[TOC \o "1-4" \h \z \u]

Drawings

Drawing PRMI-T05
Drawing D361L-LT4

1.0 INTRODUCTION[tc \l1 "1.0 INTRODUCTION]

US Ecology Idaho, Inc. (USEI) operates an approximate 328-acre RCRA/TSCA waste management facility, approximately 10 miles northwest of Grand View, Idaho. This facility receives and manages, for disposal, PCB wastes in accordance with the provisions of 40 CFR Part 761 and a Final Approval issued September 10, 1991 and effective on November 29, 1991. Additionally, this facility receives and manages wastes for treatment, storage, and disposal under the authority of its current RCRA Final Status Permit administrated by the Idaho Department of Environmental Quality (IDEQ).

This application for a new Approval is being made in accordance with Approval Condition I.F. and I.G. of the existing TSCA PCB Approval. USEI is submitting an amended application for approval as a PCB chemical waste landfill that also processes PCB wastes for other types of treatment and disposal.

This application fulfills the requirements of 40 CFR § 761.75(b) (8)(ii) for an Operational Plan. It also provides all information required by 40 CFR § 761.75(b) and 40 CFR § 761.75(c) for other technical data required for a PCB chemical waste landfill. Finally, it provides the information required by 40 CFR § 761.65(d) for approval as a Commercial Storer of PCB wastes.

USEI's facility is also a fully permitted RCRA facility. USEI operates many portions of the facility for the management of both RCRA and PCB wastes concurrently. Many of the requirements for the PCB Approval Renewal Application are consistent with the requirements of the RCRA Final Status Permit. Accordingly, this RCRA Final Status Permit is referenced as necessary to avoid duplication of regulatory efforts. As appropriate, this document will reference the portions of the RCRA Final Status Permit that provide the specific information required by the TSCA regulations. This application shall provide all the necessary information that is unique to the requirements of the TSCA regulations and for those limited facilities that are not utilized for RCRA waste at USEI.

USEI accepts and manages the following types of PCB wastes for the processes noted:

- PCB transformers ≥500 ppm PCB - received for landfill disposal of the drained/flushed carcass. The generator must certify that the PCB transformer has been drained/flushed in accordance with 40 CFR 761.60(b)(1)(B). Waste must contain no free liquids. Any PCB transformer with free liquids present will be rejected back to the generator on the day of receipt.

- PCB contaminated transformers ≥50 ppm but <500 ppm- received for landfilling or recycling of the carcass (e.g. shipment to a metal smelter subject to 40 CFR 761.72). The PCB contaminated transformer must arrive drained with no free liquids present. Any PCB contaminated transformer with free liquids present will be rejected back to the generator on the day of receipt.

- PCB contaminated solids containing no free liquids (PCBs ≥ 50 ppm) - received for landfill disposal; or mixed RCRA/TSCA for stabilization, or encapsulation. These include but are not limited to contaminated clothing, rags, environmental media, debris, and equipment. Waste must contain no free liquids.

- PCB containers - received for disposal in the landfill. The contents of each container are managed based on the type of PCB material present (solids, transformer, capacitor, etc.). Waste must contain no free liquids.

- PCB articles and electrical equipment - articles/electrical equipment are received for direct landfill. PCB articles and equipment that would require draining must arrive drained of free liquids. Any PCB articles/electrical equipment with free liquids present will be rejected back to the generator on the day of receipt.
- PCB contaminated articles and electrical equipment - articles/electrical equipment are received for direct landfill. PCB contaminated articles and equipment that would require draining must arrive drained of free liquids. Any PCB contaminated articles/electrical equipment with free liquids present will be rejected back to the generator on the day of receipt.
- PCB remediation waste – remediation wastes such as soil, concrete, asphalt, etc. are received for landfill disposal. Waste must contain no free liquids.
- PCB bulk product waste – PCB bulk product wastes including paint, caulk, mastics, sealants, and building surfaces that have been coated with these products are received for landfill disposal. Waste must contain no free liquids.

