hazardous waste container storage capacity for the facility is 120,000 gallons or 2,181 55-gallon equivalents. SGRR will not store more than 2,181 55-gallon equivalent containers on-site at any one time.

Overflow from the Tanker Load/Unload Area would flow approximately 129,000 gallon secondary containment of the Tank Farm.

The Truck Dock Area provides additional secondary containment for Building F, the Flammables Pad and Building H..

WOOLPERT CONSULTANTS

Client: CECOS - SPRING GROVE PROCESSING FACILITY

Subject: SECONDARY CONTAINMENT VOLUME CALC. - APP. Order No. 17167-C

Computed by: Date: 9/89 Checked by: Date:

TABLE OF CONTENTS FOR CALCULATIONS

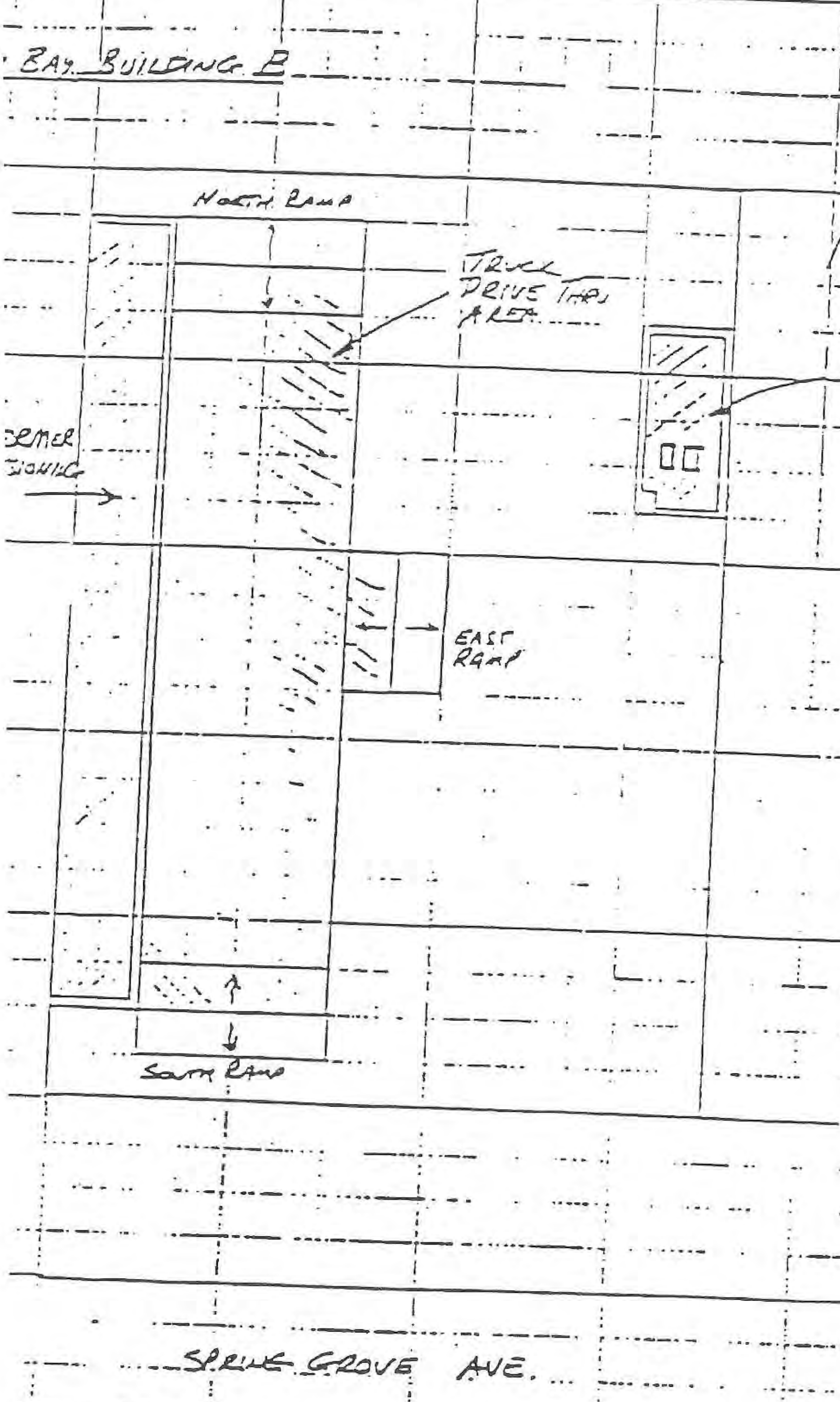
HIGH BAY, BUILDING B	D-III-4 THRU 8
SOLIDIFICATION BUILDING, BUILDING A	D-III-9 THRU 11
FLAMMABLES PAD	D-III-12 THRU 14
TANKER LOADING/UNLOADING AREA	D-III-15 THRU 21
FARM	D-III-50 THRU 53
...CK DOCK	D-III-54 THRU 58
...ILDING F	D-III-59
...STE WATER BERM	D-III-117 THRU 119

WOOLPERT CONSULTANTS

Client: CECOS - SPRING GROVE PROCESSING FACILITY

Subject: SECONDARY CONTAINMENT VOLUME CALCS - PRO   Order No. 1747-01

Computed by: Date: 9/89   Checked by: Date:



NOTE:

A TOTAL HIGH BAY VOLUME CALCULATION IS PRESENTED ON THE PAGE LABELED SUB-AREA 7 IN THIS APPENDIX. PAGES 2-5 WHICH FOLLOW CONTAIN CALCULATIONS OF THE CONTAINMENT VOLUMES OF THE INDIVIDUAL BERMED AREAS WITHIN BUILDING B

WOOLPERT CONSULTANTS

Client: CECOS - SPRING GROVE PROCESSING FACILITY

Subject: SECONDARY CONTAINMENT VOLUME CALCS - PREL. Order No. 17147-

Computed by: Date: 9/29 Checked by: Date:

BAY. BUILDING "B"

TRANSFORMER DECOMMISSIONING AREA

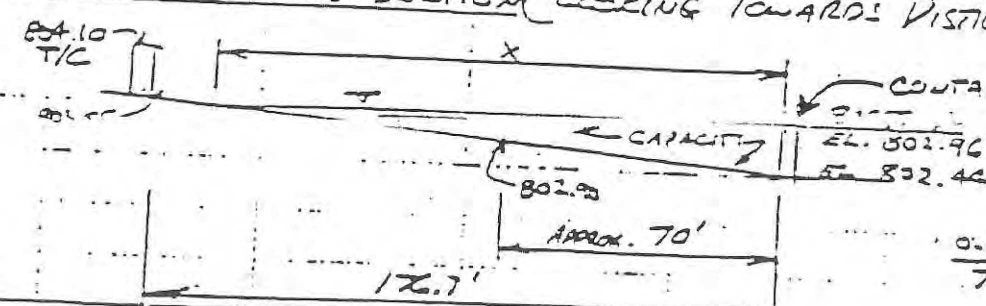
LENGTH $= (180'-8") - [(3'6") + (6")] = 176'-8"$ or $176.7'$

WIDTH $= 9'-6"$ or $9.5'$

CURB HEIGHT (ARE)	TOP/CURB	BACKCURB (FLOOR EL)	LOCATION	HEIGHT
	803.01	802.46	SW CORNER	0.55'
	802.96	802.15	SE CORNER @ S. RAMP	0.81'
	803.49	802.90	E CURB	0.59'
	804.10	803.55	NE CORNER	0.55'
	803.56	803.19	E. CURB @ N. RAMP	0.37'

LOWEST T/C = 802.96

NORTH TO SOUTH CROSS-SECTION (LOOKING TOWARDS DISTILLATION AREA)



$\frac{0.36}{70'} = \frac{0.52'}{x}$

$x = 101'$

SECONDARY CONTAINMENT STORAGE VOLUME $= \frac{1}{2}(0.52')(101')(9.5') = \boxed{250 \text{ ft}^3 \text{ or } 1370 \text{ GAL CAPACITY}}$

H BAY BLDG B (CON'T)

TRUCK DRIVE-THRU AREA

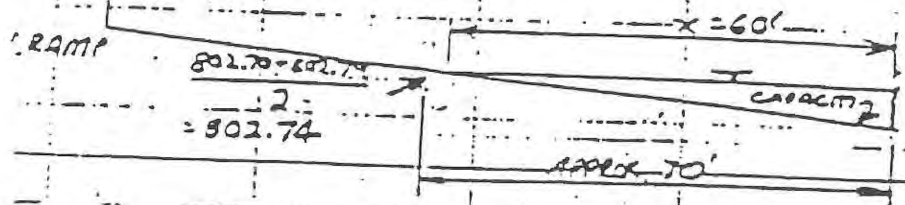
LENGTH = 160'-0"
WIDTH = 24'-6"

CURB HEIGHT:

LOCATION	TOP ELEV.	FLOOR ELEV.
NORTH RAMP	803.52 T/RAMP	803.21 T/C/RAMP
"	—	802.92 T/C/RAMP
WEST CURB	803.49 T/C	802.70
EAST RAMP	803.12 T/RAMP	—
"	803.28 T/C@RAMP	802.79
"	803.17 T/C@RAMP	—
SOUTH RAMP	802.66 T/RAMP	802.15
EAST CURB @ RAMP	802.67 T/C	—
		AVG = 802.75

LOWEST T/C = 802.66
OR T/RAMP

NORTH TO SOUTH CROSS SECTION (LOOKING TOWARDS DISTILLATION AREA)



.51 $\frac{.51}{x} = \frac{.51}{70}$

S. RAMP x = 60'

VOLUMES: $\frac{1}{2}(.51')(60')(24.5')$ = 374.8 FT³
S. RAMP = $\frac{1}{2}(.51')(7')(24.5')$ = 47.7 FT³
SECONDARY E. RAMP = NEGL.

WOOLPERT CONSULTANTS

Job: GREER - SPRING GROVE PROCESSING FACILITY

Subject: SECONDARY CONTAINMENT VOL. CALCS - PREL   Order No. 17147-0

Computed by: Date: 9/99   Checked by: Date:

Bay Bldg B (Con't)

Distillation Area

~~Total Area = Area Bounded By Curb - (2 x Equipment Pad) - SW Corner Pad~~

~~Area Bounded By Curb~~

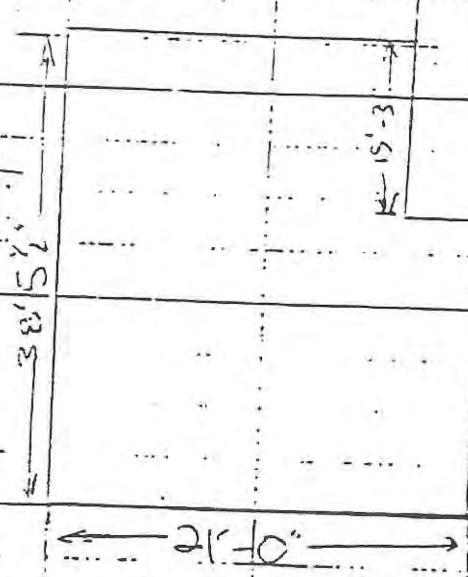
~~[20' x 37' (scaled)] - [12' (scaled) x 2 (scaled)]~~ = 716 ft²

~~Equipment Pads~~

~~2 x [7' x 4']~~ = ~~57 ft²~~

~~SW Corner Pad~~

~~2.1' x 3.8'~~ = 8 ft²



Σ = 650 ft²

~~Curb Height~~

~~Location~~	Top/Curb	Slab/Curb (Floor elev.)
~~SW Corner Pad @ Curb~~	~~803.18~~	802.69
~~NE Corner~~	803.36	802.68
		Avg = 802.68

~~curb height~~ nominal 8" = .667'

~~Lowest T/C = 803.18~~

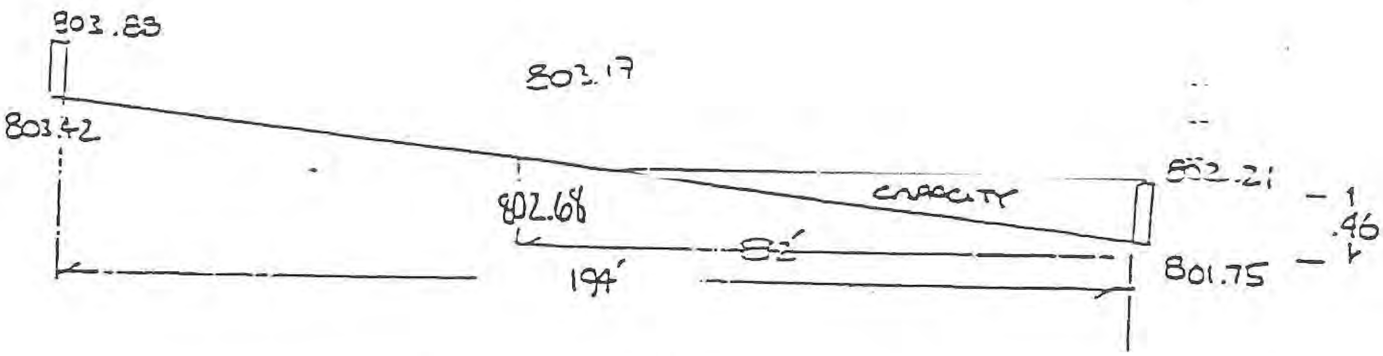
~~Average Curb Height = 803.18 - 802.68 = 0.5'~~

Secondary Containment Storage Volume = ~~650 ft² x 0.5'~~ = ~~325 ft³ or 2430 gal Volume~~

19.25' x 16.375' x .667' x 7.48 + 18 ...

Building B - Center Storage Area

Based on elevations gathered; the containment volume slopes to the Southeast from a high elevation to the northwest at 803.88 top of curb to 802.21 top of curb at the southeast.



$$\frac{.93'}{82'} = \frac{.46'}{x}$$

$x = 40.56'$

Volume = $\frac{1}{2}(.46)(40.56')(83') = 774.29\,ft^3 \times 7.48052 = 5792.09$ gal

Stoop area $4' \times 6' \times .51 = 12.24\,ft^3 \times 7.48052 = 91.56$ gal

containment volume	5700.53 gal

wall Footer removes 209.35 gal from total

5700.53 gal − 209.35 gal = 5491.18 gal.

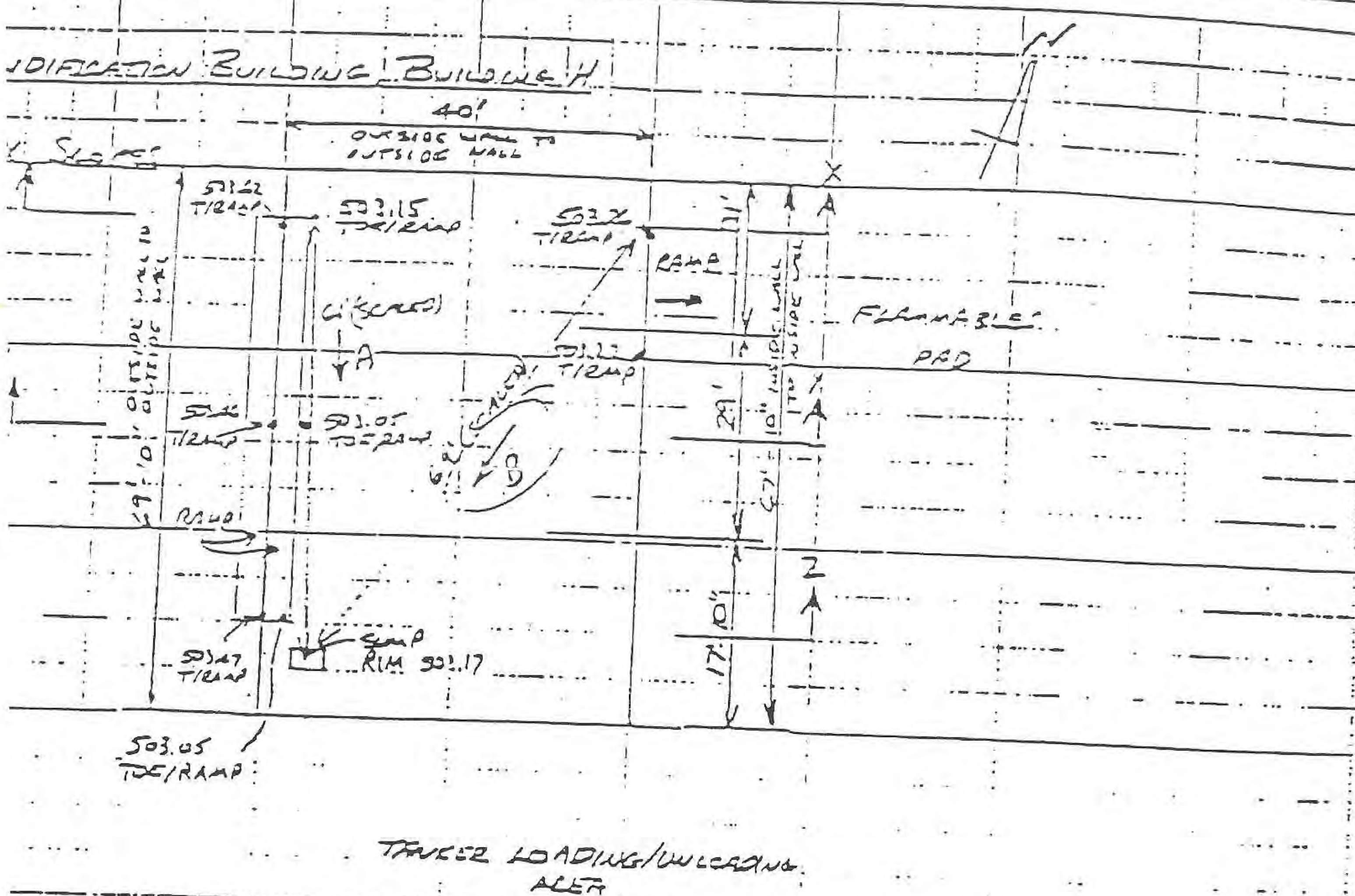
WOOLPERT CONSULTANTS

Client: Cecos - Spring Grove Processing Facility

Subject: Secondary Containment Volume Calc - Prel

Order No. 17147-01

Computed by: | Date: 9/89 | Checked by: | Date:



Slope: A: T/Ramp elev < Sump Rim elev slightly

B: $\frac{503.26 - 503.17}{69} = 0.0013'$ or 0.1%

SOLIDIFICATION BUILDING, BUILDING H (CON'T)

CONTAINMENT VOLUME (NOTE: NO CONTAINMENT CURB PRESENT)

ASSUME 1' THICK BUILDING WALLS (FROM CONSTRUCTION DWGS.)

