

Air Quality

PERMIT TO CONSTRUCT

Permittee US Ecology Idaho, Inc.
Permit Number P-2008.0162
Project ID 62415
Facility ID 073-00004
Facility Location 20400 Lemley Road
Grand View, ID 83624

Permit Authority

This permit (a) is issued according to the “Rules for the Control of Air Pollution in Idaho” (Rules), IDAPA 58.01.01.200–228; (b) pertains only to emissions of air contaminants regulated by the State of Idaho and to the sources specifically allowed to be constructed or modified by this permit; (c) has been granted on the basis of design information presented with the application; (d) does not affect the title of the premises upon which the equipment is to be located; (e) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (f) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; and (g) in no manner implies or suggests that the Idaho Department of Environmental Quality (DEQ) or its officers, agents, or employees assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment. Changes in design, equipment, or operations may be considered a modification subject to DEQ review in accordance with IDAPA 58.01.01.200–228.

Date Issued July 24, 2020



Kelli Wetzel, Permit Writer



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1 Permit Scope

Purpose

- 1.1 This is a modified permit to construct (PTC) to construct a new waste Indoor Stabilization Building and new drum storage canopy and to add two used oil-fired heaters.
- 1.2 Those permit conditions that have been modified or revised by this permitting action are identified by the permit issue date citation located directly under the permit condition and on the right-hand margin.
- 1.3 This PTC replaces Permit to Construct No. P-2008.0162 issued on December 30, 2014.

Regulated Sources

Table 1.1 lists all sources of regulated emissions in this permit.

Table 1.1 Regulated Sources

Permit Section	Source	Control Equipment
2, 3	<p><u>Indoor Stabilization Building:</u></p> <p><u>Treatment Tanks 1 and 2</u> Tank Capacity, each: 175 T/hr (150 T/hr wastes, 25 T/hr reagents) Waste* Throughput : 300 T/hr, 7,200 T/day, 276,000 T/yr Reagent Throughput: 50 T/hr, 1,200 T/day, 46,000 T/yr</p> <p><u>“Fugitive” Emissions</u> (Treated as point source emission for PTE) 15’ x 15’ roll-up door, north wall Two 15’ x 28’ roll-up doors, south wall Two 14’ x 28’ roll-up doors, south wall 12’ x 15’ roll-up door, south wall</p> <p>* “Fine wastes” and wastes containing volatile HAPs/TAPs</p> <p><u>Two Additive Silos</u> Silo baghouse/filters collect PM emissions during silo filling. Both silos are typically used to store lime but occasionally are used to store cement.</p>	<p>Retractable vinyl curtains and collection hood for each tank. Water spray bars will be installed slightly above and on the east and west sides of each treatment tank.</p> <p><u>Baghouse (SB_BH1)</u> Rated flow: 25,000 acfm PM₁₀/PM_{2.5} control efficiency: 99.5%</p> <p><u>Baghouse (SB_BH2)</u> Rated flow: 25,000 acfm PM₁₀/PM_{2.5} control efficiency: 99.5%</p> <p>Negative building pressure is maintained whenever one or both of the baghouses are operating.</p> <p><u>Two Silo Baghouses (ADD_SILO, LIM_SILO)</u> Manufacturer: Stephens Model: SV380 PM₁₀/PM_{2.5} control efficiency: 99.5%</p>
2, 4	<p><u>Outdoor Stabilization Facility:</u></p> <p><u>Treatment Bins (Portable) (OSF1, OSF2)</u> Manufacturer: N/A Bin Capacity: 52 yd³ Waste Throughput (All bins combined): 270 T/hr, 6,480 T/day, 337,400 T/yr Reagent Throughput (All bins combined): 50 T/hr, 1,200 T/day, 62,500 T/yr</p> <p><u>Three Additive/Reagent Silos</u> The silos baghouses collect emissions during silo filling. Additives/reagents are usually lime (58.5% CaO) or occasionally cement.</p>	<p>The Waste processing bin lid covers the processing bin during lime and cement addition, rated at 25% efficient for PM. Water sprays are also used to control dust.</p> <p><u>Silo Baghouses (O_SILO1, O_SILO2, O_SILO3)</u> Manufacturer: Mikropul “Pulsair” PM₁₀/PM_{2.5} control efficiency: 99.5%</p>
2, 5	<p><u>Maintenance Shop Space Heater:</u> Manufacturer: Firelake Model: 500, B5 single stage burner Manufacture Date: March 2017 Heat input rating: 0.493 MMBtu/hr Max. operation: 3,600 hr/yr Fuel: Used oil, ULSD</p> <p><u>Quonset Hut Space Heater</u> Manufacturer: Firelake Model: 350, B5 single stage burner Manufacture Date: February 2011 Heat input rating: 0.343 MMBtu/hr Max. operation: 3,600 hr/yr Fuel: Used oil, ULSD</p>	<p>None</p>

[7/24/2020]

2 Facility-Wide Conditions

Operation and Maintenance Manual Requirements

2.1 O&M Manual

Within 60 days of issuance of this permit, the permittee shall have developed an Operations and Maintenance (O&M) manual for each air pollution control device at this facility based on manufacturer specifications and recommendations. Where available, the manufacturer's O&M manual(s) shall be part of the O&M manual developed by the permittee. All O&M manuals shall remain on site at all times and be made available to DEQ representatives upon request. Additionally, for each air pollution control device, a copy of its respective O&M manual shall be posted at the location of the air pollution control device and shall be readily accessible to shift workers. Each O&M manual shall include the following information at a minimum:

- A general description of the air pollution control device;
- Manufacturer recommended pressure drop operating range. (This requirement applies for all baghouses except for the O_Silo 3 baghouse);
- Operating instructions and startup and shutdown procedures;
- The operation, maintenance, and repair of the air pollution control device;
- Routine and periodic maintenance procedures, (Information to describe when it is necessary to change filter media shall be included in this section); and
- Upset conditions and corrective action procedures.

Records shall be maintained onsite to describe when maintenance and repair has been performed on each air pollution control device. At a minimum, the records shall include a description of the maintenance/repair action taken and the date the action was completed. The records shall be maintained in accordance with PTC General Provision 6.10 of this permit.

[1/27/2009]

Waste Requirements

2.2 Wastes Not Subject to Limits in This Permit

The following wastes are not subject to the treatment throughput limits in this permit:

- Wastes that do not contain particulate or volatile HAP/TAPs, as determined through routine waste characterization practices.
- Wastes that do not require processing or treatment to meet Land Disposal Restrictions (LDRs) and can be disposed in the as-received condition. This practice is referred to as "direct burial."

[7/24/2020]

2.3 Wastes Containing HAPs/TAPs Not Listed in Appendix A

Wastes not excluded from treatment throughput limits in Permit Condition 2.2 and which have been determined through routine waste characterization practices to contain one or more TAPs not listed in Appendix A of this permit may be treated/stabilized if:

- It has been demonstrated that emissions of the TAP in any calendar day will not exceed the applicable screening emissions level (EL) listed in Section 585 of the Rules and/or projected annual emissions of the TAP will not exceed ten times the applicable EL listed in Section 586 of the Rules. For TAPs listed in both sections, emission rates must be less than or equal to both ELs.

Or

- It has been demonstrated that emissions of the TAP will not cause an ambient impact greater than the applicable acceptable ambient concentration (AAC) increment or ten (10) times the acceptable ambient concentration for carcinogens (AACC) increment listed in Section 585 and/or 586 of the Rules in one of the following ways:
 - Calculating the maximum ambient impact from emissions of the TAP using the dispersion coefficients listed in Appendix A to this permit; or
 - Conducting atmospheric dispersion modeling to determine the maximum ambient impact from emissions of the TAP. The modeling analyses shall use a current version of an EPA-approved model and follow relevant guidance in the most recent version of the “State of Idaho Guideline for Performing Air Quality Impact Analyses,” available for download on DEQ’s website.
 - For TAPs listed in both Section 585 and 586 of the Rules, compliance shall be demonstrated with both the AAC and ten times the AACC.

Records documenting compliance with this permit condition shall be maintained in accordance with PTC General Provision 6.10.

[7/24/2020]

Fugitive Emissions

2.4 Fugitive Dust

All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651. In determining what is reasonable, consideration will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions that might affect the movement of particulate matter. Some of the reasonable precautions include, but are not limited to, the following:

- Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of lands.
- Application, where practical, of asphalt, water, or suitable chemicals to, or covering of, dirt roads, material stockpiles, and other surfaces which can create dust.
- Installation and use, where practical, of hoods, fans, and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations.
- Covering, where practical, of open-bodied trucks transporting materials likely to give rise to airborne dusts.
- Paving of roadways and their maintenance in a clean condition, where practical.
- Prompt removal of earth or other stored material from streets, where practical.