LENGTH = (69'-10") - (2×1') = 67'-10"

WIDTH = (40'-0") - (2×1') = 38'-0"

CONTAINMENT HEIGHT:

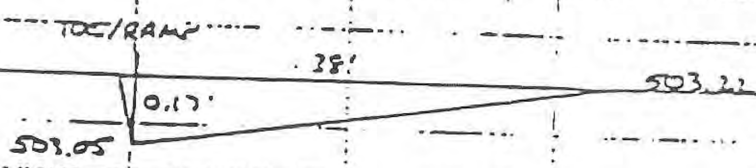
LOWEST TOP/RAMP ELEV = 503.22
LOWEST FLOOR ELEV = 503.05
SUMP, RIM ELEV = 503.17

CROSS SECTIONAL AREAS (ASSUME FLOOR ELEV. @ E. WALL = 503.22

XX

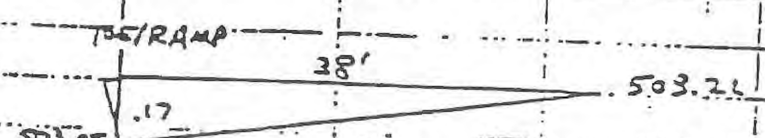
$A_{XX} = \frac{1}{2}(38')(0.07)' = 1.3\ FT^2$

YY



$A_{YY} = \frac{1}{2}(38')(0.17') = 3.2\ FT^2$

ZZ



WOOLPERT CONSULTANTS

Client: CECOS SPRING GROVE PROCESSING FACILITY

Subject: SECONDARY CONTAINMENT VOLUME CALC PREP

Order No. 17147-C

Computed by — Date 9/89 — Checked by — Date

...DIFICATION BUILDING BUILDING H (CONT)

VOLUMES BASED ON CROSS-SECTIONAL AREAS:

$21' \times A_{xx} = 21' \times 1.3\ Ft^2 = 27.3\ Ft^3$

$29' \times A_{yy} = 29' \times 3.2\ Ft^2 = 92.8\ Ft^3$ NOD IIC

$(17'\text{-}10'') \times A_{zz} = (17'\text{-}10'') \times 3.2\ Ft^2 =$ ~~92.8 Ft³~~ $57.07\ Ft^3$

SUMP VOLUME $= 2.3' \times 2.3' \times (503.17 - 501.20) = 10.4\ Ft^3$

$\Sigma =$ ~~223.3 Ft³~~ $187.57\ Ft^3$

SECONDARY CONTAINMENT STORAGE VOLUME = $\boxed{\text{~~223 Ft³~~ OR ~~1670~~ GAL CAPACITY}}$

187.57 — 1403

Additional berm height to bring up to 10" increases containment ~~to~~ additional 14,653.52 gallons

14,653.52 g + 1403 = 14,766.9

Containment Calculations for the Solidification Building H

Berm alteration to comply with TSCA requirements regarding PCB storage shown on drawing 5384-S-04. New concrete will be sealed with sealant as specified in section D-III of the permit.

Using the survey data and original containment volume calculations from Woolpert Consultants:

The lowpoint of the building's containment -or where the overflow would occur, is presently at the door opening to the flammables pad, at elevation 503.22' . At this time there is no containment berm across this opening.

Adding a new 10" high speed bump here, and raising the existing curb height across the front of the building to 10" minimum (from 5 1/2" average height currently) will make the new lowpoint of the containment be across the front of the building, at elevation 503.98'.

This increases the current containment volume by an additional (503.98 - 503.22) = .76' across the entire floor area of the building:
.76'x (67'-10") x (38') = 1959.03 cubic feet

which equates to an additional 14,653.52 gallons.

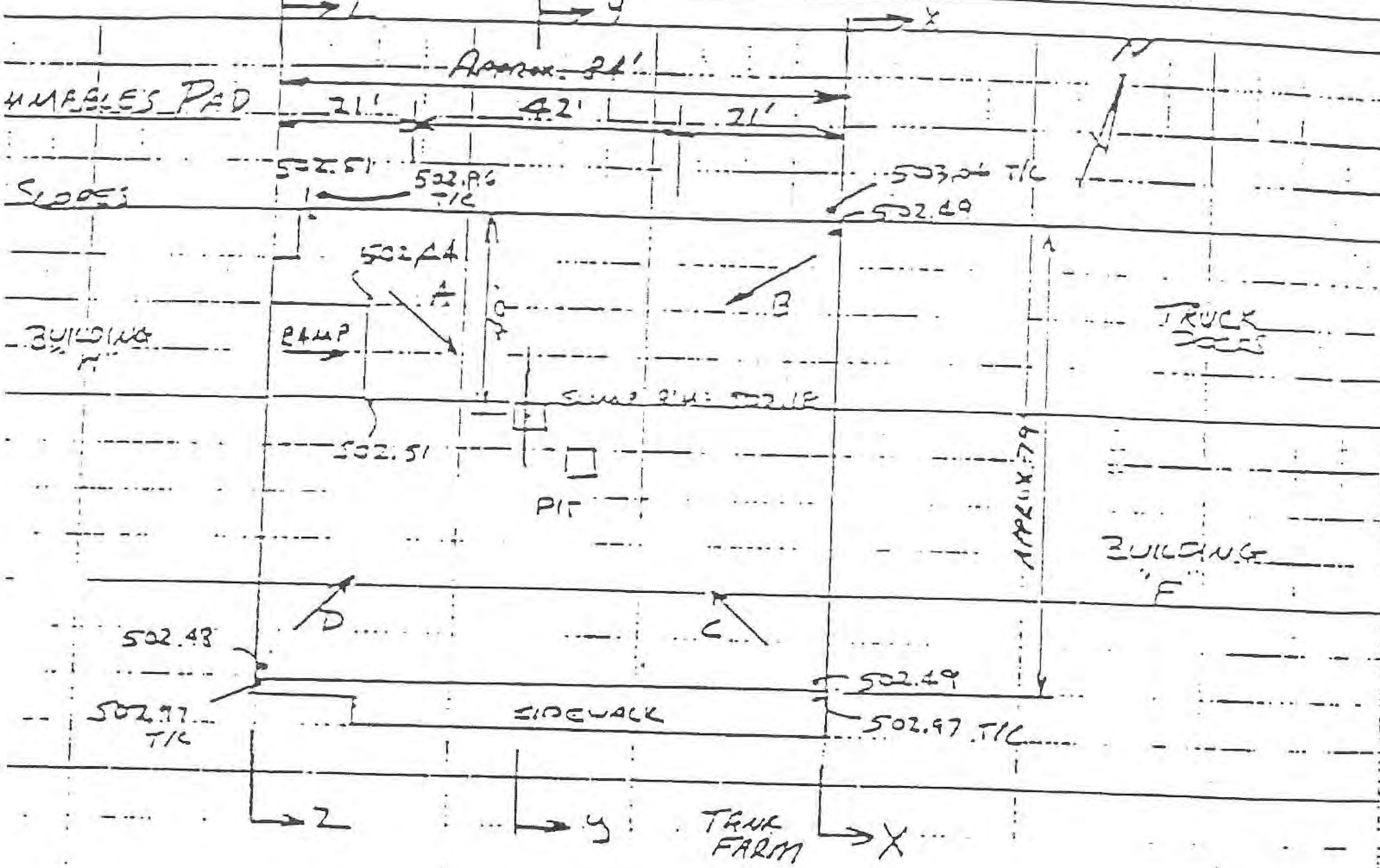
This volume gets added to the existing volume of 1403 gallons. The sump is included in this figure. A deduction is made on the drawing for the volume displaced by the ramps and new 6" wide by 10" high curb around the inside of the remaining walls, resulting in a net volume of 14,765.9 gallons. Preceding pages are accordingly revised.

WOOLPERT CONSULTANTS

Client: CECOS-Spring Grove Processing Facility

Subject: Secondary Containment Volume Calcs - Prel Order No. 17167-01

Computed by: Date: 9/29 Checked by: Date:



A: $\dfrac{502.51 - 502.18}{59' \text{ (SCALED)}} = 0.0056\ '/' = 0.6\%$

B: $\dfrac{502.49 - 502.18}{58' \text{ (SCALED)}} = 0.0053\ '/' = 0.5\%$

C: $\dfrac{502.49 - 502.18}{52' \text{ (SCALED)}} = 0.0060\ '/' = 0.6\%$

D: $\dfrac{502.48 - 502.18}{55' \text{ (SCALED)}} = 0.0054\ '/' = 0.5\%$

WOOLPERT CONSULTANTS

CLIENT: CECOS - SPRING GROVE PROCESSING FACILITY

SUBJECT: SECONDARY CONTAINMENT VOL. CALCS - PRE.

Order No. 17147-01

Computed by

Date: 9/89 Checked by

Date

FLAMMABLES PAD (CON'T)

CONTAINMENT VOLUME

PAD LENGTH & WIDTH FROM CONSTRUCTION DRAWINGS & RECORD DRAWING MEASUREMENTS

LENGTH ≅ 84'

WIDTH ≅ 79'

CONTAINMENT HEIGHT:

LOWEST TOP/CURB OR CONTAINMENT HEIGHT = 502.96 C NW CORNER

CROSS-SECTIONAL AREAS

XX

79'

.48 .48

502.49 502.96 502.49

SIDEWALK/TANK FARM SIDE

$A_{XX} = (79')(.48')$ = 37.9 FT²

YY

40' ℄ SUMP 39'

.46' .78' .48

$\frac{502.51 + 502.49}{2} = 502.50$

502.96

$\frac{502.49 - 502.48}{2} = 502.48$

502.18

$A_{YY} = \left(\frac{.46 + .78}{2}\right)(40') + \left(\frac{.78 + .48}{2}\right)(39') =$ 49.4 FT²

ZZ

79'

.45 .48

(NEGLECT BLDG H RAMP)

502.51 502.96 502.48

$A_{ZZ} = \left(\frac{.45 + .48}{2}\right)(79')$ = 36.7 FT²

WOOLPERT CONSULTANTS

Client: CECOS SPRING GROVE PROCESSING FACILITY

Subject: SECONDARY CONTAINMENT VOLUME CALCS - PAGE 1 Order No. 17167-

Computed By

Date: 9/89 Checked By

Date

...MEABLES PAD (CONT.)

CONTAINMENT

VOLUMES BASED ON CROSS-SECTIONAL AREAS:

$21' \times A_{XX} = 21' \times 37.9\ ft^2$	= +	795.9 ft^3
$42' \times A_{YY} = 42' \times 49.4\ ft^2$	= +	2074.8 ft^3
$21' \times A_{ZZ} = 21' \times 36.7\ ft^2$	= +	770.7 ft^3
SUMP VOLUME = $2.3' \times 2.3' \times (502.18 - 499.58)$	= +	13.8 ft^3
*SPRINKLER PIT = $3' \times 3' \times (502.86 - 502.18)$	= −	6.1 ft^3
BLDG H RAMP = $\frac{1}{2}\left[502.96 - \left(\frac{502.44 + 502.51}{2}\right)\right](\cong 6')(12') =$	−	17.5 ft^3
NW CORNER = $(5.7)(1.3)(502.96 - 502.51)$	= −	3.3 ft^3
	Σ =	3628.3 ft^3

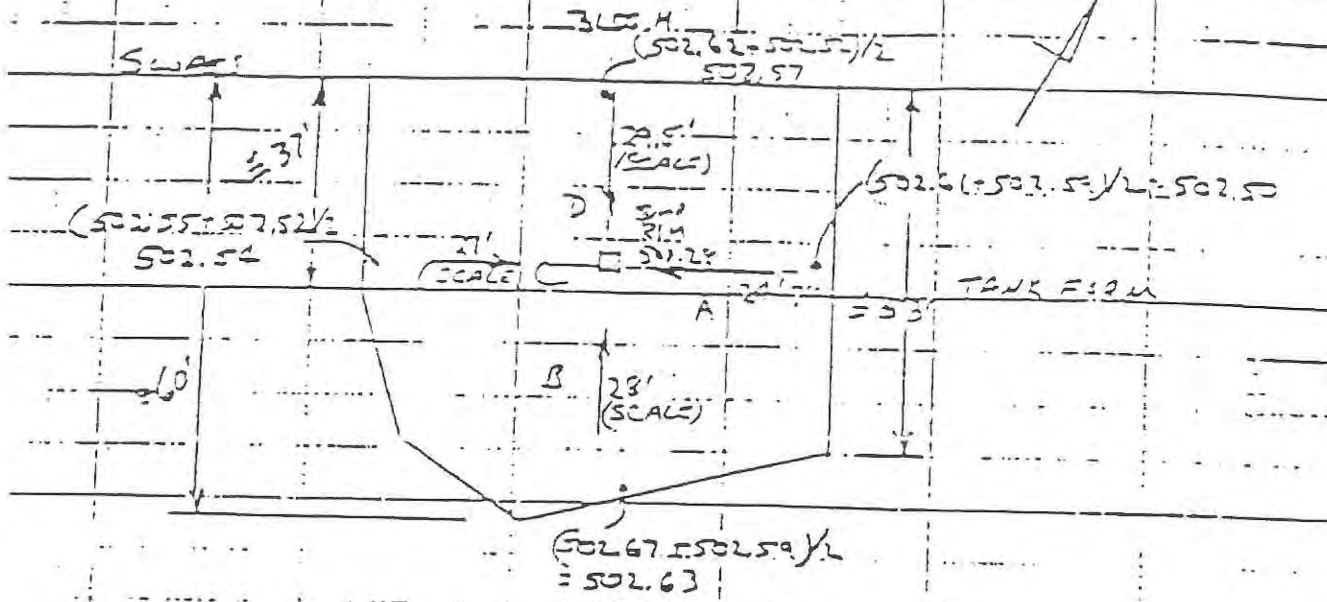
SECONDARY CONTAINMENT STORAGE VOLUME = $\boxed{3630\ ft^3 \text{ OR } 27150 \text{ GAL CAPACITY}}$

Client: CEMS - SPRING CREEK PROCESSING FACILITY

Subject: SECONDARY CONTAINMENT VOLUME CALCS - PREL. Order No 17167-R.1

Computed by Date 9/99 Checked by Date

...ER LOADING/UNLOADING AREA



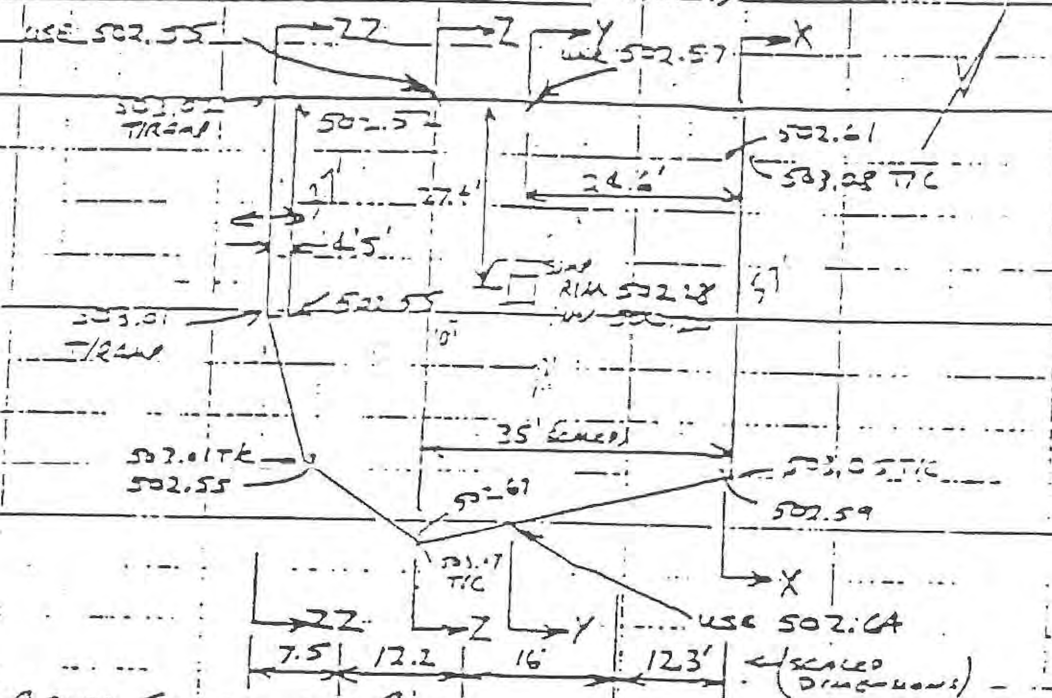
A: $\dfrac{502.50 - 502.28}{(24'\text{-}7")} = 0.0089$ '/' $= 0.9\%$

B: $\dfrac{502.63 - 502.28}{28'} = 0.0125$ '/' $= 1.2\%$

C: $\dfrac{502.54 - 502.28}{21'} = 0.0124$ '/' $= 1.2\%$

D: $\dfrac{502.57 - 502.28}{29.5'} = 0.0098$ '/' $= 1.0\%$

...P LOADING / UNLOADING AREA (CONT.)



LOWEST T/C-RAMP = 503.01

CROSS SECTIONAL AREAS

BLDG H SIDE

XX

53'

502.61 .4' .42' 503.01 502.59

$A_{XX} = \left(\frac{0.4 + 0.42}{2}\right)(53') = 21.7$ SF

YY

27.4' SUMP 29' (SCALED)

502.57 .44' .73 .37 503.01 502.64

502.28

$A_{YY} = \left(\frac{.44 + .73}{2}\right)(27.4') + \left(\frac{.73 + .37}{2}\right)(29) = 32.0$ SF

60'

ZZ 502.55 .46 .34 503.01 502.67

$A_{ZZ} = \left(\frac{0.46 + 0.34}{2}\right)(60') = 24.0$ SF

37'

ZZ-ZZ 502.52 .49 .46 503.01

...ER LOADING / UNLOADING AREA (CONT.)