2.5 Fugitive Dust Monitoring

The permittee shall monitor and maintain records of the frequency and the method(s) used (i.e., water, chemical dust suppressants, etc.) to reasonably control fugitive emissions.

2.6 Fugitive Dust Recordkeeping

The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

2.7 Inspections

The permittee shall conduct quarterly facility-wide inspections of potential sources of fugitive emissions, during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive emissions are effective. If fugitive emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each fugitive emissions inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed), any corrective action taken in response to the fugitive emissions, and the date the corrective action was taken.

Odors

2.8 Odors

The permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

2.9 Complaint Recordkeeping

The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Visible Emissions

2.10 Visible Emissions

The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, NO_x, and/or chlorine gas is the only reason for the failure of the emission to comply with the requirements of this section.

2.11 Inspections

The permittee shall conduct quarterly facility-wide inspections of potential sources of visible emissions during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each visible emissions inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

Open Burning

2.12 Open Burning Requirements

The permittee shall comply with IDAPA 58.01.01.600-623, Rules for Control of Open Burning.
[1/27/2009]

Reports and Certifications

2.13 Reporting Requirement

Any reporting required by this permit, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, notifications of intent to test, testing reports, or compliance certifications, shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete. Any reporting required by this permit shall be submitted to the following address:

Air Quality Permit Compliance
Department of Environmental Quality
Boise Regional Office
1445 North Orchard Street
Boise, ID 83706-2239
Phone: (208)373-0550
Fax: (208) 373-0287

Fuel-burning Equipment

2.14 Fuel-burning Requirement

The permittee shall not discharge to the atmosphere from any fuel-burning equipment PM in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas and 0.050 gr/dscf of effluent gas corrected to 3% oxygen by volume for liquid.

Sulfur Content

2.15 Distillate Fuel Oil Requirement

The permittee shall not sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur:

- ASTM Grade 1 fuel oil - 0.3% by weight (3000 ppmw).
- ASTM Grade 2 fuel oil - 0.5% by weight (5000 ppmw).
- ASTM Grades 4, 5 and 6 fuel oil – 1.75% by weight (17,500 ppmw).

[1/27/2009]

2.16 Sulfur Verification

The permittee shall maintain documentation of supplier verification of distillate fuel oil sulfur content on an as-received basis.

Hazardous Air Pollutants

2.17 Hazardous Air Pollutants Limit

Facility wide HAP emissions shall not exceed 10 tons per year for any one HAP or 25 tons per year for all HAPs combined for any consecutive 12-month period. In accordance with 40 CFR 63.2, fugitive emissions shall be included in facility-wide totals for comparison with these major source thresholds.

[7/24/2020]

2.18 Hazardous Air Pollutants Monitoring and Recordkeeping

Each calendar month, the permittee shall monitor and record the emissions of HAPs for the previous month in tons per month based on HAP concentrations determined through routine waste characterization practices. Annual HAPs emissions shall be determined by summing the monthly emissions over the previous consecutive 12-month period to demonstrate compliance with the Hazardous Air Pollutants Limit permit condition.

[7/24/2020]

3 Indoor Stabilization Building

3.1 Process Description

The stabilization process in the new Indoor Stabilization Building produces stable products by mixing waste with reagents in either of two mixing tanks, each capable of holding up to 150 tons of untreated waste. Water spray bars will be located slightly above and on two sides of each of the treatment tanks to control dust from materials determined to contain “fine wastes.” Retractable vinyl curtains will also be provided to control emissions from each tank. A hood collector will be located above each treatment tank, ducted to one of two dedicated 25,000 acfm baghouses (SB_BH1 or SB_BH2) with minimum 99.5% capture efficiency for PM₁₀/PM_{2.5}.

Waste materials, including materials containing “fine wastes” are transferred into the mixing tanks directly from trucks, roll-off bins, or by front-end loader. Stabilization reagents or additives are then added to the tanks. Common reagents used include lime, cement, ferrous sulfate (FeSO₄), and clay. Cement or lime is transferred from two nearby existing storage silos using a reagent screw auger system. Each of the storage silos is equipped with a baghouse/filter to capture particulate matter (PM) emissions during silo filling. Other reagents are added in bulk. An excavator or backhoe is used to mix the wastes and reagents and to transfer the processed/stabilized material out of the mixing bin into a transport vehicle for further handling or disposal.

[7/24/2020]

3.2 Control Device Descriptions

Table 3.1 Indoor Stabilization Building Description

Emissions Units / Processes	Control Devices
Treatment Tanks 1 and 2 Waste Loading and Stabilization	Retractable vinyl curtains and collection hood for each tank Water spray bars Baghouse SB_BH1 for Treatment Tank 1 Baghouse SB_BH2 for Treatment Tank 2
Additive/ reagent silo	ADD_SILO: Additive silo baghouse
Additive/ reagent silo	LIM_SILO: Additive silo baghouse

[7/24/2020]

Operating Requirements

3.3 Indoor Stabilization Waste Throughput Limits

Waste throughput to the indoor stabilization building shall not exceed 276,000 tons of waste per any consecutive 12 month period and 7,200 tons of waste per calendar day for “fine wastes” containing particulate TAPs and wastes containing volatile TAPs, combined.

[7/24/2020]

3.4 Indoor Stabilization Reagent Throughput Limits

Combined reagent throughput to the indoor stabilization building shall not exceed 46,000 tons of reagent per any consecutive 12 month period and 1,200 tons of reagent in any calendar day.

[7/24/2020]

3.5 Noncarcinogenic Particulate TAPs Screening Treatment Limits

Except as provided in the Maximum TAPs Treatment Limits permit condition, the treatment of noncarcinogenic particulate TAPs in “fine wastes” listed shall not exceed the limit listed in Table 3.2.

Table 3.2 Noncarcinogenic Particulate TAP Screening Treatment Limits^(a)

Pollutant	Modeled ppmw ^(b)	Screening Treatment Limit
		T/day ^(c)
Noncarcinogenic particulate TAPs listed in Appendix A.	125,000	900

- a) The pollutant treatment limit is for the specific pollutant, not the amount of wastes containing the pollutant.
- b) The pollutant modeled ppmw is a screening tool. Wastes with higher concentrations may be treated as long as the limit in T/day is not exceeded.
- c) Tons per any consecutive 24-hour period.

[7/24/2020]

3.6 Carcinogenic Particulate TAPs Screening Treatment Limits

Except as provided in the Maximum TAPs Treatment Limits permit condition, the treatment of carcinogenic particulate TAPs in “fine wastes” shall not exceed the limits listed in Table 3.3.

Table 3.3 Carcinogenic Particulate TAP Screening Treatment Limits^(a)

CAS No.	Pollutant	Modeled ppmw ^(b)	Screening Treatment Limit
			T/yr ^(c)
	Carcinogenic particulate TAPs listed in Appendix A except as noted below.	125,000	34,500
	Exceptions		
1332-21-4	Asbestos (friable)	2,700	745.2
7440-38-2	Arsenic compounds	50,000	13,800
16065-83-1 18540-29-9	Total chromium, default NEI for Cr (III) and Cr (VI)	50,000	13,800

- a) The pollutant treatment limit is for the specific pollutant, not the amount of wastes containing the pollutant.
- b) The pollutant modeled ppmw is a screening tool. Wastes with higher concentrations may be treated as long as the limit in T/yr is not exceeded.
- c) Tons per any consecutive 12-calendar month period.

[7/24/2020]

3.7 Noncarcinogenic Volatile TAPs Screening Treatment Limits

Except as provided in the Maximum TAPs Treatment Limits permit condition, the treatment of noncarcinogenic volatile TAPs in wastes shall not exceed the ton per day limit for TAPs listed in Appendix A or pound per day limits for exceptions listed in Table 3.4.

Table 3.4 Noncarcinogenic Volatile TAP Screening Treatment Limits^(a)

CAS No.	Pollutant	Modeled ppmw ^(b)	Screening Treatment Limit	
			lb/day ^(c)	T/day ^(c)
	Noncarcinogenic volatile TAPs listed in Appendix A, except as noted below.	10,000	144,000	72
	Exceptions			
95-95-4	2,4,5-Trichlorophenol	1,600	23,040	11.52
60-35-5	Acetamide	2,800	40,320	20.16
107-02-8	Acrolein	1,100	15,840	7.92
7782-50-5	Chlorine	1,600	23,040	11.52
75-08-1	Ethyl Mercaptan	3,000	43,200	21.6
7664-39-3	Hydrogen Fluoride	7,200	103,680	51.84
7783-06-4	Hydrogen Sulfide	7,000	100,800	50.4
75-44-5	Phosgene	410	5,904	2.952
7803-51-2	Phosphine	6,100	87,840	43.92
88-89-1	Picric acid	4,700	67,680	33.84
584-84-9	Toluene-2,6-diisocyanate	2,100	30,240	15.12

- a) The pollutant treatment limit is for the specific pollutant, not the amount of wastes containing the pollutant.
- b) The pollutant modeled ppmw is a screening tool. Wastes with higher concentrations may be treated as long as the limit in lb/day or T/day is not exceeded.
- c) Pounds and tons per any consecutive 24-hour period.

[7/24/2020]

3.8 Carcinogenic Volatile TAPs Screening Treatment Limits

Except as provided in the Maximum TAPs Treatment Limits permit condition, the treatment of carcinogenic volatile TAPs in wastes shall not exceed the ton per year limit for TAPs listed in Appendix A or the pound per year limits for exceptions listed in Table 3.5.

Table 3.5 Carcinogenic Volatile TAP Screening Treatment Limits^(a)

CAS No.	Pollutant	Modeled ppmw ^(b)	Screening Treatment Limit	
			lb/yr ^(c)	T/yr ^(c)
	Carcinogenic volatile TAPs listed in Appendix A, except as noted below.	1,500	---	414
	Exceptions			
96-12-8	1,2-Dibromo-3-chloropropane	360	198,720	99.36
106-99-0	1,3-butadiene	100	55,200	27.60
132-64-9	Dibenzofuran	29	16,008	8.00
75-21-8	Ethylene oxide	530	292,560	146.28
302-01-2	Hydrazine	18	9,936	4.97
60-34-4	Methyl Hydrazine	1,400	772,800	386.40
55-18-5	N-Nitrosodiethylamine	27	14,904	7.45
62-75-9	N-Nitrosodimethylamine	49	27,048	13.52
75-35-4	Vinylidene chloride	1,100	607,200	303.60

- a) The pollutant treatment limit is for the specific pollutant, not the amount of wastes containing the pollutant.
- b) The pollutant modeled ppmw is a screening tool. Wastes with higher concentrations may be treated as long as the limit in lb/yr or T/yr is not exceeded.
- c) Pounds and tons per any consecutive 12-calendar month period.

[7/24/2020]

3.9 Maximum TAPs Treatment Limits

Treatment of TAPs in wastes shall not exceed the applicable Maximum Treatment Limits listed in Tables A-2, A-3, A-4, or A-5 of Appendix A to this permit. For TAPs listed in both Section 585 and 586 of the Rules, compliance must be demonstrated with the applicable calendar day and annual treatment limits.

[7/24/2020]

3.10 Pressure Drop Monitoring Device

The permittee shall install, calibrate, maintain and operate in accordance with manufacturer specifications, pressure drop monitoring equipment to measure the pressure differential across each of the four baghouses (SB_BH1, SB_BH2, ADD_SILO, and LIM_SILO).

[7/24/2020]

3.11 Micro-Encapsulation, Macro-Encapsulation and Sizing Operations

Micro-encapsulation, macro-encapsulation and sizing operations shall not be conducted when wastes are being loaded, treated, or unloaded in either of the treatment tanks.

[7/24/2020]

3.12 Operation of Air Pollution Control Equipment

When conducting stabilization operations involving waste streams that meet the definition of “fine wastes” as determined in Appendix B of this permit, or conducting sizing operations that might generate dust, the permittee shall operate the baghouse serving the treatment pit (SB_BH1 or SB_BH2) or the area nearest the treatment pit where these operations are occurring. In the event of a power outage or other event that reduces the required operating efficiency of the air pollution control equipment, all unloading and treatment operations of “fine wastes” shall cease until such time as the power is restored or the air pollution control equipment is returned to normal operation. Silo baghouses (ADD_SILO and LIM_SILO) shall operate during silo filling operations. Each of these air pollution control devices shall be operated according to manufacturer’s recommendations and specification and in accordance with the Operation and Maintenance Manual Requirements permit condition and PTC General Provision 6.2.

The terms “Paint Filter Determination” in Appendix A shall mean EPA Method 9095B.

[7/24/2020]

Monitoring and Recordkeeping Requirements

3.13 Indoor Stabilization Waste Throughput Limits Monitoring

Each calendar day, the permittee shall monitor and record the waste throughput to the indoor stabilization building for the previous day in tons per day. Annual waste throughput to the indoor stabilization building shall be determined by summing the monthly totals over the previous consecutive 12-month period to demonstrate compliance with the Indoor Stabilization Waste Throughput Limits permit condition.

[7/24/2020]

3.14 Indoor Stabilization Reagent Throughput Limits Monitoring

Each calendar day, the permittee shall monitor and record combined reagent throughput to the indoor stabilization building for the previous day in tons per day. Annual combined reagent throughput to the indoor stabilization building shall be determined by summing the monthly totals over the previous consecutive 12-month period to demonstrate compliance with the Indoor Stabilization Reagent Throughput Limits permit condition.

[7/24/2020]

3.15 Fine Waste Determination

The permittee shall maintain on-site and make available to DEQ representatives upon request all records of fine waste determinations for all wastes subject to indoor stabilization. Records shall be kept in accordance with PTC General Provision 6.10.

[12/30/2014]

3.16 TAPs Treatment Limits Monitoring

The permittee shall monitor and record the weight of waste being processed and the concentration in parts per million by weight (ppmw) of each TAP present in that waste as determined by routine waste characterization practices, for all wastes processed during a calendar day in the Indoor Stabilization Building.

For any case where the concentration of a TAP exceeds the applicable “modeled ppmw” screening level listed in Tables 3.2, 3.3, 3.4, or 3.5, the permittee shall calculate and record the weight of that TAP processed during that calendar day.

To demonstrate compliance with the non-carcinogenic TAPs treatment limits, the permittee shall compare the amount of that TAP processed with the applicable calendar day limit listed in Tables 3.2, 3.4, or Appendix A.

The permittee shall monitor and record the weight of carcinogenic particulate TAPs and carcinogenic volatile TAPs treated on a monthly basis in pounds per month. Annual amounts of carcinogenic TAPs shall be determined by summing the monthly totals over the previous consecutive 12-month period. To demonstrate compliance with the carcinogenic TAPs treatment limits, the permittee shall compare the totals for the previous 12-month period with the applicable annual limit listed in Tables 3.3, 3.5, or Appendix A.

[7/24/2020]

3.17 Pressure Drop Monitoring Requirement

The permittee shall monitor and record the pressure drop across each of the four baghouses (SB_BH1, SB_BH2, ADD_SILO, and LIM_SILO) once daily when operating to demonstrate compliance with Pressure Drop Monitoring Device permit condition. Records demonstrating compliance with this permit condition shall be maintained in accordance with PTC General Provision 6.10.

[7/24/2020]

4 Outdoor Stabilization Facility

4.1 Process Description

Outdoor stabilization operations produce stable products by mixing with reagents in either of two mixing bins capable of holding up to 30 tons of untreated waste each. Waste arrives by truck and is dumped into a mixing bin. A steel plate acts as a waste bin lid during cement or lime addition. All other reagents are added in bulk; water is added manually. Mixing is accomplished with a backhoe, then the mixed products are moved to land disposal.

Common reagents are cement, lime, ferrous sulfate (FeSO_4), and clay. The reagents lime and cement are kept in silos; each silo has a baghouse to control emissions during silo filling.

4.2 Control Device Descriptions

Table 4.1 Outdoor Stabilization Facility Description

Emissions Units / Processes	Control Devices
OSF1, OSF2: waste mixing bins with cement, lime, and other reagent addition	A bin lid, or steel plate, which covers the waste bin during cement and lime addition. Manual water sprays
Additive/ reagent silo	O_SILO 1: Additive silo baghouse
Lime silo	O_SILO 2: Lime silo baghouse
Additive/ reagent silo	O_SILO 3: Additive silo baghouse

[7/24/2020]

Operating Requirements

4.3 Volatile Organic Wastes

The permittee shall not treat hazardous wastes containing an average volatile organic (VO) concentration at the point of waste origin of more than 500 ppmw unless the appropriate emission control requirements specified in IDAPA 58.01.05.008 (40 CFR 264, Subpart CC) are met.