VOLUMES BASED ON CROSS-SECTIONAL AREAS:

12.3 × A = 12.3 × 21.7 = + 266.9 FT³

16.0 × A = 16.0 × 32.0 = + 512.0 FT³

12.2 × A = 12.2 × 24.0 = + 292.8 FT³

7.5 × A = 7.5 × 17.6 = + 132.0 FT³

SUMP VOLUME = 2' × 2' × (502.28 - 500.20) = + 8.3 FT³

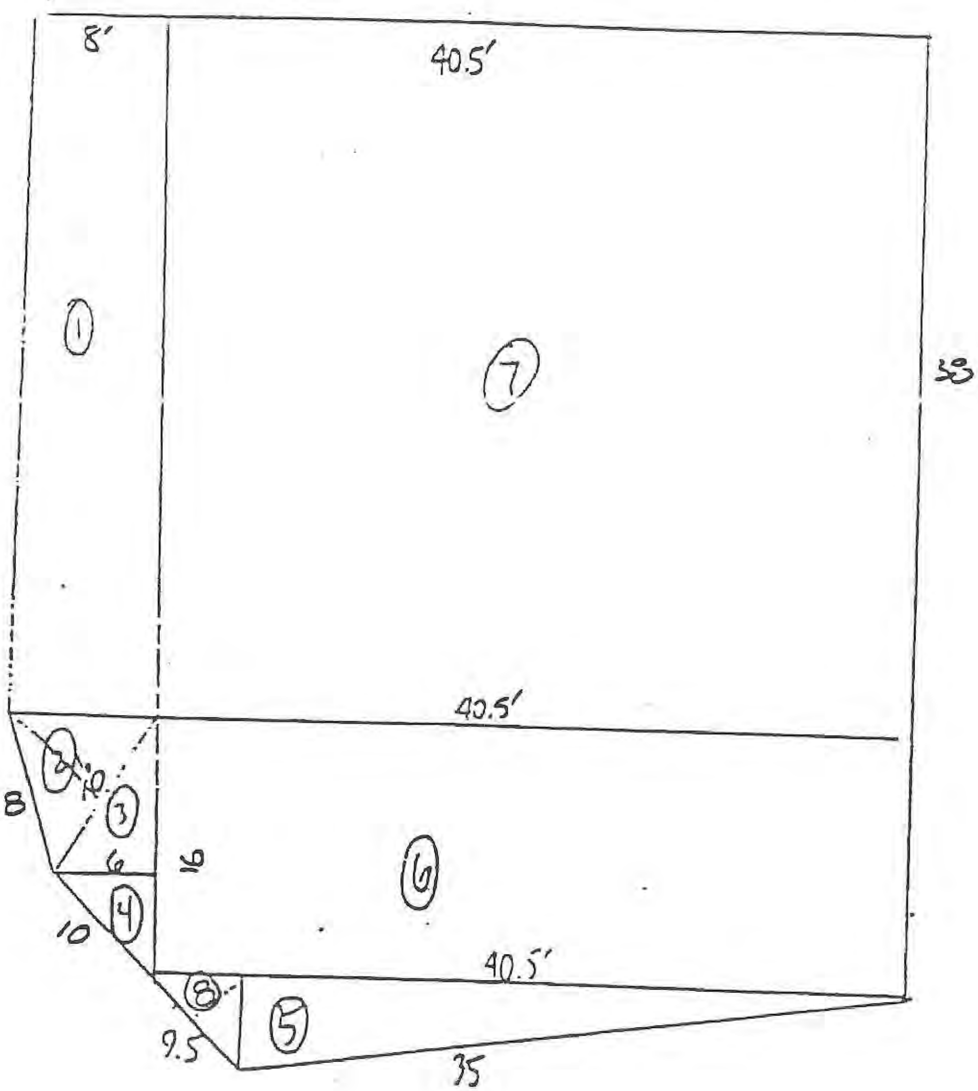
$$RAMP = \frac{1}{2}\left[\frac{503.02 + 503.05}{2} - \frac{502.52 + 502.55}{2}\right](4.5')(37') = -79.9\ FT^3$$

Σ = 1132.1 FT³

SECONDARY CONTAINMENT STORAGE VOLUME = $\boxed{1130\ FT^3 \text{ or } 8450 \text{ GAL CAPACITY}}$

Tanker Pad - Rainfall 25 year 24 hour storm

Area of Tanker Pad



1 = 8×38 = 304 ft²

2 ≈ (3)(10) 30

4 = (½)(6)(16) = 48

5 ≈ (½)(½)(7)(81) = 141.75

6 = (16)(40.5) = 648

Rainfall = 4.7" = .39167 ft

2729.75 ft² * .39167 ft = 1069.16

1069.16 ft³ * 7.48052 = 7997.87

Maximum Capacity Tanker Pad	8450 gal
Rainfall	− 7997.87 gal
Available Capacity	452.13 gal

assuming largest container was 8,000 gal
and total stored was 15,000 gal

8000 gal secondary containment must be shown

overflow goes to tank farm
(35 ft)(8ft)(4.95') = 1386 ft^3
1386 ft^3 × 7.48052 = 10,368 gal

rainfall in this area
(35 ft)(8ft)(.39167ft) = 109.67 ft^3 × 7.48052 = 820.37 gal

(Tanker Pad containment + tank farm) − (TP rain + TF rain)
(816.7 + 8450 + 10,368) − (7997.87 + 820.37)
(~~18,818~~ 19,634.7) − (8818.24) = ~~9999.76~~ 10,816.46 gal
addition of berm height to 6" adds 816.7 gals of containment
9999.76 g + 816.7 g = 10,816.46 gal
∴ ~~9,999.76~~ 10,816 gal maximum size container that could be stored a

~~99,997.6~~ gal maximum [illegible]

Containment Calculations for the Tanker Loading/Unloading Area

Berm alteration to comply with TSCA requirements regarding PCB storage shown on drawing 5384-S-04. New concrete will be sealed with sealant as specified in section D-III of the permit.

Using the survey data and original containment volume calculations from Woolpert Consultants:

The low point of the area's containment - or where the overflow would occur, is presently at the South end of the ramp used to drive into the area, at elevation 503.01' .

Raising this existing ramp to a new height of 6" minimum (from 5 1/2" average height currently) will raise the low point elevation to 503.05'. This increases the current containment volume by an additional (503.05 - 503.01) = .04' across the entire Tanker Loading/Unloading Area, which equates to an additional 816.7 gallons.

This volume gets added to the existing volume of 8450 gallons.
The sump and ramp are included in this figure. An addition is made on e drawing to include the additional volume provided by the portion of e Tank Farm dike area along the Southern edge of the Tanker Loading/Unloading Area. Preceding pages are accordingly revised.

Affected on Containment Volume Tank Farm
With Tanker Pad Overfill to Area (a)

area 5 has different floor elevation than rest

(747.5 ft²) (3.42 ft)   2556.45 ft³ × 7.48052   19123.58 gal

all others
(4103.5 ft²) (4.63 ft) = 18,999.205 ft³ × 7.48052 = 142123.93 gal

161247.51 gal
assuming no loss to tank volumes in this area.

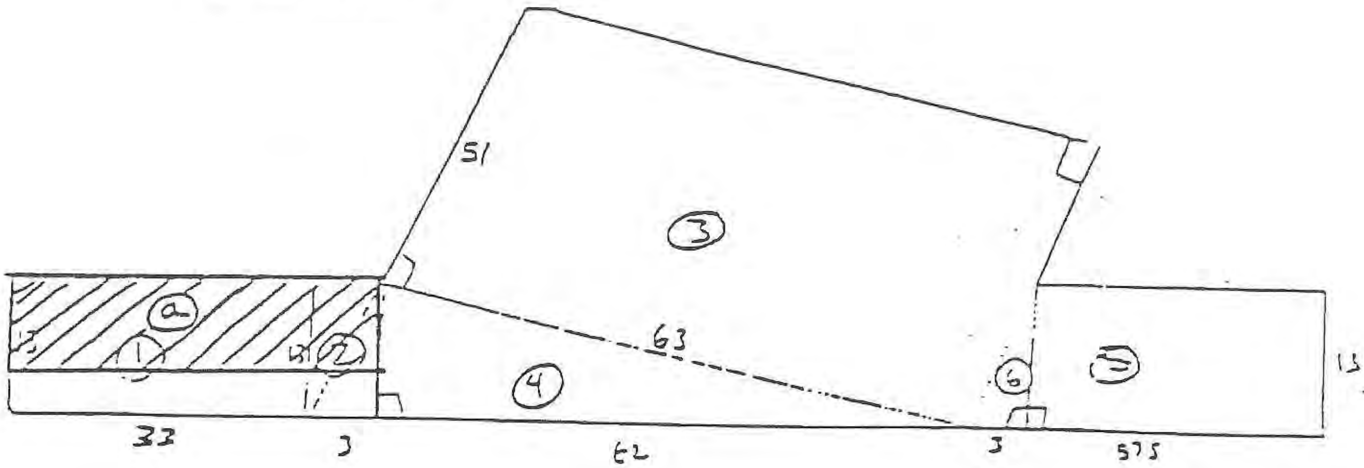
if area (a) is given up to tanker pad volume would be.

161,247.51 gal
− 9,999.76 gal area (a)

151,247.75 gallons

∴ negligible loss of containment volume < 6%

Tank Farm



Areas:

① $(13)(33) = 429\ ft^2$

② $(3)(13) = 39\ ft^2$

③ $(51)(63) = 3213\ ft^2$

④ $(\frac{1}{2})(13)(62) = 403\ ft^2$

⑤ $(13)(57.5) = 747.5\ ft^2$

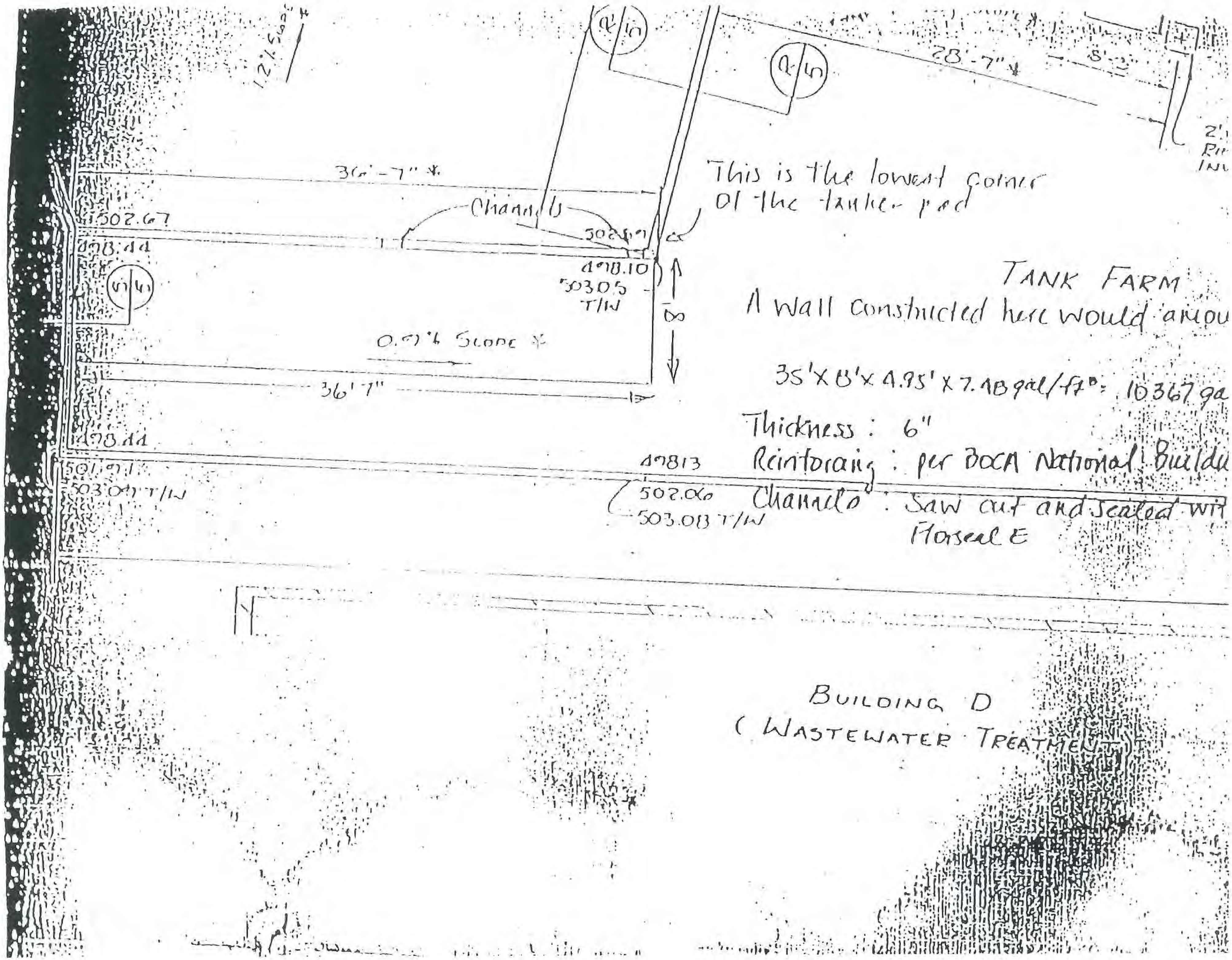
⑥ $(\frac{1}{2})(13)(3) = 19.5\ ft^2$

$\sum 4851\ ft^2$

Rainfall (gal) =

$(4851\ ft^2)(.39167\ gal)(7.48052)$

$= 14{,}212.92$ gallon



1.2% Slope
28'-7"
8'
36'-7"
Channels
502.67
498.44
498.10
503.05
T/W
8'
0.97% Slope
36'-7"
498.44
501.97
503.09 T/W
49813
502.06
503.08 T/W
This is the lowest corner
of the tanker pad
TANK FARM
A wall constructed here would amou
35' x 8' x 4.95' x 7.48 gal/ft³ = 10367 ga
Thickness : 6"
Reinforcing : per BOCA National Buildi
Channels : Saw cut and sealed wit
Floseal E
BUILDING D
(WASTEWATER TREATMENT

Client: Cecos - Spring Grove Processing Facility

Subject: Secondary Containment - Volume Calcs - Pre

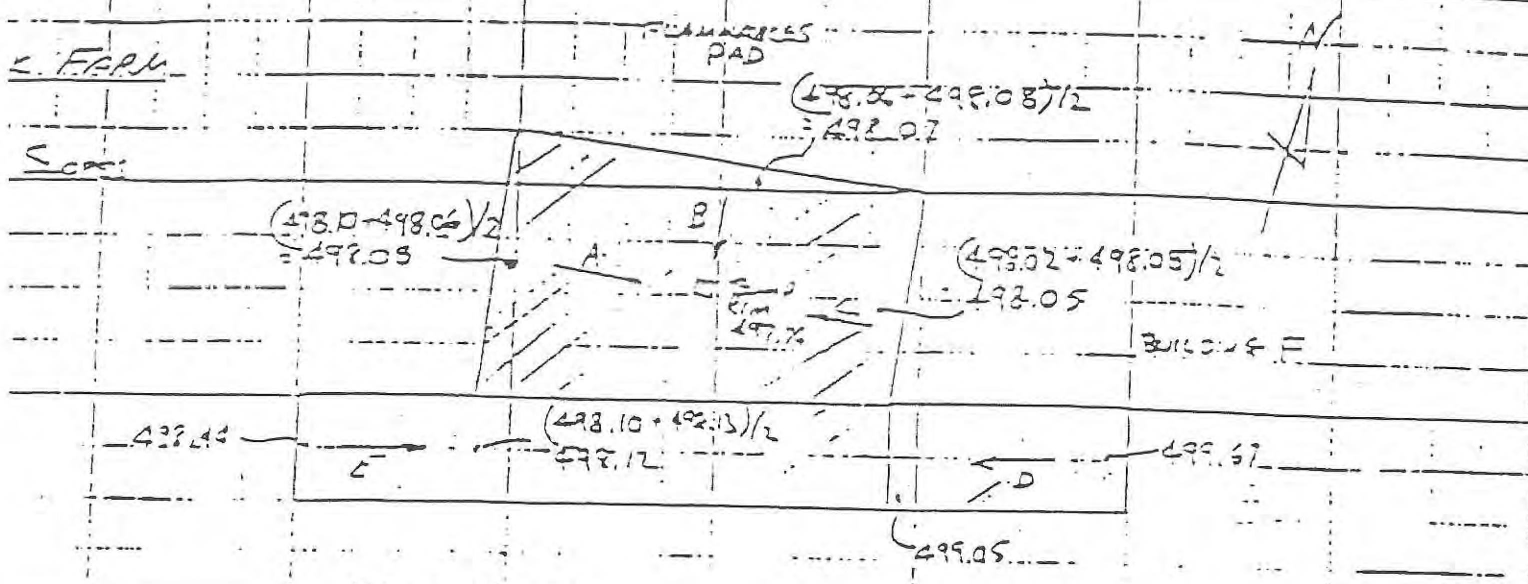
Order No 1747-01

Computed by

Date: 9/89

Checked by

Date



$$A: \frac{498.09 - 497.76}{(28'-7")} = 0.0112'/' = 1.1\%$$

$$B: \frac{498.07 - 497.76}{(28')} = 0.0111'/' = 1.1\%$$

$$C: \frac{498.05 - 497.76}{63'-(28'-7")} = 0.0084'/' = 0.8\%$$

$$D: \frac{499.67 - 499.05}{(55'-4")} = 0.0112'/' = 1.1\%$$

$$E: \frac{498.44 - 498.12}{(36'-7")} = 0.0087'/' = 0.9\%$$

WOOLPERT CONSULTANTS

OHIO EPA DHWM

MAR 31 1994

7/11/91

15

Client: Cecos - Spring Grove Processing Facility

Subject: Secondary Containment Volume Calcs - Prel.

Order No 17147-01

Computed by

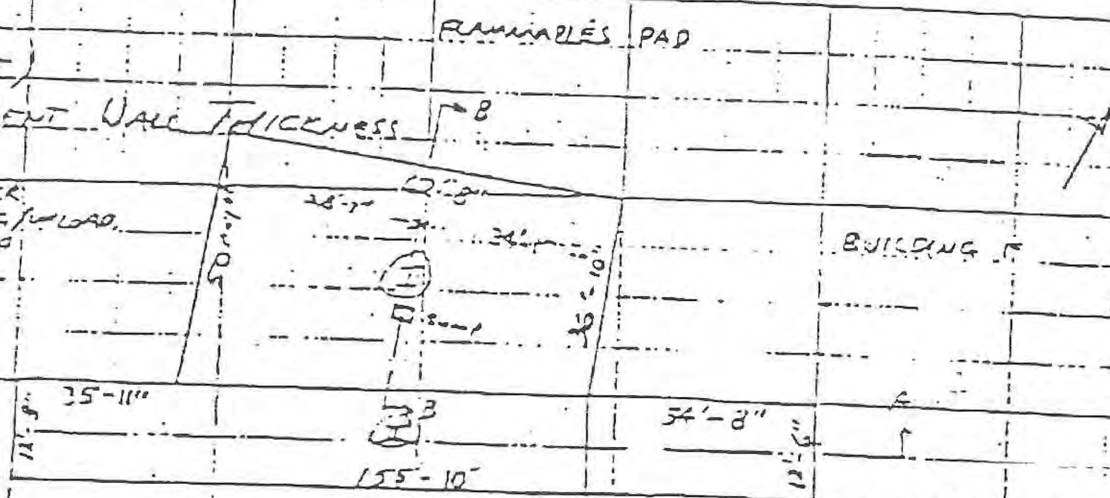
Date 9/89

Checked by

Date

... Fcap. (cont)

Use 8" Containment Wall Thickness



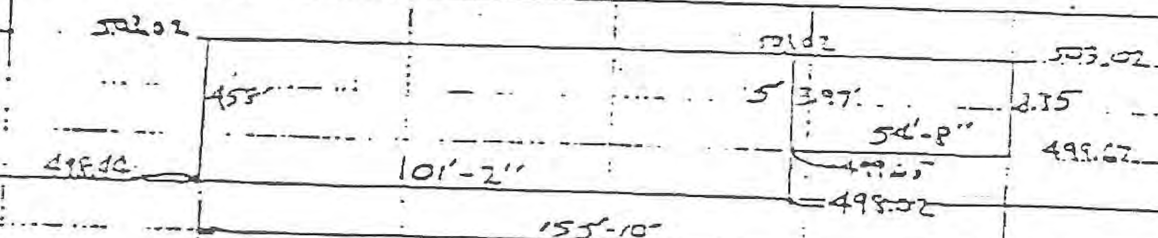
Plan Area I $= (62'\text{-}8") \times \left[\frac{(36'\text{-}10")+(50'\text{-}...)}{2}\right]$ $= 2723\,ft^2$

Plan Area II $= (155'\text{-}10") \times \left[\frac{(12'\text{-}8")+(12'\text{-}6")}{2}\right]$ $= 1960.9\,ft^2$

Lowest Top/Wall = 503.02

Volumes:

Cross-Section A-A



$$\text{Volume II} = \left(\frac{3.97+3.35'}{2}\right) \times (54'\text{-}8") \times (12'\text{-}6")$$

$$+\left(\frac{4.58+3.97}{2}\right) \times (101'\text{-}2") \times (12'\text{-}8")$$

$$= 2500.7 + 5475.3 = 7976\,ft^3$$

WOOLPERT CONSULTANTS

OHIO EPA, DHWM

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MAR 31 1994

7/11/91

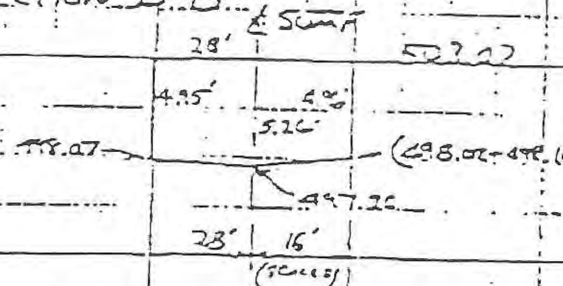
Client: CECOS - SPRING GROVE PROCESSING FACILITY

Subject: SECONDARY CONTAINMENT VOLUME CALC - PRE Order No. 17167-01

Computed by: Date: 9/89 Checked by: Date:

TANK FARM (CONT.)

CROSS-SECTION B:B



VOLUME I = $\left(\frac{4.95+5.26}{2}\right)(28')(62'-8")$

$+\left(\frac{5.26+[illegible]}{2}\right)\times(16')\times(62'-8")$

= 8958.0 + 5123.9 = +14081.9 ft³

SUMP VOLUME = 2'×2'×(497.76 - 495.26) = + 10.0 ft³

STRUCTURES OCCUPYING CONTAINMENT VOLUME

4 CONC PADS FOR TK-1 THROUGH TK-4

TANK DIAMETER = 10'-6"

TANK RADIUS, r = 5'-3"

CONC. PAD RADIUS, R = 5'-7"

PAD HEIGHT, H = 10"

VOLUME

$4\times\pi R^2H = 4\times\pi\times(5'-7")^2\times 10"$ = - 326.4 ft³

4 - 10'-6" DIA TANKS

ASSUME FLOOR ELEV BETWEEN THE 4 TANKS = 497.91

PAD HEIGHT, H = 10"

∴ ELEV @ BOTTOM OF 4 TANKS = 497.91 + (10") = 498.74

VOLUME = $4\times\pi r^2 h$ = $4\pi(5'-3")^2\times(503.02-498.74)$ = - 1482.1 ft³

WOOLPERT CONSULTANTS

OHIO EPA, DHWM

MAR 31 1994

7/11/91

17

Client: CPDS - Spring Grove Processing Facility

Subject: Secondary Containment Volume Calc - Prel

Order No. 1717-01

Computed by: Date: 9/89 Checked by: Date:

...ic Farm (Con'T.)

8 Conc. Pads for TK5 & TK-6

8 × (1'x11")x(1'x11")x(5") = -12.8 ft³

2 ~10' Dia. Tanks

Tank Section Occupying Storage Capacity is A Cone:

$$Volume = \frac{1}{3}\left(\frac{\pi D^2 h}{4}\right)$$

Diameter of Cone @ Elev 503.02 from Construct Dwgs, D ≅ 6'

Height of Cone, h ≅ 2'

$$2 \times Volume = 2 \cdot \frac{1}{3}\left(\frac{\pi 6^2 \times 2}{4}\right) = -37.7 \text{ ft}^3$$

20200 ft³

SECONDARY CONTAINMENT STORAGE AREA = 7976 + 14081.9 + 10.0 - 326.4 - 1482.4 - 12.8 - 37.7

= $\boxed{\text{20200 ft}^3 \text{ or 151,100 Gal Capacity}}$

Subtract volume for pad under 4 x 15K tanks
30'x30'x1' = 900 ft³ or 6752 gal

piping, tank legs & app. are neglig. (assume 1000 gal)

recalculated total: 143,368 gal

Client: [illegible] Spring Gate [illegible] Facility

Subject: Secondary Containment Volume Calc - Pre

Order No 17K7-01

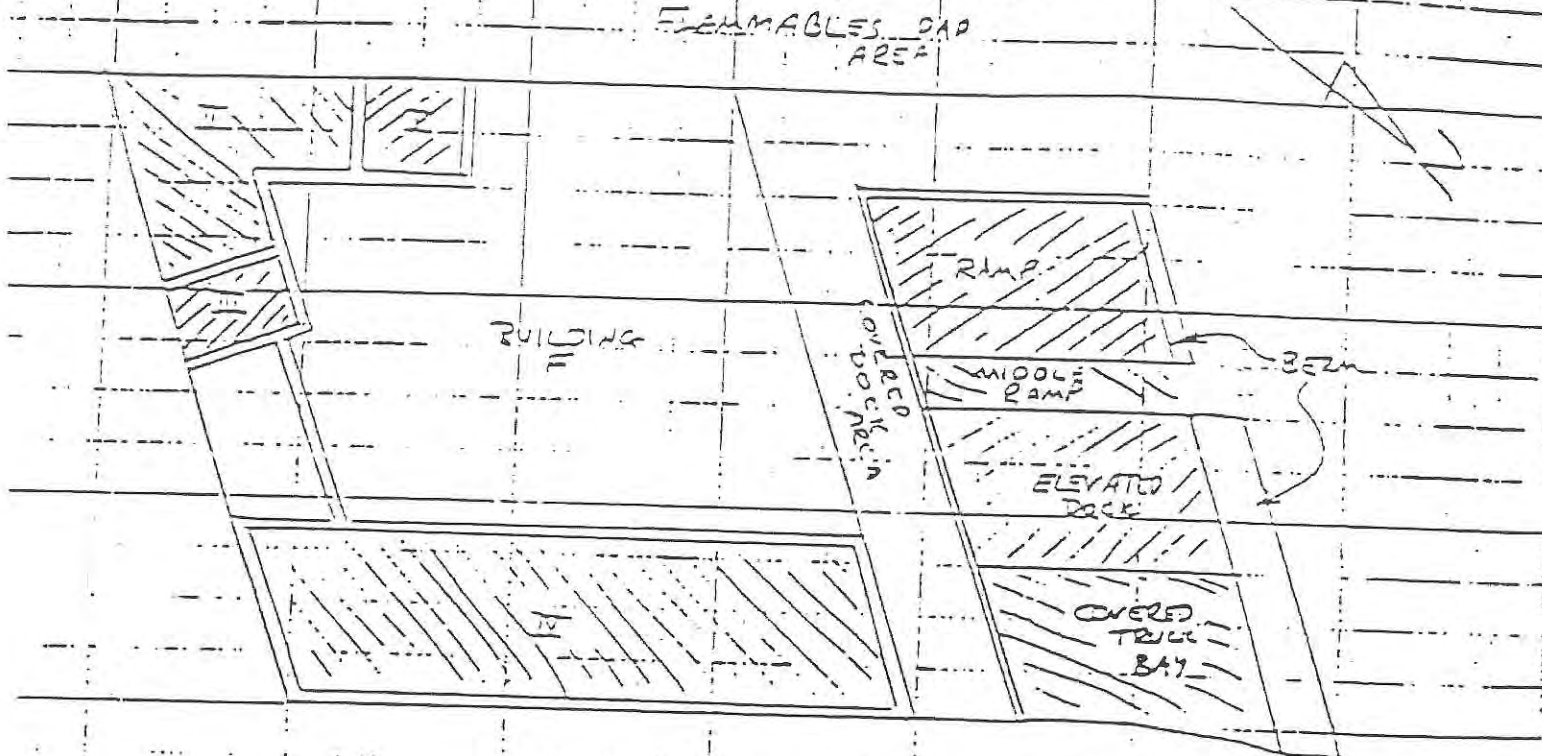
Computed by:

Date 9/89

Checked by:

Date

Building "F" & Truck Dock



WOOLPERT CONSULTANTS

Client: CPDS - Spring Grove Processing Facility

Subject: Secondary Containment Volume Calcs - Freon Project No 17187-01

Computed by Date: 9/89 Checked by Date

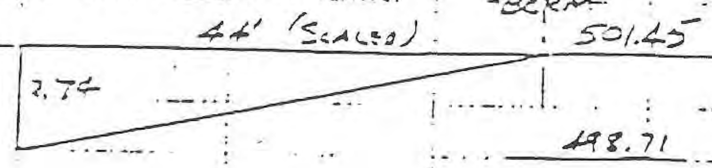
BUILDING

TRUCK DOCK AREA

RAMP

AVERAGE SLOPE (TAKEN TO BERM): $\frac{501.23 - 498.71}{40'} = 0.063$ or 6.3%

CROSS-SECTIONAL AREA OF RAMP:



AREA = $\frac{1}{2}(2.74')(44') = 60.3$ Ft^2

RAMP WIDTH = 47'-7" = 47.6 Ft

VOLUME = $60.3\ Ft^2 \times 47.6\ Ft = 2870\ Ft^3$

SUMP VOLUME = 2' × 2' × UNKNOWN = ASSUME 0

SECONDARY CONTAINMENT STORAGE VOLUME = $\boxed{2870\ Ft^3 \text{ or } 21470 \text{ gal Capacity}}$

WOOLPERT CONSULTANTS

Client: CECOS - SPRING GROVE PROCESSING FACILITY

Subject: SECONDARY CONTAINMENT VOLUME CALCS - PRE

Order No. 17167-01

Computed by: Date: 9/89 Checked by: Date:

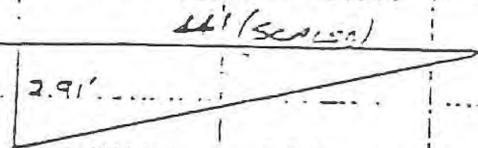
BUILDING

~~FRONT DOCK AREA~~

~~MIDDLE RAMP~~

~~AVERAGE SLOPE = (501.22 - 499.31) / 45' = 0.0424 or ≈ 3%~~
(TAKEN TO BERM END)

~~CROSS SECTIONAL AREA OF MIDDLE RAMP~~



~~AREA = ½ (2.91')(44') = 64.0 Ft²~~

~~RAMP WIDTH = 8'6" = 8.5 Ft~~

~~VOLUME = 64.0 Ft² x 8.5 Ft = 544 Ft³~~

~~SUMP VOLUME = 3'x3' x (498.31 - 496.[illegible]) = 10.7 Ft³~~

~~SECONDARY CONTAINMENT STORAGE VOLUME = 544 + 10.7 = 555 Ft³ or [illegible] GAL CAPACITY~~

Client: Cedar Springs Grain Processing Facility

Subject: Secondary Containment Volume Calcs - Prel. Order No. 17167-C

Computed by: Date: 9/89 Checked by: Date:

"E" Building

Truck Dock Area

"Elevated Dock"

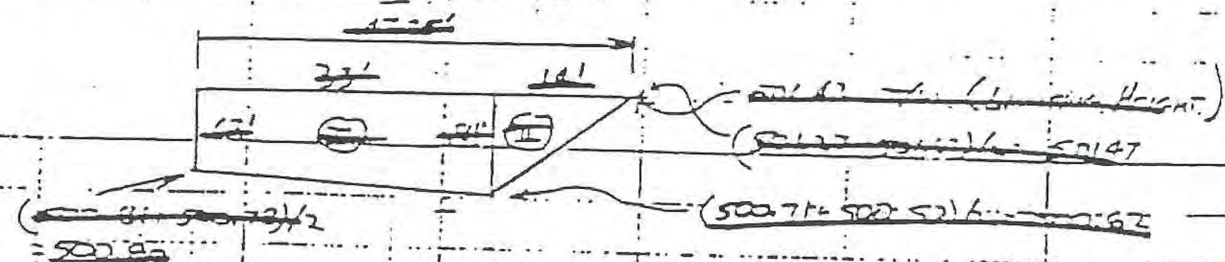
Average Slopes: (Taken to Berm) ~~500.71 - 500.55 / 27~~ = ~~0.0059~~ ≈ 0%

~~500.73 - 500.72 / 32'~~ = ~~0.0003~~ ~~0.03%~~

Average Length = ~~[(43' 3") + (48' ...)] / 2~~ = ~~47'~~ 45.58'

Width = ~~31' (2")~~ 29'10" = ~~30.3~~ 29.8'

~~Cross Sectional Area 3 Ft. of Elevated Dock from Berm to Carriage Dock Area~~



Volume (I) = ~~((0.81 + 0.63) / 2) × 33 × 31'~~ = ~~736.5 ft³~~

$45.58' * 29.8' * 0 = \varnothing$

~~Volume (II) = ½ (0.81)(18)(31)~~ = ~~175.77~~ ~~180.5 ft³~~ Not the

No berm on East side

— flows to truck bay

~~Σ 924.8 ft³~~

~~912.27~~

Sump Volume = 2' × 2' × (500.52 - 498.77) = 7 ft³

Secondary Containment Storage Volume = ~~924.8~~ ~~912.27~~ + 7 = $\boxed{\text{~~932 ft³~~ or ~~6970 gal~~ capacity}}$

~~919.27~~ ~~6877~~

WOOLPERT CONSULTANTS

Client: CECOS Spring Grove Processing Facility

Subject: Secondary Containment Volume Calcs - Prel. Order No. 1747-01

Computed by: Date: 9/89 Checked by: Date:

Building

Truck Dock Area

TO BE ELIMINATED AT TIME OF North Dock INSTALLATION

~~Covered Truck Bay~~

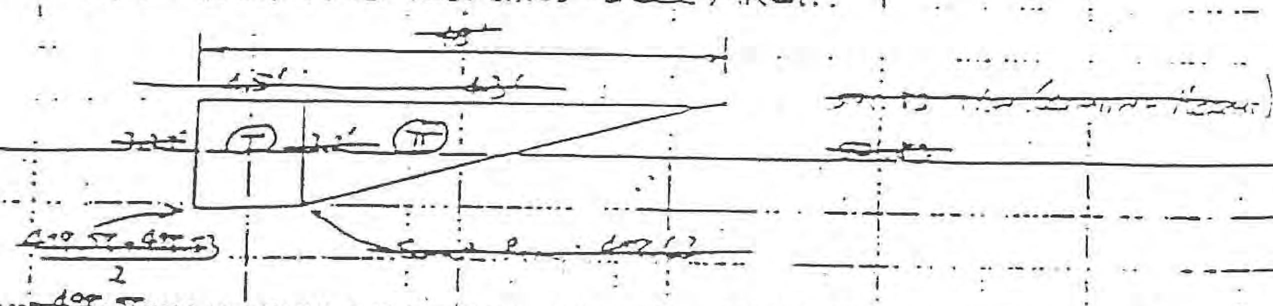
~~Average Slope (Berm end to sump):~~ ~~= 498.63 ...~~

~~43'~~

~~Average Ramp Width = $\frac{15'+20'}{2}$ = 17.5'~~

~~Average Ramp Length = 45'~~

~~Cross-Section @ Middle of Covered Truck Bay From Berm To Covered Dock Area:~~



~~Volume I = $\left(\frac{3.27+3.2}{2}\right)(4.5)(15')$ = 218.4 Ft³~~

~~Volume II = ½ (3.2')(43')(17.5') = 1204.0 Ft³~~

~~Sump Volume = 2'×2'×(499.63 − 496.72) = 7.6 Ft³~~

~~Σ = 1430 Ft³~~

~~Secondary Containment~~

Client: CPS: Spring Grove Processing Facility

Subject: Secondary Containment Volume Calc - Pac. Order No. 17147-C

Computed by: Date: 9/89 Checked by: Date:

"BUILDING"

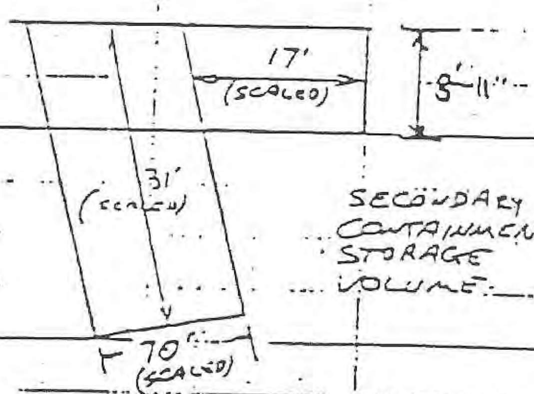
INSIDE BUILDING

FLOOR ASSUMED FLAT @ ELEV 592.99, CURB HEIGHT = 6"

CONTAINMENT AREA I

SECONDARY CONTAINMENT STORAGE VOLUME = (8'-11") x ~~(12'-7")~~ 10'-9" x (6") = ~~57.0~~ 47.93 FT³ or ~~425~~ 358.5 gal CAPACITY

CONTAINMENT AREA II



151.53 310

SECONDARY CONTAINMENT STORAGE VOLUME = {[(17') x (8'-11")] + [(31') x (10')]} x 6"

= 231 Ft³ or 1730 gal CAPACITY

CONTAINMENT AREA III

SECONDARY CONTAINMENT STORAGE VOLUME = (18'-8") x (10') x 6" = 93 Ft³ or 696 gal CAPACITY

CONTAINMENT AREA IV

SECONDARY CONTAINMENT STORAGE VOLUME = (79'-6") x (22') x 6" = 874 Ft³ or 6540 gal CAPACITY

Waste Water Treatment Area

Total Available Containment

Area is rectangular in shape with sidewalls
average dimensions are 59'11" x 37'10.5" x 2'.5"

59.917ft x 37.875ft x 2.042 ft

= 4634.0257 ft^3
≈ ~~4634~~ ft^3

~~4634~~ ft^3 x 7.48052 = $\boxed{34,664.73 \text{ gallons}}$

Reduction in Available Containment

flat bottom tank
circumference = $2\pi r$ = 48' 8" = 48.67
r = 7.746 ft

area = πr^2 = $\pi(7.746)^2$

= 188.5 ft^2

volume = area x verticle height affecting containment

$22.09\ ft^3 \times 7.48052 = \boxed{165.25 \text{ gallons}}$

2 pumps each take up < 5 gallons each

$5\text{gal} \times 2 = \boxed{10 \text{ gallons}}$

Summary

Total Useable Secondary Containment

(34,664.73 gallons) − (2,878.88 gallons) − (63.37 gallons) −
(9.63372 gallons) − (165.25 gallons) − (10 gallons)

$\boxed{= 31,537.5 \text{ gallons}}$

Largest Container = 31,537 gallons

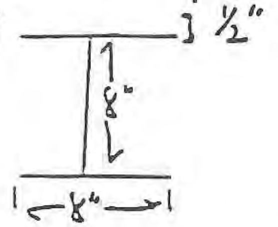
Total Containers (assuming 55 gallon in size) $= \left(\dfrac{31,537}{109\%}\right) \div 55$

= 573.4

$384.85\ ft^3 \times 7.48052 = \boxed{2{,}878.88 \text{ gallons}}$

Steel support structures for core bottom tanks

izontal



$3 \times 8'' \times \frac{1}{2}'' = 12\ in^2$

$= .083328\ ft^2$

10.167 ft linear run $\times\ .083328\ ft^2 = .847168\ ft^3$

2 per tank $\times$ 5 tanks $\times\ .847168\ ft^3 = 8.47168\ ft^3$

$8.47168\ ft^3 \times 7.48052 = \boxed{63.37 \text{ gallons}}$

cl same dimension as horizontal

4 supports/tank $\times$ 5 tanks $\times$ vertical run $1.292\ ft \times .083328\ ft$
$= 2.1532\ ft^3$

$2.1532\ ft^3 \times 7.48052 = \boxed{9.63372 \text{ gallons}}$

Pipe and pumps

estimate 200 linear feet w/ .375 ft outside diameter pipe

area $= \pi r^2 = \pi(.1875)^2 = .11045\ ft^2$

APPENDIX B

RCRA Facility Inspection Plan

CleanHarbors ENVIRONMENTAL SERVICES

CONTAINER STORAGE AREA
DAILY FACILITY INSPECTION SHEET

pring Grove Resource Recovery

FormCode SGCMPFRM12

Full Name:		Date:	1/14/2008
Location:	10 Day Pad	Military Time:	

Instructions: Inspections must be conducted daily when the facility is in operation. Note condition of inspection items. If item does not apply to a storage area, mark N/A. All unsatisfactory findings must be explained below. Include any repairs, changes or other remedial actions required or performed.