[7/24/2020]

4.4 Outdoor Stabilization Waste Throughput Limits

Waste throughput to the outdoor stabilization facility shall not exceed 337,400 tons of waste per any consecutive 12 month period and 6,480 tons of waste per any calendar day wastes containing volatile TAPs.

[7/24/2020]

4.5 Outdoor Stabilization Silos Reagent Throughput Limits

Combined reagent throughput for the three outdoor stabilization silos shall not exceed 62,500 tons of reagent per any consecutive 12 month period and 1,200 tons of reagent per any calendar day.

[7/24/2020]

4.6 Maximum Treatment Limits

Treatment of TAPs in wastes shall not exceed the applicable Maximum Treatment Limits listed in Table A-6 of Appendix A to this permit.

[7/24/2020]

4.7 Pressure Drop Monitoring Device

The permittee shall install, calibrate, maintain, and operate, according to manufacturer's recommendations and specification, a pressure drop monitoring device to measure the pressure drop across the O_Silo 1 baghouse and the O_Silo 2 baghouse while operating.

[1/27/2009]

4.8 Operation of Air Pollution Control Equipment

When conducting outdoor stabilization silo filling operations, the permittee shall operate the respective silo baghouse. Each of these air pollution control devices shall be operated according to manufacturer's recommendations and specification and in accordance with the Operation and Maintenance Manual Requirements permit condition and PTC General Provision 6.2.

Monitoring and Recordkeeping Requirements

4.9 Outdoor Stabilization Waste Throughput Limits Monitoring

Each calendar day, the permittee shall monitor and record the waste throughput to the outdoor stabilization facility for the previous day in tons per day. Annual waste throughput to the outdoor stabilization facility shall be determined by summing the monthly operation over the previous consecutive 12-month period to demonstrate compliance with the Outdoor Stabilization Waste Throughput Limits permit condition.

[7/24/2020]

4.10 Outdoor Stabilization Silos Reagent Throughput Limits Monitoring

Each calendar day, the permittee shall monitor and record combined reagent throughput for the three outdoor stabilization silos for the previous day in tons per day. Annual combined reagent throughput for the three outdoor stabilization silos shall be determined by summing the monthly operation over the previous consecutive 12-month period to demonstrate compliance with the Outdoor Stabilization Silos Reagent Throughput Limits permit condition.

[7/24/2020]

4.11 Outdoor Stabilization Wastes TAPs Treatment Limits Monitoring

The permittee shall monitor and record the weight of waste being processed and the concentration in parts per million by weight (ppmw) of each TAP present in that waste as determined by routine waste characterization practices, for all wastes processed during a calendar day at the Outdoor Stabilization Facility.

For any case where the concentration of a TAP exceeds the applicable "weight fraction" listed in Table A-6, the permittee shall calculate and record the weight of that TAP processed during that calendar day.

To demonstrate compliance with TAPs treatment limits, the permittee shall compare the amount of that TAP processed with the applicable pound per day (lb/day) or ton per day (T/day) limit listed in Table A-6 in Appendix A to this permit.

[7/24/2020]

4.12 Pressure Drop Monitoring Requirement

The permittee shall monitor and record the pressure drop across the O_Silo 1 baghouse and the O_Silo 2 baghouse once daily when operating to demonstrate compliance with the Operation of Air Pollution Control Equipment permit condition. Records demonstrating compliance with this permit condition shall be maintained in accordance with PTC General Provision 6.10.

5 Space Heaters

5.1 Process Description

Two heaters in the Maintenance Shop and in the Quonset Hut burn used oil generated onsite to provide heat during colder months. On rare occasions, the heaters burn used oil received from household used oil generators. When used oil supplies are depleted, the heaters burn ultra-low sulfur diesel fuel.

[7/24/2020]

5.2 Control Device Descriptions

Table 5.1 Space Heaters Description

Emissions Units / Processes	Control Devices
Maintenance Shop Space Heater (SHOPHTR)	None
Quonset Hut Space Heater (QHHEATER)	

[7/24/2020]

Operating Requirements

5.3 On-Site Burning of Used Oil

Used oil-fired space heaters shall comply with 40 CFR 279.23.

[7/24/2020]

5.4 Space Heaters Operation Limits

Each space heater shall not exceed 3,600 hours of operation each per any consecutive 12-month period.

[7/24/2020]

5.5 Fuel Requirements

The space heaters shall combust only used oil with a maximum sulfur content of 1.0% by weight or ultra-low sulfur diesel fuel with a maximum sulfur content of 0.0015% by weight.

In accordance with 40 CFR 279.11, used oil (as defined by ASTM D6488) shall be limited to RFO4, RFO5L, and RFO5H, and shall not exceed any of the allowable levels of the constituents or properties listed in the following table:

Table 5.2 40 CFR 279.11 - USED OIL SPECIFICATIONS^(a)

Constituent/Property	Allowable Level
Arsenic	5 ppm
Cadmium	2 ppm
Chromium	10 ppm
Lead	100 ppm
Flash Point	A minimum of 100 °F
Total Halogens ^(b)	4,000 ppm
PCBs ^(c)	< 2 ppm

- a) The specification does not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (see 40 CFR 279.10(b)).
- b) Used oil containing more than 1,000 parts per million (ppm) total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under § 279.10(b)(1). Such used oil is subject to subpart H of part 266 of this chapter rather than 40 CFR 279 when burned for energy recovery unless the presumption of mixing can be successfully rebutted (see § 279.11).
- c) Applicable standards for the burning of used oil containing PCB are imposed by 40 CFR 761.20(e).

[7/24/2020]

Monitoring and Recordkeeping Requirements

5.6 Annual Hours of Operation Monitoring

Each calendar month, the permittee shall monitor and record the operating hours of each space heater for the previous month in hours per month. Space heater operation shall be determined by summing the monthly operation for each heater over the previous consecutive 12-month period to demonstrate compliance with the Space Heater Operation permit condition.

[7/24/2020]

5.7 Sulfur Verification

The permittee shall maintain documentation of supplier verification of ultra- low sulfur diesel fuel sulfur content on an as-received basis and documentation that used oil meets the specifications in the Fuel Requirements Permit Condition.

[7/24/2020]

6 General Provisions

General Compliance

- 6.1** The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the “Rules for the Control of Air Pollution in Idaho.” The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit, the “Rules for the Control of Air Pollution in Idaho,” and the Environmental Protection and Health Act (Idaho Code §39-101, et seq).
- [Idaho Code §39-101, et seq.]**
- 6.2** The permittee shall at all times (except as provided in the “Rules for the Control of Air Pollution in Idaho”) maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.
- [IDAPA 58.01.01.211, 5/1/1994]**
- 6.3** Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules, and regulations.
- [IDAPA 58.01.01.212.01, 5/1/1994]**

Inspection and Entry

- 6.4** Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:
- Enter upon the permittee’s premises where an emissions source is located, emissions-related activity is conducted, or where records are kept under conditions of this permit;
 - Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
 - Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.
- [Idaho Code §39-108]**

Construction and Operation Notification

- 6.5** This permit shall expire if construction has not begun within two years of its issue date, or if construction is suspended for one year.
- [IDAPA 58.01.01.211.02, 5/1/1994]**
- 6.6** The permittee shall furnish DEQ written notifications as follows:
- A notification of the date of initiation of construction, within five working days after occurrence; except in the case where pre-permit construction approval has been granted then notification shall be made within five working days after occurrence or within five working days after permit issuance whichever is later;
 - A notification of the date of any suspension of construction, if such suspension lasts for one year or more; and

- A notification of the initial date of achieving the maximum production rate, within five working days after occurrence - production rate and date.

[IDAPA 58.01.01.211.01, 5/1/1994]

- A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date; and
- A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date.

[IDAPA 58.01.01.211.03, 5/1/1994]

Performance Testing

6.7 If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

6.8 All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

6.9 Within 60 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

[IDAPA 58.01.01.157, 4/5/2000 and 4/11/2015]

Monitoring and Recordkeeping

6.10 The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Monitoring records shall include, but not be limited to, the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.211, 5/1/1994]

Excess Emissions

- 6.11** The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130–136 for excess emissions due to start-up, shut-down, scheduled maintenance, safety measures, upsets, and breakdowns.