INSPECTION ITEM	PASS	FAIL	N/A	REASON FOR FAILURE	WORK TICKET STAT
Container Placement and Stacking	◉	○	○		
Sealing of Containers	◉	○	○		
Labeling of Containers	◉	○	○		
Containers	◉	○	○		
'lets	◉	○	○		
'ndoors area)	◉	○	○		
ndation	◉	○	○		
Berm	◉	○	○		
Debris and h	◉	○	○		
Warning Signs	◉	○	○		

Aisle Space	◉	○	○		
Loading and Unloading Areas	◉	○	○		
Sumps	◉	○	○		
On-Demand Work Ticket (please describe reason below)					

Select Overall Assessment of Inspection Results	Pass

Submit

Supervisor's Signature ______________________________

CleanHarbors ENVIRONMENTAL SERVICES

ing Grove Resource Recovery

TANK SYSTEMS
DAILY FACILITY INSPECTION SHEET

FormCode SGCMPFRM02

Full Name:		**Date:**	1/14/2008
Location:	TANK Farm	**Time:**	

Instructions: Inspections must be conducted daily. Note condition of inspection items. All unsatisfactory findings must be explained below. Include any repairs, changes or other remedial actions required or performed.

ITEM	PASS	FAIL	REASON FOR FAILURE	WORK TICKET STATUS
Tanks	●	○		
Pipes	●	○		
Valves	●	○		
Fittings	●	○		
iquid Level	●	○		
Secondary Containment System	●	○		
Sump	●	○		
On-Demand Work Ticket (please describe reason below)				

Select Overall Assessment of Inspection Results	Pass

Submit

Supervisor's Signature ____________________

CleanHarbors ENVIRONMENTAL SERVICES

SECURITY AND EMERGENCY EQUIPMENT MONTHLY FACILITY INSPECTION SHEET

Spring Grove Resource Recovery

FormCode

Full Name:	Jeff LinebacK	**Date:**	10/1/2008
Location:	Boneyard	**Military Time:**	8:00:00 AM

Instructions: Inspections must be conducted monthly when the facility is in operation. Note condition of inspection items. If item does not apply to a storage area, mark N/A. All unsatisfactory findings must be explained below. Include any repairs, changes or other remedial actions required or performed.

INSPECTION ITEM	PASS	FAIL	N/A	REASON FOR FAILURE	WORK TICKET STAT
Portable Fire Extinguishers	●	○	○		
Fire Suppression on Shredder	●	○	○		
Self-Contained Breathing Apparatus	●	○	○		
Respirators and Cartridges	●	○	○		
Industrial Absorbents	●	○	○		
Shovels	●	○	○		
55-Gallon Drums	●	○	○		
First Aid Equipment and Supplies	●	○	○		
Protective Clothing (overalls, gloves, boots)	●	○	○		
Pumps, Hoses, Other Equipment	●	○	○		

On-Demand Work Ticket (please describe reason below)		

lect Overall Assessment of Inspection Results	Pass

Submit

Supervisor's Signature ______________________

Clean Harbors
ENVIRONMENTAL SERVICES

SECURITY AND EMERGENCY EQUIPMENT
WEEKLY FACILITY INSPECTION SHEET

Spring Grove Resource Recovery

FormCode SGCMPFRM14

Full Name:		**Date:**	1/14/2008
Location:	Pegasus Room	**Military Time:**	

Instructions: Inspections must be conducted weekly when the facility is in operation. Note condition of inspection items. All unsatisfactory findings must be explained below. Include any repairs, changes or other remedial actions required or performed.

INSPECTION ITEM	YES	NO	REASON FOR FAILURE	WORK TICKET STATUS
Fence	●	○		
Gates and Locks	●	○		
Warning Signs on Gates	●	○		
Emergency Shower and Eyewash	●	○		
On-Demand Work Ticket (please describe reason below)				

Select Overall Assessment of Inspection Results	Pass

Submit

Supervisor's Signature ______________________

SPRING GROVE I OURCE RECOVERY
SPRING GR VE FACILITY
INSPECTION SHEET

Inspector's name______________________ Date__________ Time__________
Type of Inspection: ____Workday ____Weekly ____Monthly ____Other__________

Equipment Item	Types of Potential Problems	Frequency	Status (See Notes)	Observations/ Comments	Action Taken
** SECURITY AND EMERGENCY EQUIPMENT**					
Doors and Alarms	Unsecured, Unlocked	Each Workday	______	______	______
Fence	Corrosion, damage to chain-link fence	Weekly	______	______	______
Gates and Locks	Corrosion, damage to chain-link fence; sticking or corroding gate	Weekly	______	______	______
Warning signs on gates	Missing or illegible	Weekly	______	______	______
Sprinkler system and Foam System	Water pressure, leaking, structural damage	Annually	______	______	______
Portable fire extinguish-ers	Needs recharging	Monthly/ after each use	______	______	______
Fire Suppression on shredder	Needs recharging	Monthly/ after ea. use	______	______	______
Self-Contained Breathing Apparatus	Air quantity in reserves, air delivery system	Monthly/ After each use	______	______	______
Respirators and Cartridges	Out of stock	Monthly/ After each use	______	______	______
Industrial Absorbents and Booms	Out of stock	Monthly/ After each use	______	______	______
Shovels	Missing or damaged	Monthly/ After	______	______	______
55-gallon drums	Corrosion, structural damage	Monthly	______	______	______

SPRING GROVE RESOURCE RECOVERY
SPRING GROVE FACILITY
INSPECTION SHEET

Inspector's name____________________ Date__________ Time__________

Type of Inspection: ____Workday ____Weekly ____Monthly ____Other__________

Equipment Item	Types of Potential Problems	Frequency	Status (See Notes)	Observations/ Comments	Action Taken
Emergency shower and eyewash	Water supply, leaking, not draining	Weekly			
First aid equipment and supplies	Items out of stock, inoperative	Monthly/ after each use			
Protective Clothing (Overalls, gloves, boots)	Damaged, out of stock, dirty	Monthly/ after each use			
Telephone and PA system	Not working	Each Workday			
Pumps, hoses, other equipment	Not clean, improperly stored, cracks, missing fittings	Monthly/ after each use			
Contingency phone list	Not posted at lab, processing and receptionist's phone	Each workday			

** TANK SYSTEMS**

Equipment Item	Types of Potential Problems	Frequency	Tank Status (See Notes) TK-5	TK-6	TK-7	TK-8	TK-9	TK-10	TK-11	Observations/ Comments	Action Taken
Tanks	Corrosion, leaking, deterioration	Daily									
Pipes	Corrosion, leaking, deterioration	Daily									
Valves	Corrosion, leaking, deterioration	Daily									
Fittings	Corrosion, leaking, deterioration	Daily									
Liquid Level	Above operating level	Daily									
Secondary containment system	Cracks, evidence of leaks Coating Integrity Color Change	Daily									
Sump	Water in sump	Daily									
Overfill alarm	Inoperable, power failure	Monthly									

SPRING GROVE RESOURCE RECOVERY
SPRING GROVE FACILITY
INSPECTION SHEET

Inspector's name__________________________ Date__________ Time__________

Type of Inspection: ____Workday ____Weekly ____Monthly ____Other__________________

Equipment Item	Types of Potential Problems	Frequency	Status (See Notes)	Observations/ Comments	Action Taken
			Tank Status (See Notes) TK-5 TK-6 TK-7 TK-8 TK-9 TK-10 TK-11		
Internal	Pitting or corrosion	Annually	___ ___ ___ ___ ___ ___ ___	________	________
****CONTAINER STORAGE AREAS****			Storage Status (See Notes) BD BF TB FP BH TL HB		
Container placement and stacking	Height of stacks, location of and incompatible wastes, ignitable liquids within 50 feet of property line, wastes outside berm.	Each Workday	___ ___ ___ ___ ___ ___ ___	________	________
Sealing of containers	Open lids	Each Workday	___ ___ ___ ___ ___ ___ ___	________	________
Labeling of containers	Improper identification, storage data or product code missing	Each Workday	___ ___ ___ ___ ___ ___ ___	________	________
Containers	Corrosion, leakage, structural defects	Each Workday	___ ___ ___ ___ ___ ___ ___	________	________
Pallets	Damaged (e.g., broken wood, warping)	Each Workday	___ ___ ___ ___ ___ ___ ___	________	________
Doors (indoor area)	Corrosion or damage	Each Workday	___ ___ ___ ___ ___ ___ ___	________	________
Base or foundation	Cracks, uneven settlement, erosion, wet spots, spills or leakage, Coating Integrity Color Change	Each Workday	___ ___ ___ ___ ___ ___ ___	________	________
Berms	Cracks, Deterioration, Coating Integrity Color Change	Each Workday	___ ___ ___ ___ ___ ___ ___	________	________
Debris and Refuse	Hazard	Each Workday	___ ___ ___ ___ ___ ___ ___	________	________
Warning Signs	Damaged, Missing	Each Workday	___ ___ ___ ___ ___ ___ ___	________	________
Aisle Space	2 feet between double rows of drums	Each Workday	___ ___ ___ ___ ___ ___ ___	________	________

SPRING GROVE RESOURCE RECOVERY
SPRING GROVE FACILITY
INSPECTION SHEET

Inspector's name________________________ Date____________ Time____________

Type of Inspection: ____Workday ____Weekly ____Monthly ____Other______________

Equipment Item	Types of Potential Problems	Frequency	Status (See Notes)	Observations/ Comments	Action Taken
			Storage Status (See Notes) BD BF TB FP BH TL HB		
Loading and Unloading areas	Spillage, hazards	Daily when in use	__ __ __ __ __ __ __	________	____
Sumps	Water in Sumps	Each Workday	__ __ __ __ __ __ __	________	____
MISCELLANEOUS EQUIPMENT					
Shredder	Ova Air Monitoring	Monthly/ Annually	________	________	____

Notes:

BD -- Building D Pad
BF -- Building F
TB -- Truck Bays
FP -- Flammable Pad
TK-5 -- 7,000 Gallon Tank
TK-7 -- 15,000 Gallon Tank
TK-9 -- 15,000 Gallon Tank
TK-11 -- 1,000 Gallon Dispersion Tank

BH -- Building H
TL -- Tanker Loading/Unloading Pad
HB -- High Bay
TK-6 -- 7,000 Gallon Tank
TK-8 -- 15,000 Gallon Tank
TK-10 -- 15,000 Gallon Tank

A -- Acceptable
U -- Unacceptable
NA -- Not Applicable

APPENDIX 12

Health & Safety Plan

1.0 **<u>GENERAL PROVISIONS</u>:** This section of the Plan includes general requirements that are applicable to all personnel who may contact PCBs in the performance of their duties.

1.1 **<u>Definitions</u>:** For the purpose of this Plan:

1.1.1. <u>Disposal</u>: To intentionally or accidentally discard, throw away, or otherwise complete or terminate the useful life of PCBs and PCB items. Disposal includes actions related to containing, transporting, destroying, degrading, decontaminating or confining PCBs and PCB items.

1.1.2. <u>Leak</u>: Any instance in which a PCB article, PCB container, or PCB equipment has any PCBs on any portion of its external surface.

1.1.3. <u>Mark</u>: The description, name, instruction, cautions, or other information applied with a legible mark by painting or fixation of an adhesive label to PCBs and PCB items or equipment.

1.1.4. <u>Non-PCB Electrical Equipment</u>: Electrical equipment containing less than 50 ppm PCB.

1.1.5. <u>PCB (Polychlorinated Biphenyl)</u>: Any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances that contains such substances. One of the primary uses of PCBs are as a dielectric fluid in transformers and capacitors, and are generally referred to by the generic name "askarels". The trade names include, but are not limited to: Asbestol, Arochlor, Chlorexrol, Diachlor, Dykanol, Elemex, Inerteen, Noflamol, Pyranlo, and Saf-T-Kuhl.

In this plan, "PCBs" means liquid or any item, device, container, and equipment in which the fluid is used.

1.1.6. <u>PCB Article</u>: Any manufactured article other than a PCB container that contains PCBs and whose surface has been in direct contact with PCBs. PCB articles include capacitors, transformers, electric motors, pumps, and pipes.

1.1.7. <u>PCB Article Container</u>: Any package, can, bottle, bag, band, drum, tank, or other devise used to contain PCB Articles or PCB Equipment and whose surface has <u>not</u> been in direct contact with PCBs.

1.1.8. PCB Container: Any package, can, bottle, bag, band, drum, tank, or other devise used to contain PCB Articles or PCB Equipment and whose surface has not been in direct contact with PCBs including transformers and capacitors.

1.1.9. PCB Contaminated Electrical Equipment: Any electrical equipment including but not limited to transformers, capacitors, circuit breakers, reclosers, voltage regulators, switches, electromagnets, and cable, that contain 50 ppm or greater PCBs, but less than 500 ppm PCBs. Oil filled electrical equipment other than circuit breakers, reclosers, and cable whose PCB concentration is unknown must be assumed to be PCB contaminated electrical equipment.

1.1.10. PCB Equipment: Any manufactured item, other than a PCB container or a PCB article container that contains a PCB article or other PCB equipment.

1.1.11. PCB Electrical Equipment: Any electrical equipment that contains 500 ppm PCB or greater.

1.1.12. PCB Item: Any PCB article, PCB article container, PCB container or PCB equipment that deliberately or unintentionally contains PCBs at a concentration greater than 50 ppm.

1.1.13. Reportable Spill (to the EPA): Federal law requires that the following spills must be reported to the EPA within 24 hours of becoming aware of the spill. Spills will be reported by the Environmental Compliance Section to the EPA.

1. Pure PCB spills greater than 10 lbs. PCB fluid (about 1 gallon dielectric fluid). If a PCB spill is from a transformer, 48 hours are allowed for reporting.

2. PCB contaminated oil (50 – 500 ppm PCB) spills greater than 270 gallons.

3. All PCB spills that contaminate surface water, sewers, or drinking water.

4. All PCB spills that contaminate grazing lands or vegetable gardens.

1.1.14. Significant Exposure: Any exposure of human beings or the environment to PCBs as measured or detected by any scientifically acceptable analytical method.

1.1.15. Spill: Any quantity of PCBs that leaves the surface of the PCB article, container, or equipment.

1.1.16. Storage for Disposal: The temporary storage of PCBs that have been designated for disposal. Such items are subject to the applicable marking and recordkeeping requirements as found within this plan, and must be disposed of within one year of the date of their first being placed in storage.

1.2. Personal Exposure and Protection: One of the primary objectives of the Plan is to reduce personal contact with PCBs. All care should be exercised to avoid personal contact with PCBs.

1.3. Containment of PCB Spills: In the event of reportable spills (to the EPA), every effort should be made using available duty personnel, call duty personnel, on-call duty personnel, equipment, oil absorbents and barriers to contain the PCB spill and prevent it from entering sewers an storm drains streams, rivers, lakes, grazing lands, or vegetable gardens. The following items are available to aid in this effort.

Item	Location
Absorbent	Bags of absorbent are located in all process and storage areas
Shovels, Brooms, & Squeeges	Located in all spill control boxes outside storage and process areas
Safety Equipment (gloves, goggles, respirators, aprons)	Located in all spill control boxes outside storage and process areas

Crews responding to spills are to use every available option open to them to contain the PCB spill, including temporary diking or diversions.

All spill response personnel should use personal protection equipment found in Appendix A and B of this Plan.

1.4. In-House Spill Reporting: Immediately following the initial discovery of a spill, or as soon as possible following efforts at containing a spill, the event must be reported by field personnel to the Environmental Department and the Environmental Department will than contact the EPA and other pertinent agencies if a reportable spill has occurred.

1.5. Immediate Clean-Up Requirements for Reportable Spills (to the EPA): In the case of EPA reportable spills as defined in 1.1.13., the following actions should be taken by crews performing spill clean-up within 24 hours.

1.5.1. <u>Restrict Area</u>: Barricades (rope or color tape should suffice in most instances) should be placed as required around the contaminated areas to prevent pedestrians and vehicles from entering the area until the spill has been cleaned up and any debris removed.

1.5.2. <u>Warning Signs</u>: Visible warning signs shall be placed around the contaminated area (visible traces plus a 3-foot buffer) that advise persons to avoid the area.

1.5.3. <u>Record Contamination Area</u>: The area of visible contamination (trace areas) shall be recorded and documented. If there are no visible traces, the Environmental Department will be called upon to establish the spill boundaries by statistical sampling.

1.5.4. <u>Initiate Clean-Up</u>: Begin to clean-up the visible traces of fluid on hard surfaces and begin removal of visible traces of the spill on soil, gravel, sand, or other media. Testing and sampling to determine adequate clean-up will be coordinated by the Environmental Department.

1.6. <u>Immediate Requirements for Other Spills</u>: In the case of PCB contaminated spills of less than 270 gallons or pure PCB spills of less than 10 lbs. PCB fluid, which do not require reporting to the EPA, the following activity shall be done within 48 hours:

1.6.1. Double wash/rinse the contaminated solid surfaces with a solvent in PCBs are at least 5% soluble (by weight). The fluid must cover the contaminated surface completely in each wash/rinse.

1.6.2. Excavate soil around spill area that is visibly contaminated plus one foot buffer surrounding visible spill. Restore to original configuration by backfilling with clean soil that contains less than 1 ppm PCB.

1.7. Spill Clean-Up General Procedures

1.7.1. <u>Protective Gear</u>: When cleaning up any PCB spill, crews should always wear appropriate personal protective gear and follow the safety procedures outlined in Appendix A.1. and A.3. to minimize their exposure.

1.7.2. <u>Apply Absorbent Materials</u>: In many cases, an oil absorptive material may be a useful clean-up tool. If used, it should be spread on the visible traces of the contaminated area an should be left in place for at least one hour or as long as necessary to insure that all available PCB fluids have been absorbed.

1.7.3. Place PCB Wastes in Containers: After visible trace areas of the spilled fluids have been absorbed, the absorptive material along with any contaminated soils are to be placed in containers provided for that specific disposal purpose. If conditions are such that PCB penetration cannot be determined, then at least 6 inches of soil depth shall be removed for disposal.

1.7.4. Decontaminate Area: All surfaces exposed to the spilled PCB fluid shall be decontaminated using a solvent in which PCBs are at least 5% soluble (by weight). Any contaminated steel structures, wood racks, poles (any types), etc., shall also be washed down with solvent. All equipment on these structures that may have been contaminated by the spill shall also be decontaminated.

1.7.5. Decontaminate Private Property: Before clean-up of such property is performed, the Environmental Department must be notified.

1.7.6. Decontaminate Protective Gear: All contaminated items, including tools, clothing, boots, and any other equipment must either be thoroughly cleaned with solvent or soaps where practical or disposed of in containers provided specifically for disposal purposes.

1.7.7. Remove Debris: All drums or containers containing debris shall be marked with a PCB label and placed in the approved PCB storage area prior to transport off-site for disposal.

1.7.8. PCB Spills Mixed with Water: Water should be bailed or pumped into secure drums and sealed. Any sediment or sludge on the bottom of the water area shall then be cleaned up and placed in drums.

1.8. **Sampling and Testing:** Field crews shall consult the Environmental Department personnel for sampling, analysis, and final clean-up procedures following spills that require testing.

1.9. **Notification of Agencies:** Should an EPA reportable spill occur, the agencies listed in the section of the Plan must be notified as soon as is practically possible by the Environmental Department following consultation with the Legal Department. The Environmental Department will determine which spill events will require written reports to the agencies and the type of information to be reported.