[IDAPA 58.01.01.130–136, 4/5/2000]

Certification

- 6.12** All documents submitted to DEQ—including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification—shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[IDAPA 58.01.01.123, 5/1/1994]

False Statements

- 6.13** No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/1998]

Tampering

- 6.14** No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/1998]

Transferability

- 6.15** This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/2006]

Severability

- 6.16** The provisions of this permit are severable, and if 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.

[IDAPA 58.01.01.211, 5/1/1994]

Appendix A – TAPs Treatment Limits



Table A-1. Indoor Stabilization Building Dispersion Coefficients				
	Dispersion Coefficient			
	Noncarcinogenic Particulate TAPs (mg/m³ per lb per hour emission rate)	Carcinogenic Particulate TAPs (µg/m³ per lb per hour emission rate)	Noncarcinogenic Volatile TAPs (mg/m³ per lb per hour emission rate)	Carcinogenic Volatile TAPs (µg/m³ per lb per hour emission rate)
Worst Case: Both Baghouses operating, north rollup door and at least 3 of the south rollup doors open	0.0315	2.10	0.0369	2.79
Both Baghouses operating, all rollup doors closed	3.28E-04	0.050	3.78E-03	0.575

Table A-2. Indoor Stabilization - Maximum Treatment Limits for Noncarcinogenic Particulate TAPs							
CAS	Compound	HAP?	24-hr Emission Rate @ 125,000 ppmw (lb/hr)	Modeled Ambient Impact (mg/m³)	AAC (mg/m³)	Percent of AAC at concentration of 125,000 ppmw in Wastes	Maximum Treatment Limit (Tons of TAP treated per calendar day)
7440-36-0	Antimony Compounds	HAP	3.01E-02	9.48E-04	0.025	3.79%	7,200
16065-83-1	Chromium Metal, Cr (III) (Default Profile, NEI)	HAP	7.72E-03	2.43E-04	0.025	0.97%	7,200
7440-48-4	Cobalt Compounds	HAP	3.01E-02	9.48E-04	0.0025	37.93%	2,373
7439-96-5	Manganese Compounds	HAP	3.01E-02	9.48E-04	0.25	0.38%	7,200
7782-49-2	Selenium Compounds	HAP	3.01E-02	9.48E-04	0.01	9.48%	7,200
7440-39-3	Barium Compounds	---	3.01E-02	9.48E-04	0.025	3.79%	7,200
1344-28-1	Aluminum oxide (fibrous forms)	HAP	2.50E-02	7.87E-04	0.5	0.157%	7,200
1313-27-5	Molybdenum trioxide	HAP	3.01E-02	9.48E-04	0.25	0.379%	7,200
7723-14-0	Phosphorus	HAP	3.01E-02	9.48E-04	0.005	18.96%	4,746

Table A-3. Indoor Stabilization - Maximum Treatment Limits for Carcinogenic Particulate TAPs							
CAS	Compound	HAP?	Annual Emission Rate @ 125,000 ppmw (lb/hr)	Modeled Ambient Impact (µg/m³)	T-RACT AACC (µg/m³)	Percent of T-RACT AACC at 125,000 ppmw in Wastes	Maximum Treatment Limit (Tons of TAP treated per consecutive 12-month period)
1332-21-4	Asbestos (friable)	HAP			4.0E-05		
7440-38-2	Arsenic Compounds	HAP			2.3E-03		
7440-41-7	Beryllium Compounds	HAP	2.59E-03	5.44E-03	4.2E-02	13%	266,168
7440-43-9	Cadmium Compounds	HAP	2.59E-03	5.44E-03	5.6E-03	97%	35,489
N090	Chromium Compounds	---			---		
7440-02-0	Nickel Compounds	HAP	2.59E-03	5.44E-03	4.2E-02	13%	266,168

Table A-4. Indoor Stabilization - Maximum Treatment Limits for Noncarcinogenic Volatile TAPs

CAS	Compound	HAP?	24-hr Emission Rate @ 10,000 ppmw (lb/hr)	Modeled Ambient Impact (mg/m ³)	ACC (mg/m ³)	Percent of AAC at concentration of 10,000 ppmw in Wastes	Maximum Treatment Limit (Tons of TAP treated per calendar day)
71-55-6	1,1,1-Trichloroethane	HAP	3.84E+00	1.42E-01	95.5	0.15%	7,200
75-34-3	1,1-Dichloroethane	HAP	5.12E+00	1.89E-01	20.25	0.93%	7,200
106-88-7	1,2 Butylene Oxide	HAP	3.88E+00	1.43E-01	0.6	23.86%	302
120-82-1	1,2,4-Trichlorobenzene	HAP	6.39E-02	2.36E-03	1.85	0.13%	7,200
107-15-3	1,2-diaminoethane	-	8.89E-01	3.28E-02	1.25	2.63%	2,742
95-50-1	1,2-Dichlorobenzene	-	2.50E-01	9.24E-03	15	0.06%	7,200
107-06-2	1,2-Dichloroethane	HAP	2.66E+00	9.84E-02	2	4.92%	1,464
540-59-0	1,2-Dichloroethylene	-	3.21E+00	1.18E-01	39.5	0.30%	7,200
78-87-5	1,2-Dichloropropane	HAP	1.36E+00	5.01E-02	17.35	0.29%	7,200
106-46-7	1,4-Dichlorobenzene	HAP	1.60E-01	5.89E-03	22.5	0.03%	7,200
540-84-1	2,2,4 Trimethylpentane	HAP	1.98E+00	7.30E-02	17.5	0.42%	7,200
95-95-4	2,4,5-Trichlorophenol	HAP		1.52E-03	0.0016	94.87%	
94-75-7	2,4-D	-	1.08E-01	4.00E-03	0.5	0.80%	7,200
111-76-2	2-butoxyethanol	-	3.03E-01	1.12E-02	6	0.19%	7,200
95-57-8	2-Chlorophenol	-	2.87E-01	1.06E-02	0.025	42.35%	170
109-86-4	2-Methoxyethanol	-	9.12E-01	3.37E-02	0.8	4.21%	1,711
534-52-1	4,6-Dinitro-o-cresol	-	2.63E-03	9.70E-05	0.01	0.97%	7,200
60-35-5	Acetamide	HAP		2.98E-04	0.0003	99.22%	
64-19-7	Acetic Acid	-	1.10E+00	4.05E-02	1.25	3.24%	2,224
67-64-1	Acetone	-	3.16E+00	1.17E-01	89	0.13%	7,200
75-05-8	Acetonitrile	HAP	1.47E+00	5.44E-02	3.35	1.62%	4,434
107-02-8	Acrolein	HAP		1.21E-02	0.0125	97.06%	
79-10-7	Acrylic acid	HAP	3.96E-01	1.46E-02	1.5	0.97%	7,200
7664-41-7	Ammonia	-	3.56E+00	1.31E-01	0.9	14.59%	493
92-52-4	Biphenyl	HAP	1.94E-02	7.15E-04	0.075	0.95%	7,200
111-44-4	bis(2-Chloroethyl)ether	HAP	1.94E-01	7.15E-03	1.5	0.48%	7,200
75-25-2	Bromoform	HAP	3.16E-01	1.17E-02	0.25	4.67%	1,541
74-83-9	Bromomethane	HAP	8.71E+00	3.21E-01	0.95	33.84%	213
141-32-2	Butyl Acrylate	-	9.16E-01	3.38E-02	2.75	1.23%	5,858
71-36-3	Butyl Alcohol	-	5.72E-01	2.11E-02	7.5	0.28%	7,200
2426-08-6	Butyl Glycidyl Ether	-	9.29E-01	3.43E-02	6.75	0.51%	7,200
109-79-5	Butyl Mercaptan	-	1.43E+00	5.28E-02	0.09	58.69%	123
133-06-2	Captan	HAP	1.76E-05	6.51E-07	0.25	0.00%	7,200
63-25-2	Carbaryl	HAP	2.94E-04	1.08E-05	0.25	0.00%	7,200
75-15-0	Carbon disulfide	HAP	4.33E+00	1.60E-01	1.5	10.65%	676
120-80-9	Catechol	HAP	6.19E-03	2.28E-04	1	0.02%	7,200
7782-50-5	Chlorine	HAP		1.48E-01	0.15	98.88%	
108-90-7	Chlorobenzene	HAP	5.95E-01	2.20E-02	17.5	0.13%	7,200
510-15-6	Chlorobenzilate	HAP	7.25E-04	2.68E-05	0.035	0.08%	7,200
75-00-3	Chloroethane	HAP	1.20E+01	4.42E-01	132	0.33%	7,200
74-87-3	Chloromethane	HAP	1.31E+01	4.85E-01	5.15	9.41%	765

Table A-4. Indoor Stabilization - Maximum Treatment Limits for Noncarcinogenic Volatile TAPs

CAS	Compound	HAP?	24-hr Emission Rate @ 10,000 ppmw (lb/hr)	Modeled Ambient Impact (mg/m ³)	ACC (mg/m ³)	Percent of AAC at concentration of 10,000 ppmw in Wastes	Maximum Treatment Limit (Tons of TAP treated per calendar day)
126-99-8	Chloroprene	HAP	2.53E+00	9.36E-02	1.8	5.20%	1,385
1319-77-3	Cresol	HAP	1.63E-01	6.02E-03	1.1	0.55%	7,200
98-82-8	Cumene	HAP	9.47E-01	3.50E-02	12.25	0.29%	7,200
592-01-8	Cyanide Compounds	HAP	4.76E+00	1.76E-01	0.25	70.25%	102
110-82-7	Cyclohexane	-	2.02E+00	7.45E-02	52.5	0.14%	7,200
108-94-1	Cyclohexanone	-	4.03E-01	1.49E-02	5	0.30%	7,200
110-83-8	Cyclohexene	-	1.62E+00	5.97E-02	50.75	0.12%	7,200
287-92-3	Cyclopentane	-	4.26E+00	1.57E-01	86	0.18%	7,200
333-41-5	Diazinon	-	3.86E-03	1.43E-04	0.005	2.85%	2,524
84-74-2	Dibutyl phthalate	HAP	1.08E-03	3.97E-05	0.25	0.02%	7,200
77-73-6	Dicyclopentadiene	-	9.20E-01	3.40E-02	1.5	2.26%	3,180
111-42-2	Diethanolamine	HAP	3.04E-02	1.12E-03	0.75	0.15%	7,200
100-37-8	Diethylaminoethanol	-	1.37E+00	5.05E-02	2.5	2.02%	3,566
108-83-8	Diisobutyl Ketone	-	4.53E-01	1.67E-02	7.25	0.23%	7,200
121-69-7	Dimethyl Aniline	HAP	2.78E-01	1.03E-02	1.25	0.82%	7,200
131-11-3	Dimethyl phthalate	HAP	1.65E-02	6.10E-04	0.25	0.24%	7,200
122-39-4	Diphenylamine (difficult to distinguish from diphenylnitrosamine)	-	9.53E-03	3.52E-04	0.5	0.07%	7,200
64-17-5	Ethanol	-	1.80E+00	6.66E-02	94	0.07%	7,200
141-43-5	Ethanolamine	-	1.74E-01	6.43E-03	0.4	1.61%	4,478
141-78-6	Ethyl acetate	-	1.88E+00	6.93E-02	70	0.10%	7,200
60-29-7	Ethyl ether	-	7.12E+00	2.63E-01	60	0.44%	7,200
75-08-1	Ethyl Mercaptan	-		4.91E-02	0.05	98.12%	
100-41-4	Ethylbenzene	HAP	6.00E-01	2.21E-02	21.75	0.10%	7,200
107-21-1	Ethylene Glycol	HAP	3.36E-02	1.24E-03	6.35	0.02%	7,200
628-96-6	Ethylene Glycol Dinitrate	-	6.42E-02	2.37E-03	0.016	14.82%	486
96-45-7	Ethylene thiourea	HAP	4.37E-04	1.61E-05	0.035	0.05%	7,200
75-34-3	Ethylidene Dichloride	HAP	4.51E+00	1.66E-01	20.25	0.82%	7,200
16219-75-3	Ethylidene-2-norbornene	-	6.37E-01	2.35E-02	1.25	1.88%	3,829
64-18-6	Formic acid	-	9.21E-01	3.40E-02	0.47	7.23%	995
111-30-8	Glutaraldehyde	-	5.04E-01	1.86E-02	0.041	45.38%	159
N230	Glycol Ethers	-	6.82E-01	2.52E-02	0.95	2.65%	2,716
142-82-5	Heptane	-	1.36E+00	5.04E-02	82	0.06%	7,200
77-47-4	Hexachlorocyclopentadiene	HAP	4.16E-02	1.53E-03	0.005	30.70%	235
110-54-3	Hexane (n-Hexane)	HAP	3.91E+00	1.44E-01	9	1.61%	4,485
7647-01-0	Hydrogen Chloride	HAP	6.61E+00	2.44E-01	0.375	65.05%	111
7664-39-3	Hydrogen Fluoride	HAP		1.24E-01	0.125	99.19%	
7783-06-4	Hydrogen Sulfide	-		6.99E-01	0.7	99.91%	
123-31-9	Hydroquinone	HAP	2.11E-01	7.81E-03	0.1	7.81%	922
123-92-2	Isoamyl Acetate	-	5.93E-01	2.19E-02	26.25	0.08%	7,200

Table A-4. Indoor Stabilization - Maximum Treatment Limits for Noncarcinogenic Volatile TAPs

CAS	Compound	HAP?	24-hr Emission Rate @ 10,000 ppmw (lb/hr)	Modeled Ambient Impact (mg/m ³)	ACC (mg/m ³)	Percent of AAC at concentration of 10,000 ppmw in Wastes	Maximum Treatment Limit (Tons of TAP treated per calendar day)
123-51-3	Isoamyl Alcohol	-	1.56E+00	5.77E-02	18	0.32%	7,200
78-83-1	Isobutyl alcohol	-	4.84E-01	1.79E-02	6	0.30%	7,200
78-59-1	Isophorone	HAP	3.22E-01	1.19E-02	1.4	0.85%	7,200
67-63-0	Isopropyl alcohol	-	1.03E+00	3.81E-02	49	0.08%	7,200
121-75-5	Malathion	-	6.54E-04	2.41E-05	0.5	0.00%	7,200
108-31-6	Maleic anhydride	HAP	1.64E-01	6.04E-03	0.05	12.08%	596
108-39-4	m-Cresol	HAP	3.15E-02	1.16E-03	1.1	0.11%	7,200
141-79-7	Mesityl Oxide	-	1.71E-01	6.29E-03	3	0.21%	7,200
126-98-7	Methacrylonitrile	-	2.37E+00	8.76E-02	0.15	58.39%	123
67-56-1	Methanol	HAP	1.57E+00	5.81E-02	13	0.45%	7,200
72-43-5	Methoxychlor	HAP	4.28E-04	1.58E-05	0.5	0.00%	7,200
96-33-3	Methyl Acrylate	-	1.32E+00	4.88E-02	1.75	2.79%	2,583
110-43-0	Methyl Amyl Ketone	-	4.94E-01	1.82E-02	11.75	0.16%	7,200
108-10-1	Methyl Butyl Ketone	HAP	4.21E-01	1.56E-02	10.25	0.15%	7,200
78-93-3	Methyl ethyl ketone	-	1.81E+00	6.68E-02	29.5	0.23%	7,200
110-12-3	Methyl Isoamyl Ketone	-	6.36E-01	2.35E-02	12	0.20%	7,200
80-62-6	Methyl Methacrylate	HAP	1.25E+00	4.60E-02	20.5	0.22%	7,200
107-87-9	Methyl Propyl Ketone	-	9.75E-01	3.60E-02	35	0.10%	7,200
108-87-2	Methylcyclohexane	-	1.93E+00	7.13E-02	80.5	0.09%	7,200
108-38-3	m-Xylene	HAP	5.91E-01	2.18E-02	21.75	0.10%	7,200
68-12-2	N,N-Dimethylformamide	HAP	3.38E-01	1.25E-02	1.5	0.83%	7,200
628-63-7	N-Amyl Acetate	-	7.04E-01	2.60E-02	26.5	0.10%	7,200
91-20-3	Naphthalene	HAP	3.75E-02	1.38E-03	2.5	0.06%	7,200
123-86-4	n-butyl acetate	-	1.03E+00	3.82E-02	35.5	0.11%	7,200
98-95-3	Nitrobenzene	HAP	1.80E-01	6.63E-03	0.25	2.65%	2,714
111-84-2	Nonane	-	5.71E-01	2.11E-02	52.5	0.04%	7,200
95-48-7	o-Cresol	HAP	1.49E-01	5.49E-03	1.1	0.50%	7,200
111-65-9	Octane	-	6.48E-01	2.39E-02	70	0.03%	7,200
95-47-6	o-Xylene	HAP	6.53E-01	2.41E-02	21.75	0.11%	7,200
56-38-2	Parathion	HAP	1.69E-03	6.25E-05	0.005	1.25%	5,764
106-44-5	p-Cresol	HAP	4.62E-02	1.71E-03	1.1	0.16%	7,200
82-68-8	Pentachloronitrobenzene	HAP	2.84E-03	1.05E-04	0.025	0.42%	7,200
87-86-5	Pentachlorophenol	HAP	4.34E-03	1.60E-04	0.025	0.64%	7,200
109-66-0	Pentane	-	4.06E+00	1.50E-01	88.5	0.17%	7,200
108-95-2	Phenol	HAP	8.93E-02	3.30E-03	0.95	0.35%	7,200
108-98-5	Phenyl Mercaptan	-	3.03E-01	1.12E-02	0.1	11.20%	643
75-44-5	Phosgene	HAP		1.98E-02	0.02	98.82%	
7803-51-2	Phosphine	HAP		1.99E-02	0.02	99.54%	
85-44-9	Phthalic anhydride	HAP	4.50E-03	1.66E-04	0.3	0.06%	7,200
88-89-1	Picric acid	-		4.90E-03	0.005	98.03%	