1.9.1. Agencies to Notify:

1. OEPA Hazardous Waste Section
   937- 285-6888

2. OEPA Emergency Response
   800 – 282 - 9378

3. EPA Region 5
   513-684-7931

4. National Response Center
   800-424-8802

1.10. Claims and Public Relations: Should a PCB spill occur that results in the contamination of private property that would require clean-up, decontamination, or removal of some of the customers property, the Environmental Department will coordinate all notification to the Legal and Claims Departments.

1.10.1. News Media Quieries: All news media queries shall be directed to the Environmental Department.

1.11. PCB Marking: Personnel can identify PCB items with a PCB label that has been affixed to the item. This PCB marking should alert personnel to use appropriate procedures should work requiring direct contact with PCBs be necessary. Should a spill or leak occur, the PCB marking will aid in the identification of the substance and will help reduce exposure to PCBs. There are three kinds of labels used most often to mark PCB containers. These are, 1) a yellow PCB label, used for equipment that contains greater than 500 ppm PCB, 2) an orange PCB label use for equipment that contains between 50 and 500 ppm PCBs, and 3) a blue PCB label, used for equipment that contains less than 50 ppm PCB. These labels identify those pieces of equipment that are defined as PCB, PCB contaminated, or non-PCB, in respect to the above three listed label types.

APPENDIX A.1. – A.4.

A.1. PERSONAL PROTECTION, EQUIPMENT, AND CLOTHING FOR HANDLING PCBs

A.1.1. <u>Protective Clothing:</u> In any operation where workers may come into direct contact with PCBs, protective clothing impervious to PCBs shall be worn. Latex or synthetic rubber gloves, boot covers and overalls shall be provided for use when necessary. Protective apparel shall be made of materials which most effectively prevent skin contact with PCBs were contact is most likely to occur. Supervisory personnel shall ensure that all personal protective clothing is in an uncontaminated and satisfactory condition and worn whenever necessary to protect against PCB exposure.

A.1.2. <u>Eye Protection:</u> Chemical or safety goggles shall be worn during any operation in which PCBs may splash or drip into the worker's eyes. A face shield should be worn if additional face protection is needed. If liquid or solid PCBs contact the eyes, the eyes shall be irrigated immediately with large quantities of water for a minimum of 15 minutes and then examined by a physician or other responsible medical personnel. If liquid or solid PCBs are splashed or spilled on the skin, that area should be washed thoroughly with soap and water for at least 15 minutes.

A.1.3. <u>Respiratory Protection:</u> Respirators shall be worn while working in an enclosed area (such as vaults and switchgear) in which PCB concentration is greater than 1.0 microgram per cubic meter or in the case of an emergency (entry into an area of unknown concentration). This condition may exist in cases where a transformer or capacitor has overheated. In cases where a transformer has ruptures any burning of PCB fluid has occurred, a self-contained positive pressure breathing apparatus with full face piece <u>must</u> be worn. Type of respirators to be used are (1) self contained breathing apparatus with full face piece operated in pressure demand or other positive pressure mode, or (2) combination type "C" supplied air respirator with full face piece operated in pressure demand or other positive pressure mode and auxiliary self contained breathing apparatus operated in pressure demand or other positive pressure mode.

A.1.4. <u>Informing Employees:</u> All new and present employees in any are in which PCBs are used, transported, or stored shall be informed of job hazards, proper maintenance, clean-up methods, proper disposal, and proper use of protective clothing and equipment, including respirators. Refer to the Section following for training requirements.

A.1.5. <u>Visitors:</u> All visitors should be accompanied by a facility employee. In the event of a PCB incident, all visitors should be removed from the area.

A.2. SANITATION PRACTICES

Employees occupationally exposed to PCBs shall be provided with separate lockers or other storage facilities for street clothes and for work clothes.

Employees occupationally exposed to PCBs shall not wear protective clothing away from their place of employment.

Facilities for shower baths shall be provided for employees occupationally exposed to PCBs. Workers should shower before changing into street clothes.

Employees exposed to PCBs shall be advised to wash their hands and exposed skin before eating, drinking, smoking, or using toilet facilities during the work shift.

Food, drink, or smoking materials shall not be permitted in areas where PCBs are handled or stored.

A.3. EMERGENCY PROCEDURES FOR HANDLING PCBs

For all PCB work areas where there is a potential for the occurrence of PCB related emergencies, supervisory personnel shall take all necessary steps to ensure that employees are instructed in, and follow, the procedures specified below as well as any other appropriate to the specific operation or process.

A.3.1. In the event of PCB spills or leaks, the following steps shall be taken:

All nonessential personnel shall be evacuated from the leak or spill area.

The area of the leak or spill shall be adequately ventilated to prevent the accumulation of vapors.

If the PCBs are in liquid form, they shall be collected for reclamation or absorbed in vermiculite, dry sand, earth, or similar non-reactive material. Construction of diversionary structures such as ditches or dikes shall be used to half the migration of PCB spills.

A.3.2. Personnel entering the spill or leak area shall be furnished with appropriate personal protective equipment and clothing. All other personnel shall be prohibited from entering the area.

A.3.3. Only personnel trained in the emergency procedures and protected against the attendant hazards shall shut off sources of PCBs, clean up spills, control and repair leaks in areas where PCBs are used.

A.3.4. All wastes and residues containing PCBs shall be collected in PCB resistant containers and appropriately stored prior to disposal.

A.3.5. If liquid or solid PCBs are splashed or spilled on an employee, contaminated clothing (if not wearing protective clothing) shall be removed promptly and the skin washed thoroughly with soap and water for at least 15 minutes. Should eyes become contaminated with PCBs, they should be irrigated immediately with large quantities of running water for at least 15 minutes.

A.4. MAINTENANCE AND/OR REPAIR PROCEDURES PERTAINING TO PERSONAL SAFETY

A.4.1. For clean up or repair of energized overhead circuits that utilize PCB items, the following steps shall be taken:

A.4.1.1. Only new Lineman's rubber gloves that pass visual inspection for holes or tears and have passed electrical testing will be used. Upon completion of the job, the gloves will be discarded as contaminated PCB waste.

A.4.1.2. The following general procedure must be used:

Obtain clearance and follow normal safety practices and procedures wearing regular protective rubber gloves and shields.

Upon isolation of defective equipment from energized source, rubber gloves without protective shields will be worn.

After defective equipment has been removed and/or cleaned, dispose of PCB rubber gloves along with other PCB wastes.

Energize equipment and remove protective covering wearing uncontaminated protective rubber gloves and shields.

Personnel shall not enter confined spaces or similar hazardous locations without prior consent of the Safety Coordinator. The Safety Coordinator shall be responsible for ensuring that all additional safety requirements (i.e., additional monitoring, entry permits, etc.) are in-place, and the personnel have met appropriate training requirements before authorizing such activities.

HEALTH AND SAFETY PLAN
TABLE OF CONTENTS

SECTION

LIST OF TABLES, AND APPENDICES

1.0 PERSONNEL TRAINING PROGRAM

Spring Grove Resource Recovery, Inc. (SGRR) has prepared a written personnel training plan designed to familiarize personnel with the properties and hazardous nature of the PCB waste stored and handled at the facility, with the procedures to operate and maintain the facility in a safe manner, and with the procedures and equipment to be used in the event of an emergency at the facility.

The purpose of the Training Plan is to promote efficient and safe performance of all facility operations, to ensure rapid and effective response to emergency events, and to protect SGRR employees, the environment, and the public. It will be SGRR's policy to emphasize accident prevention through training employees in the use of safe management practices.

SGRR's Training Program combines pre-employment Introductory Training in a classroom setting with facility-specific instruction and on-the-job training. Training subjects are reinforced through Continuing Training conducted on a periodic (e.g., weekly, monthly, annual) or as-needed annual basis. The content of the entire training program is described in Section 1.2, below. All training sessions are prepared and conducted by qualified supervisors, managers, and in-house personnel experienced in PCB waste management practices, and facility operations and procedures.

1.1 Job Title/Job Description

The type and degree of training provided to an individual is directly related to the individual's work responsibilities and potential for contact with hazardous wastes. The job functions at SGRR, along with Employee Group Numbers assigned by the Corporate Training Manager, include the following:

Job Title	Employee Group Number
General Manager	3.1
Facility Compliance Manager	3.2
Operations Manager	3.1
Senior Plant Operator	3.1
Operator Trainee	3.1
Maintenance I	3.2

Job Title	Employee Group Number
Maintenance II	3.2
Chief Chemist - Plant	3.1
Chemist	3.1
Laboratory Technician	3.1
Truck Clerk/Sample Taker	3.1
Sales Representative	1.0
Sales Assistant - Plant	1.0
Clerical	1.0
Secretary/Bookkeeper - Plant	1.0
Office Administrator	1.0

The Employee Group Number assigned by the Corporate Training Manager to the various job titles identifies the particular training curriculum for each job position at the facility. The program is designed to achieve an overall level of training, which meets the particular needs of each job position at the facility. The various training programs are described in Section 1.2, below.

Detailed job descriptions for each job title are included in **Appendix H.I.** SGRR may modify, delete or add job titles and/or descriptions without prior notification to OEPA in the event a job description changes, a job description is found to be obsolete, or a new job descriptions are created. In the event a job title or description is modified, deleted or added, SGRR will assign an Employee Group Number to that title and/or description and ensure that that employee is trained in accordance with the requirements of their Employee Group Number.

A list of personnel employed at SGRR at the time of the submittal of the Part B renewal application (December 1998) is included in **Appendix H.II.** The list of employees in **Appendix H.II** may change during the life of the TSCA permit. SGRR does not need to notify EPA any time there is a change in the list of employees found in **Appendix H.II.** The list in does not prohibit SGRR from hiring new employees or terminating employees without notification to EPA.

Other Personnel may be authorized to work in the plant (e.g. other Clean Harbors employees) upon completion of training relative to the responsibilities they are to assume.

1.2 Training Content, Frequency, and Techniques

The content of the SGRR's Training Program is listed in **Table H-1**. As discussed in Section 1.1 above, employees receive varying level of training based on their job title, job description, and Employee Group Number. Administrative and other support personnel assigned to Employee Group Number 1.0 (i.e., those individuals who are not directly involved in PCB waste handling activities) receive a reduced level of training which includes Company Orientation, Right-to-Know/Hazard Communication, Contingency, and Nature and Properties of Hazardous Waste. All other employees at SGRR are assigned to Employee Group Number 3.1 or 3.2 and receive instruction on the training topics listed in Table H-1. A summary of the training topics relevant to each Employee Group Number is presented in
Table H-2. Training is reviewed on an annual basis.

Training is accomplished through a combination of classroom instruction, on-the-job training, mock exercises, or other training techniques appropriate for each topic.

1.3 Training Director

Richard Griffiths directs the Clean Harbors Corporate Training Program. Mr. Griffith has several years experience in PCB waste facility management operations/compliance and commercial environmental training

1.4 Relevance of Training to Job Position

Each new employee that is involved in hazardous waste management activities is required to attend the pre-employment Introductory Training program. New employees also receive Facility-Specific training, which is tailored to meet their specific job duties and responsibilities. No employee may work without supervision without having completed the Introductory Training program. All employees must complete the Facility-Specific Training program within six months of hire. Continuing Training in the form of an annual review session will be mandatory for all facility personnel. The annual review will focus on the topics covered as part of the employee's introductory training. Other training in the form of weekly or monthly safety meetings and compliance updates will be conducted on an as-needed basis at the discretion of the General Manager, the Facility Compliance Manager and the Corporate Training Manager. The purpose of the periodic training sessions will be to review and reinforce previous training topics, and to instruct employees on new techniques, procedures, regulations, or other relevant topics.

In addition, optional Continuing Training sessions on topics such as such as cardiopulmonary resuscitation (CPR) will be given periodically on an as-needed basis at the discretion of the General Manager, the Facility Compliance Manager and the Corporate Training Manager. Instructors may be drawn from in-house expertise or a qualified outside contractor, such as a certified CPR instructor. Training may use classroom, on-the-job, drills and/or other techniques as appropriate for the particular training topic. Courses may be conducted either on-site or off-site.

1.5 Training for Emergency Response

In an effort to ensure that facility personnel are able to respond effectively to emergencies at the facility, SGRR has structured the Introductory Training Program to include a detailed review of the facility's Contingency Plan. Contingency Plan training is required for all facility employees regardless of Employee Group Number. Refer to Item B.2 of Table H-1 for a complete listing of the topics discussed as part of the emergency response training session.

2.0 IMPLEMENTATION OF THE TRAINING PROGRAM

Each new employee will complete the required Site-Specific Training within six months of hire. No new employee involved in PCB waste handling operations, or employee transferred to a new position at the facility, will be allowed to work without supervision until the employee completes the Site-Specific training program.

All training sessions will be documented, and all training records will maintained on-site by the Facility Compliance Manager. Attendance at individual training sessions is documented through the use of a standardized Training Documentation Form. Upon completion of the training session, both the attendee and the trainer are required to sign and date the form. A copy of each completed the Training Documentation Form is maintained in the individual's training file maintained by the Facility Compliance Manager; the original copy is forwarded to the Clean Harbors Corporate Training Department for recordkeeping and tracking purposes. A copy of the Training Documentation Form is included in **Appendix H-III.**

Clean Harbors' Corporate Training Department also maintains comprehensive employee training records in a computer data base system. The database includes the employee's name, date of hire, job title, employee category, training topics, and dates attended. Annual update of training is ensured through use of a monthly report which shows which employees must be scheduled for training or training reviews within 30, 60 and 90 days from the date of the report. This monthly reporting system assists the Corporate Training Department in scheduling sessions to meet the appropriate retraining requirements for all employees.

Training records for each employee will be retained at the facility for a minimum of three (3) years after the date of employee termination. In cases where an employee transfers to another Clean Harbors facility, the employee's file, including training records, will be transferred to the other facility.

Table H-1

Training Program Outline

A. Introductory Training Topics

1. Clean Harbors Orientation/Compliance Awareness
    - Company policies and procedures
    - Functions of facility
    - Relationship to other Clean Harbors companies
    - The regulated environment

2. Worker Right to Know/Hazard Communication Training
    - Federal and state laws
    - Basic chemical properties and handling procedures

3. Health and Safety Training/Awareness
    - PCB handling and use of protective gear
    - Rational for use of protective gear
    - Procedures to prevent hazards and exposure
    - Personal hygiene
    - Minimization of exposure to potential contamination

4. Personnel Protective Equipment
    - Use and care of safety and emergency equipment
    - Respirator training including use and care of respirator and personal respirator fit test

5. Dot/PCB Labeling and Manifesting
    - Overview of environmental regulations
    - PCB Waste Manifesting
    - DOT terminology
    - EPA waste codes
    - Labeling and placarding
    - Use of DOT emergency response guide
    - Requirements of Clean Harbors Licenses

B. Facility Specific Training

1. SGRR licenses and approvals

2. Contingency Plan Training
    - Use of communication and alarm systems
    - Emergency coordinators
    - Notification requirements
    - Response procedures in the event of injury, fire, explosions and/or spills
    - Response to potential groundwater and/or surface water contamination incidents
    - Shutdown of operations
    - Location and use of emergency monitoring equipment
    - Automatic and manual waste feed shutdown systems
    - Evacuation and decontamination procedures

3. Properties and Nature of PCB waste
   - Properties and hazards of PCB waste

4. Waste Analysis Plan
   - Sampling Methods
   - Acceptance Criteria

5. Inspection Plan
   - Procedures for using, inspecting, repairing and replacing facility emergency monitoring equipment

6. Standard Operating Procedures
   - Tanker loading/unloading procedures
   - Transfer pump operation and shutdown
   - Use of PCB waste storage and transfer equipment
   - Container handling procedures
   - Waste treatment system operations
   - Operation of Dispersion System

7. Firefighting Training
   - Fire hazard caused by spills. Leaks and other releases of PCB liquids and vapors
   - Containment of contaminated water and runoff
   - Drum fires
   - Bulk container fires
   - Location and use of pull boxes
   - Individual roles and duties during an emergency
   - Incipient stage of fire fighting
   - Chemistry of fire
   - Water as a protective device
   - Use of emergency equipment
   - Use and limitations of portable fire extinguishers
   - Nature and scope of incipient fire fighting

8. Decontamination Procedures
   - EPA protection levels
   - Establishing the decontamination corridor (access control)
   - Types of specialized procedures, techniques for PCBs, cyanides, acids, caustics, chlorinated solvents
   - Choice and use of decontamination solvents
   - Soil and groundwater contamination prevention

C. Other Training Topics

1. On an as needed basis, various topics such as:
   - CPR (given by certified instructors)
   - PCB properties
   - Driver training
   - Forklift training
   - Vacuum container theory and practice
   - PCB handling
   - Confined space entry procedures
   - Respirator protection and fit tests
   - Managers/ compliance meetings

D. Continuing Training Program

1. Special Training Updates
   - Training sessions given on as needed basis to provide employees with new information and/or new skills whenever there are changes in the facility, facility procedures or the employee's job assignment.

2. Annual Training Review
   - Annual Review of all required training to reinforce each employee's previous training experiences in the general and specific training programs and to promote employee safety and level of awareness

Table H-2

Topics	Employee Group Number
1. General	
Clean Harbors Company Orientation	1.0, 3.1, 3.2
Hazard Communication/ Right to Know	1.0, 3.1, 3.2
Health and Safety Training/Awareness	1.0, 3.1, 3.2
Personnel Protective Equipment	3.1, 3.2
DOT/PCB Labeling and Manifesting	3.1, 3.2
2. Site Specific	
Contingency and SPCC plans	1.0, 3.1, 3.2
Nature and properties of PCB waste	1.0, 3.1, 3.2
SGRR licenses and approvals	3.1, 3.2
Waste Analysis Plan	3.1, 3.2
Inspection Plan	3.1, 3.2
Waste Water Treatment Process	3.1, 3.2
Standard Operating Procedures	3.1, 3.2
Fire fighting training	3.1, 3.2
Decontamination	3.1, 3.2

Table H-3
Fire Suppression and Fighting Equipment

I. Fire Extinguishers

Number	Location	Weight	Type
1	Upstairs office	10 lbs.	Halon 1211
2	Furnace Room	5 lbs.	ABC Dry
3	Accounting	5 lbs.	Halon 1211
4	Lunch	20 lbs.	ABC Dry
5	Lab	10 lbs.	Halon 1211
6	Shower/Lockerroom	20 lbs.	ABC Dry
7	Lab	10 lbs.	Halon 1211
8	Lab	10 lbs.	ABC Dry
9	Main Office	10 lbs	Halon 1211
10	Main Office	10 lbs.	Halon 1211
11	Tool Room	5 lbs.	ABC Dry
12	Maintenance	20 lbs.	ABC Dry
13	Garage	20 lbs	ABC Dry
14	Garage	20 lbs.	ABC Dry
15	High Bay	30 lbs	Class D
16	High Bay	20 lbs.	ABC Dry
17	High Bay	20 lbs.	ABC Dry
18	High Bay	20 lbs.	ABC Dry
19	Boiler room	20 lbs.	ABC Dry
20	Waste water	20 lbs.	ABC Dry
21	Building E	10 lbs.	ABC Dry
22	Building E	20 lbs.	ABC Dry
23	Building F	30 lbs.	Class D
24	Building F	20 lbs.	ABC Dry
25	Building F	20 lbs.	ABC Dry
26	Building F	20 lbs.	ABC Dry
27	Flammables Pad	10 lbs.	ABC Dry
28	Flammables Pad	20 lbs.	ABC Dry
29	Building H	20 lbs.	ABC Dry
30	Building L	20 lbs.	ABC Dry
1-F	High Bay	33 gallons	AFFF Mobile
2-F	High Bay	33 gallons	AFFF Mobile
3-F	Spill Supply	33 gallons	AFFF Mobile
4-F	Building F	33 gallons	AFFF Mobile
1-P	High Bay	50 lbs.	ABC Dry
2-P	Tool Cage (on welder)	5 lbs.	ABC Dry
3-P	Tool Cage	5 lbs.	ABC Dry
4-P	Building F	30 lbs.	Class D
N/A	Forklifts	2.5 lbs.	ABC Dry
N/A	Bobcats	2.5 lbs.	ABC Dry

Fire Suppression and Fighting Equipment

II. Sprinkler System

Location	Capability
Throughout Building	165 Degree Fahrenheit Heads

III. Foam System

Location	Capability
F-Building	10,000 cubic foot coverage

Table H-4

Personnel Protective Equipment

Description	Location	Capability
Air Purifying Full-Face Respirator Store room	Respiratory	Protection
Air Purifying Half-Face Cartridge Store room Protection	Respiratory	
Self-Contained Breathing Apparatus: Scott Pressure Pak II Area	Spill Control Protection	Respiratory
Spare Air Cylinders, 45 cubic feet Spill Control	Spare for Scott SCBA Area	
Respirator Cartridges:		
Organic Vapor/Acid Gases	Store Room	For Respirators
Organic Vapor, Dusts, Mists Store Room	For Respirators	
Ammonia, Methyl Amine	Store Room	For Respirators
Gloves (cotton, vinyl, neoprene PVC)	Store Room	Hand Protection
Disposable Cover All	Store Room	Splash Protection
Fully Encapsulated Suits	Store Room with SCBA	Complete Protection
Aprons	Store Room	Splash Protection
Goggle, Chemical Splash	Store Room	Eye Protection

HEALTH/SAFETY EQUIPMENT INSPECTION SHEET

Inspector's name____________________ Date________ Time________

Type of Inspection: _____Workday _____Weekly _____Monthly _____Other____________

Equipment Item	Types of Potential Problems	Frequency	Status (See Notes)	Observations/ Comments	Action Taken
**** SECURITY AND EMERGENCY EQUIPMENT****					
Doors and Alarms	Unsecured, Unlocked	Each Workday	______	______	______
Fence	Corrosion, damage to chain-link fence	Weekly	______	______	______
Gates and Locks	Corrosion, damage to chain-link fence; sticking or corroding gate	Weekly	______	______	______
Warning signs on gates	Missing or illegible	Weekly	______	______	______
Sprinkler system and Foam System	Water pressure, leaking, structural damage	Annually	______	______	______
Portable fire extinguish-ers	Needs recharging	Monthly/ after each use	______	______	______
Fire Suppression on shredder	Needs recharging	Monthly/ after ea. use	______	______	______
Self-Contained Breathing Apparatus	Air quantity in reserves, air delivery system	Monthly/ After each use	______	______	______
Respirators and Cartridges	Out of stock	Monthly/ After each use	______	______	______
Industrial Absorbents and Booms	Out of stock	Monthly/ After each use	______	______	______
Shovels	Missing or damaged	Monthly/ After	______	______	______
55-gallon drums	Corrosion, structural damage	Monthly	______	______	______

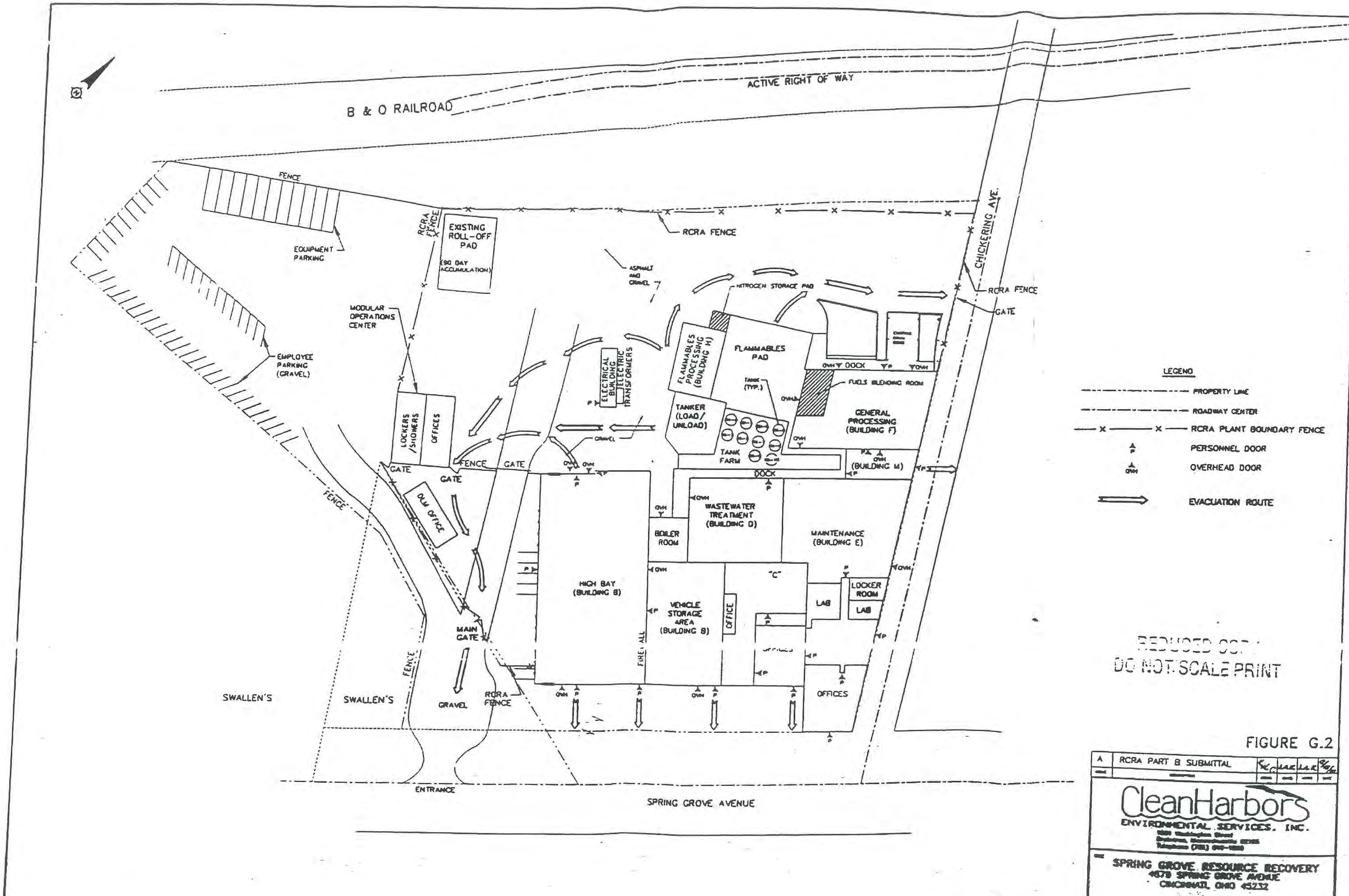
HEALTH/SAFETY EQUIPMENT INSPECTION SHEET

Inspector's name__________ Date__________ Time__________

Type of Inspection: _____Workday _____Weekly _____Monthly _____Other__________

Equipment Item	Types of Potential Problems	Frequency	Status (See Notes)	Observations/ Comments	Action Taken
Emergency shower and eyewash	Water supply, leaking, not draining	Weekly			
First aid equipment and supplies	Items out of stock, inoperative	Monthly/ after each use			
Protective Clothing (Overalls, gloves, boots)	Damaged, out of stock, dirty	Monthly/ after each use			
Telephone and PA system	Not working	Each Workday			
Pumps, hoses, other equipment	Not clean, improperly stored, cracks, missing fittings	Monthly/ after each use			
Contingency phone list	Not posted at lab, processing and receptionist's phone	Each workday			

Figure H-1



ACTIVE RIGHT OF WAY
B & O RAILROAD
FENCE
EQUIPMENT PARKING
RCRA FENCE
EXISTING ROLL-OFF PAD
(90 DAY ACCUMULATION)
RCRA FENCE
ASPHALT AND GRAVEL
NITROGEN STORAGE PAD
CHICKERING AVE.
RCRA FENCE
GATE
MODULAR OPERATIONS CENTER
EMPLOYEE PARKING (GRAVEL)
FLAMMABLES PROCESSING (BUILDING H)
FLAMMABLES PAD
DOCK
FUELS BLENDING ROOM
ELECTRICAL BUILDING
ELECTRIC TRANSFORMERS
TANK (TYP.)
TANKER (LOAD/ UNLOAD)
GENERAL PROCESSING (BUILDING F)
LOCKERS /SHOWERS
OFFICES
GRAVEL
TANK FARM
(BUILDING M)
GATE
FENCE
GATE
GATE
DOCK
FENCE
DLM OFFICE
WASTEWATER TREATMENT (BUILDING D)
BOILER ROOM
MAINTENANCE (BUILDING E)
HIGH BAY (BUILDING B)
VEHICLE STORAGE AREA (BUILDING B)
OFFICE
"C"
LAB
LOCKER ROOM
LAB
OFFICES
OFFICES
FIRE WALL
MAIN GATE
FENCE
SWALLEN'S
SWALLEN'S
GRAVEL
RCRA FENCE
ENTRANCE
SPRING GROVE AVENUE
LEGEND
PROPERTY LINE
ROADWAY CENTER
RCRA PLANT BOUNDARY FENCE
PERSONNEL DOOR
OVERHEAD DOOR
EVACUATION ROUTE
REDUCED COPY
DO NOT SCALE PRINT
A RCRA PART B SUBMITTAL
CleanHarbors
ENVIRONMENTAL SERVICES, INC.
SPRING GROVE RESOURCE RECOVERY
4879 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232

FIGURE G.2

Figure H-2

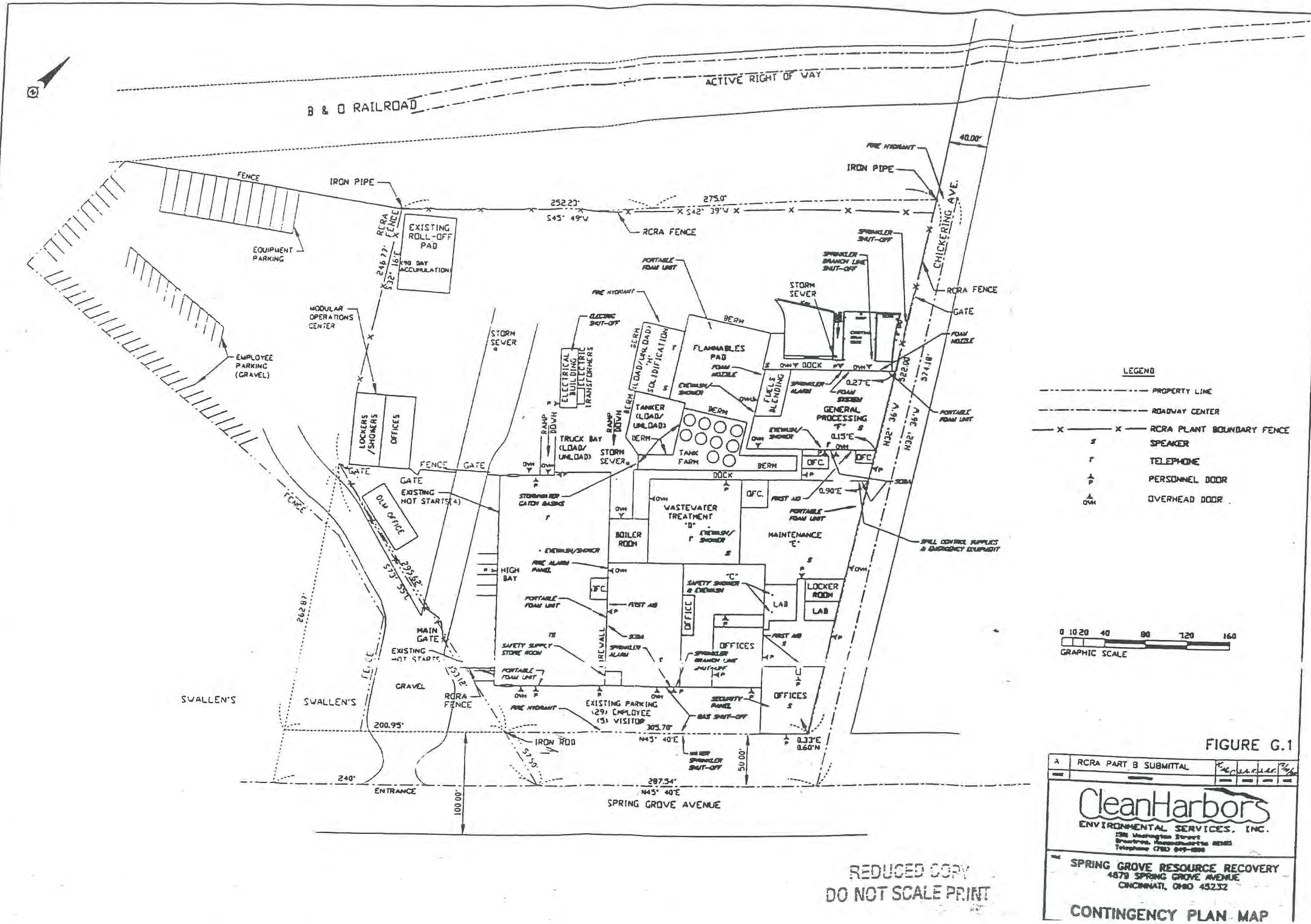

ACTIVE RIGHT OF WAY
B & O RAILROAD
CHICKERING AVE.
SPRING GROVE AVENUE
SWALLEN'S
SWALLEN'S
ENTRANCE
FENCE
IRON PIPE
IRON PIPE
FIRE HYDRANT
RCRA FENCE
RCRA FENCE
RCRA FENCE
GATE
EQUIPMENT PARKING
EMPLOYEE PARKING (GRAVEL)
EXISTING ROLL-OFF PAD
90 DAY ACCUMULATION
MODULAR OPERATIONS CENTER
LOCKERS /SHOWERS
OFFICES
OLD OFFICE
STORM SEWER
STORM SEWER
STORM SEWER
ELECTRICAL BUILDING
ELECTRIC TRANSFORMERS
ELECTRIC SHUT-OFF
FLAMMABLES PAD
FOAM NOZZLE
PORTABLE FOAM UNIT
SOLIDIFICATION "H"
TANKER (LOAD/ UNLOAD)
TRUCK BAY (LOAD/ UNLOAD)
TANK FARM
BERM
DOCK
FUELS BLENDING
GENERAL PROCESSING "F"
SPRINKLER ALARM
FOAM SYSTEM
EYEWASH/ SHOWER
SPRINKLER SHUT-OFF
SPRINKLER BRANCH LINE SHUT-OFF
OFC.
WASTEWATER TREATMENT "D"
BOILER ROOM
MAINTENANCE "E"
FIRST AID
SCBA
SPILL CONTROL SUPPLIES & EMERGENCY EQUIPMENT
HIGH BAY
FIRE ALARM PANEL
SAFETY SUPPLY STORE ROOM
FIREWALL
OFFICE
"C"
SAFETY SHOWER & EYEWASH
LAB
LOCKER ROOM
LAB
OFFICES
OFFICES
SECURITY PANEL
GAS SHUT-OFF
WATER SPRINKLER SHUT-OFF
EXISTING HOT STARTS(4)
EXISTING HOT STARTS
MAIN GATE
GRAVEL
EXISTING PARKING (29) EMPLOYEE (5) VISITOR
STORMWATER CATCH BASINS
RAMP DOWN
IRON ROD
252.20' S45° 49'W
275.0' S42° 39'W
246.72' S32° 16'E
322.00' N32° 36'W
374.18' N32° 36'W
295.62'
262.87'
200.95'
240'
305.70' N45° 40'E
287.54' N45° 40'E
50.00'
100.00'
40.00'
0.27'E
0.15'E
0.90'E
0.33'E 0.60'N
LEGEND
PROPERTY LINE
ROADWAY CENTER
RCRA PLANT BOUNDARY FENCE
SPEAKER
TELEPHONE
PERSONNEL DOOR
OVERHEAD DOOR
0 10 20 40 80 120 160
GRAPHIC SCALE
A RCRA PART B SUBMITTAL
CleanHarbors ENVIRONMENTAL SERVICES, INC.
SPRING GROVE RESOURCE RECOVERY
4879 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232
CONTINGENCY PLAN MAP

FIGURE G.1

APPENDIX H-1

JOB DESCRIPTIONS

1. JOB TITLE: Administrative

   Physically at the facility, but are not involved in hazardous waste management activities (i.e. administrative assistants, customer service representative, office personnel, etc.).

2. JOB TITLE: Laboratory Manager

   - Oversees the quality control of the laboratory
   - Calibrates and utilizes instrumentation to analyze wastes
   - Completes and maintains all analytical records
   - Oversees lab operation to ensure compliance with OSHA and Health and Safety guidelines

3. JOB TITLE: Facility Technician

   - Warehousing, transfer, and consolidation of hazardous wastes.
   - Tank Farm operations
   - Loading and unloading vehicles
   - Obtaining samples of hazardous wastes from containers
   - Operation of material handling equipment
   - Proper labeling of hazardous waste containers.
   - Drum crusher/shredder operation.

4. JOB TITLE: Receiving Chemist

   - Sampling and Evaluation of waste streams received or treated at the facility
   - Quality control on incoming/outgoing hazardous wastes (i.e., compatibility, physical and chemical analysis).
   - Implementation of Facility Waste Analysis Plan.

5. JOB TITLE: Supervisor

   - Warehousing, transfer and consolidation of hazardous waste

- Supervision of Tank Farm Operations
- Loading and unloading of transport vehicles
- Obtaining samples of hazardous wastes.
- Hazardous Waste labeling and identification.
- Operation of material handling equipment
- Supervision of Facility Technicians
- Supervision of Receiving Chemists.
- Supervision of Laboratory Technicians.
- Record keeping/ paperwork in work area.
- Responsible for compliance with Waste Analysis Plan implementation.

NOTE: Each supervisor has a specific area and/or activity for which he/she is responsible (e.g. Tank Farm Supervisor, Bulk Solids Supervisor, Drum Receiving Supervisor). Each supervisor is responsible for quality management for his or her respective areas of operation.

6. JOB TITLE: <u>General Manager</u>

- Manages the entire facility's hazardous waste storage and treatment operation.
- Responsible for maintenance and operation of environmental monitoring equipment (e.g. LEL meters), and for ensuring that all analytical equipment is properly maintained.
- Manages safety controls and procedures implemented at the facility.

7. JOB TITLE: <u>Facility Compliance Manager</u>

- Insure compliance with permits, licenses, approvals, etc.
- Maintain up-to-date management and operating plans.
- Maintain operating records (e.g. Inspection/training). Ensures forms are completed.
- Ensures any deficiencies are addressed
- Ensure compliance with applicable federal, state, and local regulations governing air quality, water quality, hazardous waste, and community right-to-know.
- Conduct internal regulatory audits.
- Conduct external regulatory audits.

- Manifest management
- Complete inspections pursuant to inspection plan. Ensures forms are completed.
- Correct minor deficiencies noted during inspections.
- Write remedial work orders for maintenance related deficiencies noted during inspections. Re-inspect once deficiency is corrected.

8. JOB TITLE: Compliance Specialist

The overall function of the Compliance Specialist is to assist the Facility Compliance Manager in assuring that the facility regulatory requirements are met.