Table A-4. Indoor Stabilization - Maximum Treatment Limits for Noncarcinogenic Volatile TAPs

CAS	Compound	HAP?	24-hr Emission Rate @ 10,000 ppmw (lb/hr)	Modeled Ambient Impact (mg/m ³)	ACC (mg/m ³)	Percent of AAC at concentration of 10,000 ppmw in Wastes	Maximum Treatment Limit (Tons of TAP treated per calendar day)
106-50-3	p-Phenylenediamine	HAP	2.39E-03	8.83E-05	0.005	1.77%	4,078
114-26-1	Propoxur	HAP	1.11E-03	4.09E-05	0.025	0.16%	7,200
109-60-4	Propyl Acetate	-	1.57E+00	5.81E-02	42	0.14%	7,200
71-23-8	Propyl alcohol	-	9.47E-01	3.50E-02	25	0.14%	7,200
75-56-9	Propylene Oxide	HAP	4.15E+00	1.53E-01	2.4	6.39%	1,127
106-42-3	p-Xylene	HAP	6.21E-01	2.29E-02	21.75	0.11%	7,200
110-86-1	Pyridine	-	8.46E-01	3.12E-02	0.75	4.16%	1,730
106-51-4	Quinone	HAP	4.33E-02	1.60E-03	0.02	8.00%	900
626-38-0	Sec-Amyl Acetate	-	7.83E-01	2.89E-02	33.25	0.09%	7,200
78-92-2	sec-Butyl alcohol	-	1.53E+00	5.65E-02	15.25	0.37%	7,200
100-42-5	Styrene	HAP	5.62E-01	2.08E-02	1	2.08%	3,469
75-65-0	tert-Butyl alcohol	-	1.57E+00	5.81E-02	15	0.39%	7,200
108-88-3	Toluene	HAP	1.29E+00	4.77E-02	18.75	0.25%	7,200
584-84-9	Toluene-2,6-diisocyanate	HAP		1.99E-03	0.002	99.42%	
8001-35-2	Toxaphene	HAP	7.87E-04	2.91E-05	0.025	0.12%	7,200
79-01-6	Trichloroethylene	HAP	2.07E+00	7.64E-02	13.45	0.57%	7,200
121-44-8	Triethylamine	HAP	1.68E+00	6.21E-02	0.2	31.03%	232
1582-09-8	TRIFLURALIN	HAP	4.20E-04	1.55E-05	1.15	0.00%	7,200
126-73-8	Tri-n-butyl phosphate	-	2.37E-02	8.75E-04	0.11	0.80%	7,200
51-79-6	Urethane	HAP	1.64E-02	6.05E-04	0.0015	40.31%	179
108-05-4	Vinyl Acetate	HAP	2.39E+00	8.84E-02	1.75	5.05%	1,426
1330-20-7	Xylene	HAP	6.29E-01	2.32E-02	21.75	0.11%	7,200

Table A-5. Indoor Stabilization - Maximum Treatment Limits for Carcinogenic Volatile TAPs

CAS	Compound	HAP?	Annual Emission Rate @ 1,500 ppmw (lb/hr)	Modeled Ambient Impact (µg/m ³)	T-RACT AACCC (µg/m ³)	Percent of T-RACT AACCC at concentration of 1,500 ppmw in Wastes	Maximum Treatment Limit (Tons of TAP treated per consecutive 12-month period)
79-34-5	1,1,2,2-Tetrachloroethane	HAP	7.53E-03	2.10E-02	0.17	12.37%	3,348
79-00-5	1,1,2-Trichloroethane	HAP	1.75E-02	4.87E-02	0.62	7.86%	5,270
75-34-3	1,1-Dichloroethane	HAP	8.07E-02	2.25E-01	0.38	59.23%	699
96-12-8	1,2-Dibromo-3-chloropropane	HAP		1.58E-03	0.0016		
107-06-2	1,2-Dichloroethane	HAP	4.20E-02	1.17E-01	0.38	30.82%	1,343

Table A-5. Indoor Stabilization - Maximum Treatment Limits for Carcinogenic Volatile TAPs

CAS	Compound	HAP?	Annual Emission Rate @ 1,500 ppmw (lb/hr)	Modeled Ambient Impact ($\mu\text{g}/\text{m}^3$)	T-RACT AACC ($\mu\text{g}/\text{m}^3$)	Percent of T-RACT AACC at concentration of 1,500 ppmw in Wastes	Maximum Treatment Limit (Tons of TAP treated per consecutive 12-month period)
106-99-0	1,3-butadiene	HAP		3.57E-02	0.036		
542-75-6	1,3-Dichloropropylene	HAP	1.99E-02	5.57E-02	2.5	2.23%	18,597
88-06-2	2,4,6-Trichlorophenol	HAP	3.28E-04	9.14E-04	1.8	0.051%	276,000
75-07-0	Acetaldehyde	HAP	8.99E-02	2.51E-01	4.5	5.57%	7,426
79-06-1	Acrylamide	HAP	1.71E-04	4.78E-04	45	0.001%	276,000
107-13-1	Acrylonitrile	HAP	3.19E-02	8.91E-02	45	0.198%	209,082
62-53-3	Aniline	HAP	1.59E-03	4.43E-03	1.4	0.32%	130,958
71-43-2	Benzene	HAP	3.06E-02	8.54E-02	1.2	7.12%	5,818
191-24-2	Benzo(g,h,i)perylene	HAP	4.17E-08	1.16E-07	3.00E-03	0.0039%	276,000
111-44-4	bis(2-Chloroethyl)ether	HAP	3.05E-03	8.51E-03	0.03	28.38%	1,459
56-23-5	Carbon Tetrachloride	HAP	3.99E-02	1.11E-01	0.67	16.62%	2,491
57-74-9	Chlordane	HAP	1.42E-05	3.98E-05	0.027	0.15%	276,000
67-66-3	Chloroform	HAP	4.25E-02	1.18E-01	0.43	27.56%	1,502
74-87-3	Chloromethane	HAP	2.07E-01	5.77E-01	2.80	20.62%	2,008
117-81-7	Di(2-ethylhexyl) phthalate	HAP	2.47E-07	6.89E-07	42.0	0.000002%	276,000
132-64-9	Dibenzofuran	HAP		2.14E-07	2.20E-07		
75-09-2	Dichloromethane	HAP	7.64E-02	2.13E-01	2.40	8.88%	4,662
123-91-1	Dioxane	HAP	2.78E-02	7.75E-02	7.10	1.09%	37,942
106-89-8	Epichlorohydrin	HAP	1.15E-02	3.22E-02	8.30	0.39%	106,710
106-93-4	Ethylene Dibromide	HAP	1.06E-02	2.97E-02	0.045	65.92%	628
75-21-8	Ethylene oxide	HAP		9.88E-02	0.100		
75-34-3	Ethylidene Dichloride	HAP	7.10E-02	1.98E-01	0.380	52.15%	794
50-00-0	Formaldehyde	HAP	2.98E-02	8.33E-02	0.770	10.82%	3,828
76-44-8	Heptachlor	HAP	9.75E-05	2.72E-04	0.0077	3.53%	11,721
87-68-3	Hexachloro-1,3-butadiene	HAP	1.37E-03	3.83E-03	0.500	0.766%	54,054
118-74-1	Hexachlorobenzene	HAP	7.24E-06	2.02E-05	0.020	0.101%	276,000
67-72-1	Hexachloroethane	HAP	3.06E-04	8.54E-04	2.50	0.034%	276,000
302-01-2	Hydrazine	HAP		3.30E-03	0.0034		
58-89-9	Lindane	-	3.10E-05	8.64E-05	0.026	0.33%	124,548
60-34-4	Methyl Hydrazine	HAP		3.18E-02	0.032		
101-14-4	Methylenebis (2-chloroaniline) (MOCA)	HAP	1.32E-05	3.69E-05	0.21	0.018%	276,000
91-20-3	Naphthalene	HAP	5.91E-04	1.65E-03	1.40E-01	1.18%	35,160
55-18-5	N-Nitrosodiethylamine	-		2.23E-04	0.00023		
62-75-9	N-Nitrosodimethylamine	HAP		7.02E-04	0.00071		

Table A-5. Indoor Stabilization - Maximum Treatment Limits for Carcinogenic Volatile TAPs

CAS	Compound	HAP?	Annual Emission Rate @ 1,500 ppmw (lb/hr)	Modeled Ambient Impact ($\mu\text{g}/\text{m}^3$)	T-RACT AACC ($\mu\text{g}/\text{m}^3$)	Percent of T-RACT AACC at concentration of 1,500 ppmw in Wastes	Maximum Treatment Limit (Tons of TAP treated per consecutive 12-month period)
924-16-3	N-Nitroso-di-n-butylamine	-	9.67E-04	2.70E-03	0.0063	42.85%	966
1336-36-3	PCBs	HAP	3.08E-05	8.60E-05	1.00E-01	0.086%	276,000
82-68-8	Pentachloronitrobenzene	HAP	4.47E-05	1.25E-04	0.14	0.089%	276,000
85-01-8	Phenanthrene	-	6.18E-05	1.72E-04	0.14	0.123%	276,000
N590	POLYCYCLIC AROMATIC COMPOUNDS	HAP	9.48E-08	2.64E-07	1.40E-01	0.0002%	276,000
127-18-4	Tetrachloroethylene	HAP	2.45E-02	6.84E-02	21	0.33%	127,176
8001-35-2	Toxaphene	HAP	1.24E-05	3.46E-05	0.03	0.12%	276,000
79-01-6	Trichloroethylene	HAP	3.26E-02	9.10E-02	7.7	1.18%	35,029
75-01-4	Vinyl Chloride	HAP	2.17E-01	6.05E-01	1.4	43.18%	959
75-35-4	Vinylidene chloride	HAP		1.93E-01	0.2		

Table A-6. Outdoor Stabilization - Maximum Treatment Limits for TAPs

Compound i	Compound weight fraction w_i	Process	Process rate, Q_p	Maximum compound process rate, Q_i		Maximum compound process rate, Q_i	
			(T/hr)	(lb/hr)	(T/hr)	(lb/day)	(T/day)
		Outdoor Stabilization	270				
Aluminum	0.270			145,800	72.90		1,749.6
Antimony	0.130			70,200	35.10		842.4
Arsenic	0.0097			5,238	2.62		62.9
Asbestos	1.00E-08			0.0054	2.70E-06	0.1296	
Barium	0.130			70,200	35.10		842.4
Beryllium	8.00E-05			43	0.02	1,032	
Cadmium	0.023			12,420	6.21		149.0
Chromium	0.130			70,200	35.10		842.4
Copper	0.270			145,800	72.90		1,749.6
Cyanides	0.270			145,800	72.90		1,749.6
Lead	0.195			105,300	52.65		1,263.6
Manganese	0.270			145,800	72.90		1,749.6
Mercury	0.004			2,160	1.08		25.9
Nickel	0.175			94,500	47.25		1,134.0
Selenium	0.050			27,000	13.50		324.0

Table A-6. Outdoor Stabilization - Maximum Treatment Limits for TAPs

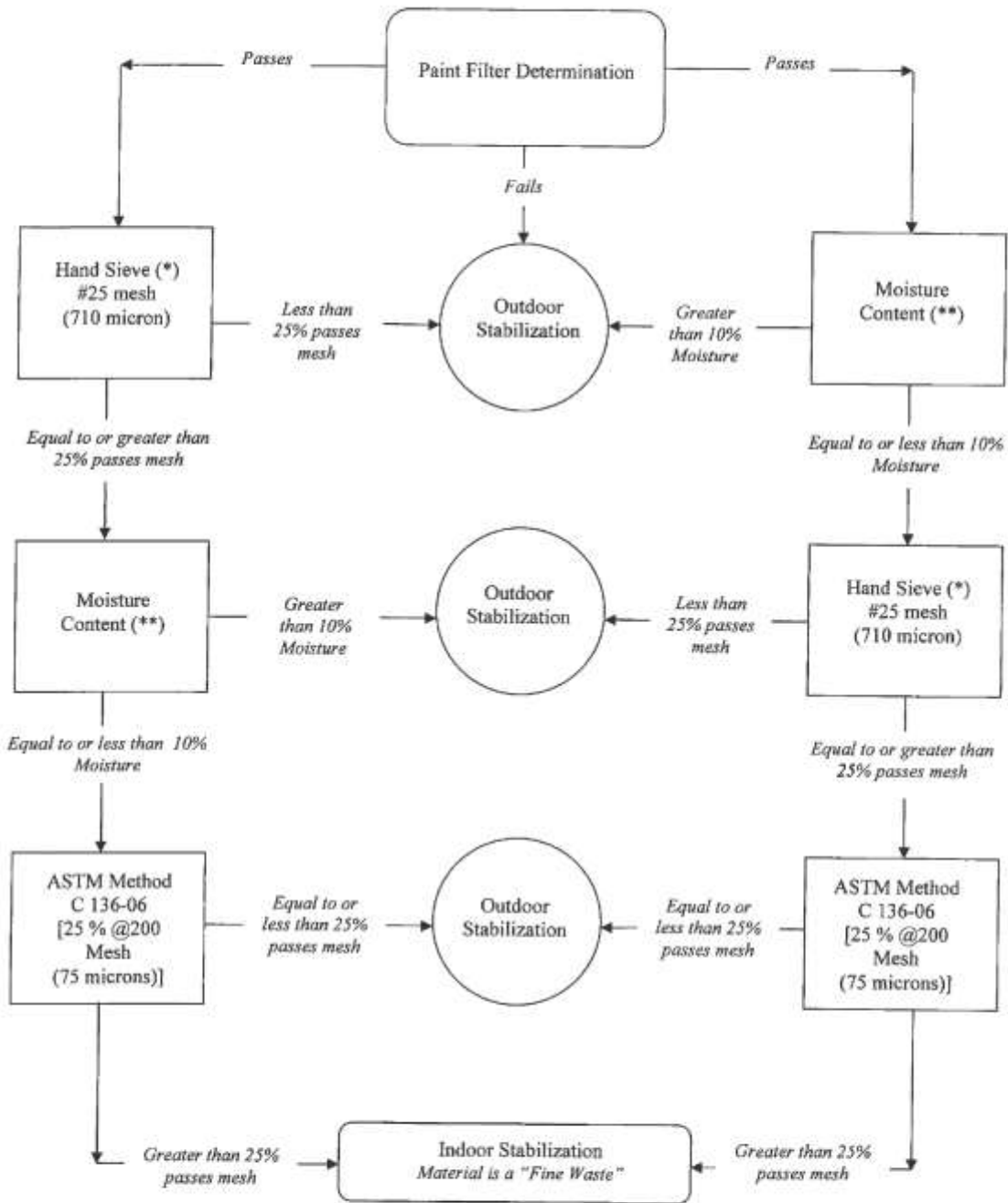
Compound i	Compound weight fraction w_i	Process	Process rate, Q_P	Maximum compound process rate, Q_i		Maximum compound process rate, Q_i	
				(lb/hr)	(T/hr)	(lb/day)	(T/day)
Silver	0.004			2,160	1.08		25.9
Thallium	0.028			15,120	7.56		181.4
Vanadium	0.012			6,480	3.24		77.8
Zinc	0.284			153,360	76.68		1,840.3

Outdoor Stabilization Facility Treatment Limits weight fractions, lb/hr, and T/hr limits are from Appendix A of P-2008.0162, Project 61436, issued January 9, 2015.

Appendix B – Fine Wastes Determination



Determination of "Fine Wastes"



(*) Hand Sieve evaluation shall be performed as discussed in Paragraph 8.4 of ASTM Procedure C 136-06.

(**) Moisture content shall be determined by drying the sample to a constant mass without generating pressure sufficient to fracture the particles or temperature so great as to cause chemical breakdown of the sample (e.g. : ashing).