9. JOB TITLE: Compliance Guard

Physically located at the facility entrance, but is not involved directly in hazardous waste management activities. Controls access into and out of the facility, conducts compliance administrative responsibilities (e.g. manifest distribution, manifest filing, compliance record keeping functions).

10. JOB TITLE: Laboratory Chemist

- Conducts QC analytical or inbound and outbound shipments of waste in accordance with the Waste Analysis Plan.
- Maintains laboratory equipment and laboratory records.

11. JOB TITLE: Shipper

Prepares paperwork for outbound shipments of waste, schedules shipments, and ensures that transportation is arranged.

12. JOB TITLE: Maintenance

Physically located at the facility, but is not involved in hazardous waste management activities. Maintenance repairs, installs and/or maintains plant equipment, building, etc.

13. JOB TITLE: Facility Driver

Based at the Facility, but is not involved in hazardous waste management activities. Facility Driver will have annual driver training. This position is involved in driving a truck to physically move waste on trailers or tankers within the facility fence line.

DeptID	ID	Name	Location	Descr
66SG	020363	Gravett, Robert L	Cincinnati, Ohio	Equipment Operator I
66SG	2121	Sibert, Jeffrey M	Cincinnati, Ohio	Facility Foreman
66SG	020296	McFarland, William S	Cincinnati, Ohio	Facility Foreman
66SG	2135	Cox, David A	Cincinnati, Ohio	Facility Operations Manager I
66SG	020344	Beatty, Roger D	Cincinnati, Ohio	Facility Operations Manager I
66SG	2622	Moyers, Michael M	Cincinnati, Ohio	Facility Shipping Coordinator
66SG	021152	Adams, Kathleen R	Cincinnati, Ohio	Facility Shipping Coordinator
66SG	022770	Horton, Jonathan B	Cincinnati, Ohio	Facility Shipping Supervisor
66SG	044593	Dean, Dalton L	Cincinnati, Ohio	Facility Technician I
66SG	026529	Lehman, Brian D	Cincinnati, Ohio	Facility Technician I
66SG	029059	Mullenix Fairley, John W	Cincinnati, Ohio	Facility Technician II
66SG	5702	Hostler, Benjamin J	Cincinnati, Ohio	Lab Chemist II
66SG	025038	Becker, David K	Cincinnati, Ohio	Pegasus Operator
66SG	044527	Hines, Eric M	Cincinnati, Ohio	Receiving Chemist I
66SG	2122	Davison, Jeffrey B	Cincinnati, Ohio	Receiving Chemist I
66SG	021128	Martinez, Oscar	Cincinnati, Ohio	Receiving Chemist I
66SG	4916	White III, Rallinson	Cincinnati, Ohio	Receiving Chemist II
66SG	5648	Brown, Jason P	Cincinnati, Ohio	Receiving Chemist II
66SG	025456	Fairley, Duane M	Cincinnati, Ohio	Yard Driver
66SG	043679	Schumacher, Randall S	Cincinnati, Ohio	Receiving Chemist I
66SG	3941	Erdy, Nicole	Cincinnati, Ohio	Facility Shipping Coordinator
66SG	3441	Mcvay, Terry	Cincinnati, Ohio	Facility Maint. Repair III
66SG	044291	Decker, Stephanie M	Cincinnati, Ohio	Compliance Guard
66SG	025455	Fryman, Richard S	Cincinnati, Ohio	Facility Maint. Manager I
66SG	042187	Dooley, Brayden L	Cincinnati, Ohio	Facility Maintenance Repair I
66SG	6692	Fink, Allan E	Cincinnati, Ohio	Facility Maintenance Repair II
66SG	3055	Vasse, Stephen B	Cincinnati, Ohio	Facility General Manager II
60P3		Bley, Stephen	Cincinnati, Ohio	Facility Compliance Manager

CLEAN HARBORS ENVI' MENTAL SERVICES
INTERNAL TRAININ .OSTER SHEET

Location: ______________________ Course Date: ______________________

Course Name: Drum Handling (08 of 08) Course Code(s): HS1048

Course Duration: ______________________

Employee ID #	Branch Code 4 digits	Employee Name	Signature	Instructor Notes

Instructor Name: ______________________ Instructor Signature: ______________________

Subject to Review by Training Director: ______________________ Facility Manager ______________________

Date: ______________________ Page# of

Appendix H-4

ENVIRONMENTAL SERVICES, INC.
4879 SPRING GROVE AVENUE • CINCINNATI, OH 45232
(513) 681-5738 • FAX (513) 681-7523
Visit our Website at www.cleanharbors.com

March 19, 2001

Cincinnati Police Department
310 Ezzard Charles Drive
Cincinnati, OH 45214-2805

CERTIFIED MAIL: #7000 1670 0001 3327 9822

Re: Spring Grove Resource Recovery, Inc. PCB Storage Facility

Dear Sir or Madam:

Spring Grove Resource Recovery, Inc. (SGRR) is requesting that all local support agencies that would potentially respond to an emergency situation at the SGRR PCB Commercial Storage Facility review the attached Contingency Plan.

We would appreciate any comments be directed to myself at 513-681-5738 extension 6382.

Sincerely,

Michael Crisenbery

Michael Crisenbery, CHMM
Facility Compliance Manager

Cc: File

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
4879 SPRING GROVE AVENUE • CINCINNATI, OH 45232
(513) 681-5738 • FAX (513) 681-7523
Visit our Website at www.cleanharbors.com

March 19, 2001

University Hospital
Department of Occupational Health
234 Goodman Street
Cincinnati, OH 45267-1000

CERTIFIED MAIL: #7000 1670 0001 3329 0100

Re: Spring Grove Resource Recovery, Inc. PCB Storage Facility

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Sincerely,

Michael Crisenbery

Michael Crisenbery, CHMM
Facility Compliance Manager

Cc: File

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
4879 SPRING GROVE AVENUE • CINCINNATI, OH 45232
(513) 681-5738 • FAX (513) 681-7523
Visit our Website at www.cleanharbors.com

March 19, 2001

Chief, District #3
Cincinnati Fire Department
301 Ludlow Ave.
Cincinnati, OH 45232

CERTIFIED MAIL: #7099 3400 0016 1796 2132

Re: Spring Grove Resource Recovery, Inc. PCB Storage Facility

Dear Sir or Madam:

Spring Grove Resource Recovery, Inc. (SGRR) is requesting that all local support agencies that would potentially respond to an emergency situation at the SGRR PCB Commercial Storage Facility review the attached Contingency Plan.

We would appreciate any comments be directed to myself at 513-681-5738 extension 6382.

Sincerely,

Michael Crisenbery, CHMM
Facility Compliance Manager

Cc: File

Appendix 13
Sampling Plan

July 26, 2016

This routine sampling plan is designed to determine if there is contamination of areas outside the PCB storage areas. Sampling will be implemented every three (3) months.

Areas to sample (with number of wipe samples) are:

1. DLM office (1)
2. Lockers/Showers @ southwest area (1)
3. Northeast offices (1)
4. Laboratory (1)
5. Breakroom (1)

(Refer to Facility Plan Drawing # 5384-C-19 for locations)

Wipe samples of tile in each area will be done per 40 CFR Part 761.123. The same location will be sampled every 3 months. Areas must be <10 ug/100 cm2 to be considered clean.

SUMMARY OF METHOD

1. A measured volume or weight of sample is extracted using the appropriate matrix specific sample extraction technique.

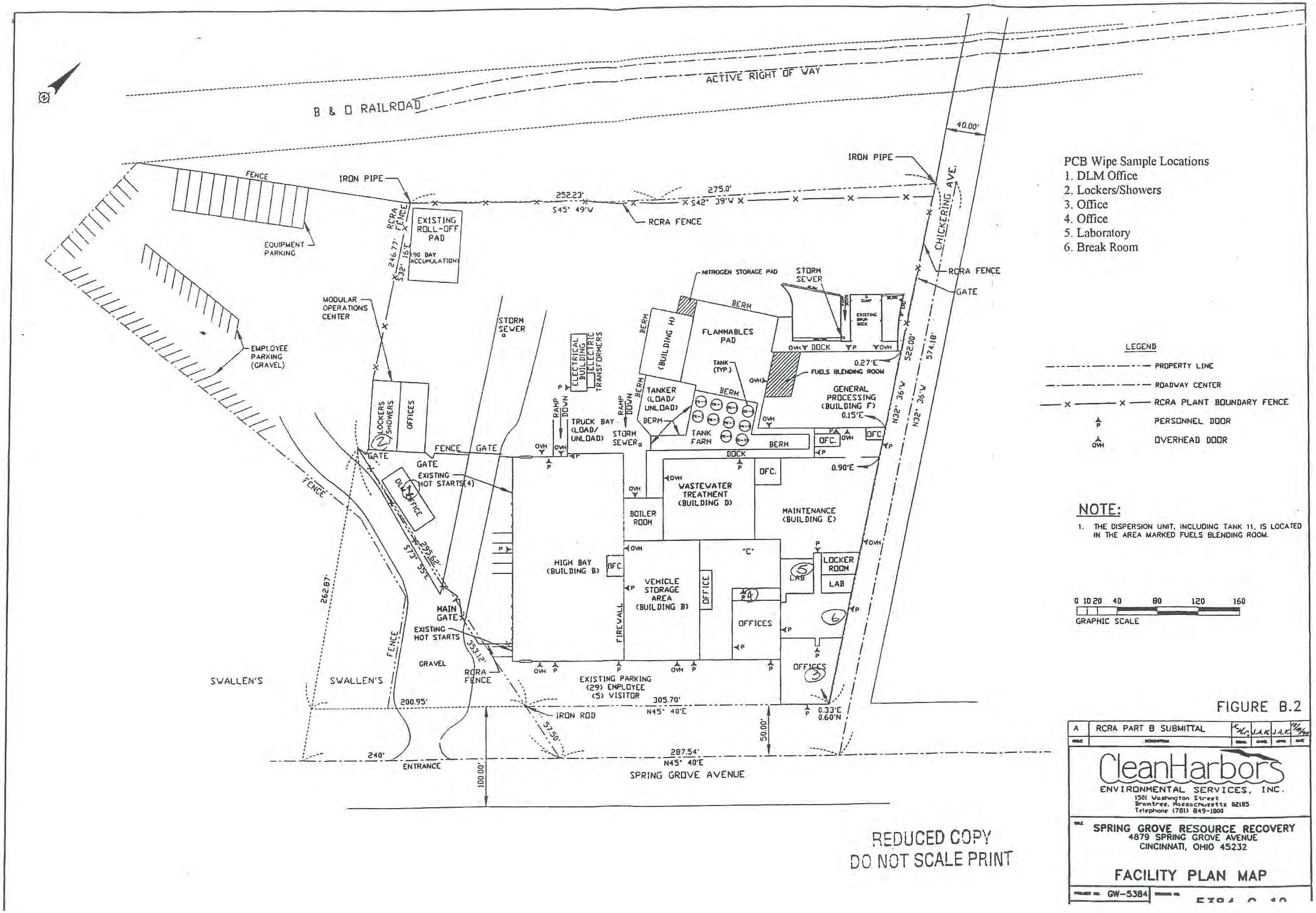
2. Liquid samples may be extracted at neutral pH with methylene chloride using either Method 3510 (separatory funnel), Method 3520 (continuous liquid-liquid extractor), Method 3535 (solid-phase extraction), or other appropriate technique or solvents.

3. Solid samples may be extracted with hexane-acetone (1:1) or methylene chloride-acetone (1:1) using Method 3540 (Soxhlet), Method 3541 (automated Soxhlet), Method 3545 (pressurized fluid extraction), Method 3546 (microwave extraction), Method 3550 (ultrasonic extraction), Method 3562 (supercritical fluid extraction), or other appropriate technique or solvents.

4. Tissue samples may be extracted using Method 3562 (supercritical fluid extraction), or other appropriate technique. The extraction techniques for other solid matrices may be appropriate for tissue samples.

5. Extracts for PCB analysis may be subjected to a sequential sulfuric acid/potassium permanganate cleanup (Method 3665) designed specifically for these analytes. This cleanup technique will remove (destroy) many single component organochlorine or organophosphorus pesticides. Therefore, this method is not applicable to the analysis of those compounds. Instead, use Method 8081.

6. After cleanup, the extract is analyzed by injecting a measured aliquot into a gas chromatograph equipped with either a narrow- or wide-bore fused-silica capillary column and either an electron capture detector (GC/ECD) or an electrolytic conductivity detector (GC/ELCD) (SW 846 8082A).


B & O RAILROAD
ACTIVE RIGHT OF WAY
40.00'
IRON PIPE
FENCE
IRON PIPE
RCRA FENCE
252.23'
S45° 49'W
275.0'
S42° 39'W
RCRA FENCE
CHICKERING AVE.
EXISTING ROLL-OFF PAD
(90 DAY ACCUMULATION)
246.77'
S32° 16'E
EQUIPMENT PARKING
RCRA FENCE
GATE
NITROGEN STORAGE PAD
STORM SEWER
MODULAR OPERATIONS CENTER
STORM SEWER
ELECTRICAL BUILDING
ELECTRIC TRANSFORMERS
BERM
(BUILDING H)
FLAMMABLES PAD
DOCK
EXISTING DRUM DOCK
522.00'
574.18'
EMPLOYEE PARKING (GRAVEL)
TANK (TYP.)
0.27'E
FUELS BLENDING ROOM
GENERAL PROCESSING (BUILDING F)
0.15'E
N32° 36'W
N32° 36'W
LOCKERS SHOWERS
OFFICES
RAMP DOWN
TRUCK BAY (LOAD/ UNLOAD)
RAMP DOWN
TANKER (LOAD/ UNLOAD)
BERM
STORM SEWER
TANK FARM
BERM
OFC.
OFC.
FENCE
GATE
GATE
GATE
DOCK
0.90'E
EXISTING HOT STARTS(4)
DLM OFFICE
FENCE
WASTEWATER TREATMENT (BUILDING D)
OFC.
BOILER ROOM
MAINTENANCE (BUILDING E)
295.62'
S73° 55'E
HIGH BAY (BUILDING B)
OFC.
VEHICLE STORAGE AREA (BUILDING B)
FIREWALL
OFFICE
"C"
LOCKER ROOM
LAB
LAB
262.87'
MAIN GATE
EXISTING HOT STARTS
OFFICES
FENCE
GRAVEL
353.12'
RCRA FENCE
OFFICES
SWALLEN'S
SWALLEN'S
EXISTING PARKING (29) EMPLOYEE (5) VISITOR
200.95'
305.70'
N45° 40'E
0.33'E 0.60'N
IRON ROD
57.50'
50.00'
240'
287.54'
N45° 40'E
ENTRANCE
100.00'
SPRING GROVE AVENUE
1
2
3
4
5
6
PCB Wipe Sample Locations
1. DLM Office
2. Lockers/Showers
3. Office
4. Office
5. Laboratory
6. Break Room
LEGEND
PROPERTY LINE
ROADWAY CENTER
RCRA PLANT BOUNDARY FENCE
PERSONNEL DOOR
OVERHEAD DOOR
NOTE:
1. THE DISPERSION UNIT, INCLUDING TANK 11, IS LOCATED IN THE AREA MARKED FUELS BLENDING ROOM.
0 10 20 40 80 120 160
GRAPHIC SCALE
REDUCED COPY
DO NOT SCALE PRINT
FIGURE B.2
A RCRA PART B SUBMITTAL J.A.K. J.A.K.
CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1501 Washington Street
Braintree, Massachusetts 02185
Telephone (781) 849-1800
SPRING GROVE RESOURCE RECOVERY
4879 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232
FACILITY PLAN MAP
GW-5384

Appendix 14

December 6, 2000

SPRING GROVE RESOURCE RECOVERY
DAILY PCB INSPECTION

(✓) indicates "yes"
(X) indicates "no"
(OK) indicates "OK"
(N/A) indicates "not operational"
note: Inspections performed each operating day

Inspector:

Date:

Time:

INSPECTION CRITERIA	HIGH BAY	COMMENTS
1. Are all PCB Articles and PCB Containers properly marked with product code, storage date, PCB label, NFPA label (non-RCRA) ?		
2. Are all PCB Articles and PCB Containers stored in approved bermed areas?		
3. Are the roof and walls in good condition to prevent rainwater from reaching PCB's (I.e. not leaking) ?		
4. Are the floors and berms in good condition where PCB's are stored (I.e. no cracks) ?		
5. Are all moveable pieces of equipment that are used for handling PCB's in the storage area?		
6. Have all pieces of equipment that have been removed from the PCB storage area been decontaminated per 40 CFR 761.79?		
7. Are all PCB Articles and PCB Containers free from leaks?		
8. Do all containers holding liquid PCB's meet 40 CFR 761.65 criteria?		
9. Do all containers holding non-liquid PCB's meet 40 CFR 761.65 criteria?		
10. Is there enough aisle space to allow movement of personnel, fire protection, spill control, and decontamination equipment?		
11. Are there any flammable PCB wastes stored in High Bay?		
12. Are all containers of PCB waste closed except for the ones being processed?		
13. Do all PCB articles and PCB containers have unique Spring Grove numbers assigned to them?		
14. Do any PCB articles or PCB containers have storage dates greater than 200 days old?		

ADDENDUM

Spring Grove Resource Recovery, Inc. (SGRR) has submitted an Application for a 761.61(c) (Risk-based Disposal) Approval to solidify PCBs.

Excluded from solidification are processing of liquid PCBs into non-liquid PCBs to circumvent the high temperature incineration requirements of 761.60(a). Multi-phase PCBs will use the highest PCB concentration for determination of disposal.

SGRR will solidify sludges to solids for the purpose of making them amenable to DOT transportation standards. These sludges will include PCB remediation wastes such as PCB spill cleanups including environmental media, sewage sludge, commercial and industrial sludges.

Sludges for solidification are expected to come in containers, primarily drums. The sludges will be combined with solidification materials and mixed together.

SGRR notes that the Truck Loading/Unloading Area (Stabilization Building H), the Rolloff Pad, and the Tanker Loading/Unloading Area function as active loading and offloading area for vehicle transporters hauling PCB wastes. The Stabilization Building H may be used to solidify PCB sludge's prior to placement in rolloffs for offsite disposal.

Sludge's will be solidified in rolloffs and/or a steel mix box (dimensions 20' x 20'x 3'). Inert reagents (clay, sawdust) that do not cause an exothermic reaction, will be used. Small amounts of reagents will be added and mixed to minimize the final amount of solids. Additional amounts will be added as needed until the material is solid. This will be determined visually and through a paint filter test. An excavator will be used to mix the reagents and sludge and transfer the waste into a rolloff box. The mixing will be done the same shift as the reagents are added and should require a minimal amount of time. After confirmation with the paint filter test, the solids will be transferred into a rolloff box the same shift.

The mix-tub and/or rolloffs would be considered a PCB container per 40 CFR 761.3 and would be decontaminated using self-implementing decontamination procedures per 40 CFR 761.79 (c) (1). This includes flushing the internal surfaces of the container three times with a solvent containing <50 ppm PCBs with each rinse volume of the flushing solvent being approximately 10% of the container volume. The excavator is moveable equipment and would be decontaminated using self-implementing decontamination procedures per 40 CFR 761.79 (c) (2) including swabbing surfaces that have contacted PCBs with a solvent or a double wash/rinse as defined in Subpart S of 40 CFR 761. Decontamination of containers/excavator may take place as business dictates, but any materials added/mixed prior to decontamination will be considered PCBs.