2.0 RECORDKEEPING[tc \l1 "2.0 RECORDKEEPING]

2.1 Purpose[tc \l2 "2.1 Purpose]

USEI has developed and maintains a comprehensive recordkeeping program as required by 40 CFR Part 761.180 (b), (d), and (f) and 761.75 (b) (8) (iv). The recordkeeping system performs the following functions:

- Pre-acceptance evaluation of each waste stream
- Documentation of individual shipment generators, dates, quantities, and waste types
- Documentation of waste sampling and test results
- Internal control of material through receipt, storage, processing, and/or disposal
- Site inventory management
- Compliance with maximum storage time limits
- Compilation of required regulatory records and reports
- Documentation of facility inspection and maintenance
- Documentation of personnel training
- Documentation of cleaning procedures
- Records of property transfers

Report form formats are revised as necessary for purposes of regulatory compliance or efficient recordkeeping by USEI management. All PCB waste tracking data is managed by a computerized system that produces hard copy (paper) data forms, as required.

Records are accessible during normal working hours for the purposes of EPA inspections.

2.2 PCB Waste Management Recordkeeping[tc \l2 "2.2 PCB Waste Management Recordkeeping]

USEI has established a waste management recordkeeping system which provides for pre-shipment evaluation and approval of wastes, sampling, and analysis of received materials, tracking of individual shipments, calculation of facility inventories, documentation of management methods, and compilation of regulatory reports.

PCB wastes are tracked and documented using a computerized system that produces information for the following items:

- Waste Profile Form (WPF) (Figure 2-1)

- Generator Notification of Approved Waste Stream (Figure 2-2)
- PCB Control Sheet (Figure 2-3)
- PCB Work Order (Figure 2-4)
- Bulk Disposal Form (Figure 2-5)
- Certificate of Disposal (Figure 2-6)

PCB waste management records will be maintained for a period of 20 years after the facility ceases to accept PCB wastes per the requirements of 40 CFR 761.180 (b).

2.2.1 PCB Waste Stream Evaluation[tc \l3 "2.2.1 PCB Waste Stream Evaluation]

Pre-shipment waste evaluation is accomplished using a Waste Profile Form (WPF). -Examples of two typical forms are presented in Figures 2-1a and 2-1b. The forms may be changed and updated as needed.

Upon receipt of a request to approve a PCB waste stream, USEI sends the generator a WPF or requests that they complete the form using the Customer Online Resource. An individual WPF must be completed for each different PCB waste stream but only one form is needed for successive shipments of the same waste type.

After the generator completes the WPF, it is returned to USEI for review. The WPF provides all information necessary to evaluate the waste stream for facility acceptance. At a minimum, the WPF must provide the following information:

- Generator name and address
- Specific PCB waste type information including:
  - Physical state
  - PCB concentration
  - Capacitor size (large or small)
  - Draining and flushing status of transformers
  - PCB Remediation Waste
    - Generator must document date and concentration of spill/release
- Estimated quantity
- Generating process
- Shipping container

- Flash point of liquids other than transformer oils, i.e., flush solvents
- Physical characteristics
- Regulation of material under the Resource Conservation and Recovery Act (RCRA)

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This form includes certification statements regarding submitted information. If the waste is also regulated under 40 CFR 268.40, required RCRA information will be included on the WPF as well; all RCRA requirements must be fulfilled. -When a RCRA waste stream also contains PCB's, the PCB's will be treated as an Underlying Hazardous Constituent under RCRA if required pursuant to 40 CFR 268.40. Certain RCRA wastes, such as regulated liquids containing PCBs can be received for treatment only if PCB levels are less than the UHC level found in the Universal Treatment Standards table of 40 CFR 268.48. RCRA regulated soils for stabilization that are characteristic for metals only, may contain total Halogenated Organic Compounds (HOCs) up to 1000 ppm; and contaminated debris for macroencapsulation that do not contain free liquids may contain PCBs at any level. Accordingly, management of the RCRA/TSCA material will be performed under the authority of USEI's RCRA Final Status Permit in addition to requirements of the TSCA approval.

When the WPF is received by USEI, the receipt is recorded and the WPF is issued a profile number. The WPF is then reviewed by facility technical personnel. If appropriate, additional information may be requested from the generator.

Once a new waste stream is approved by USEI, the waste stream is assigned a unique Waste Stream Identification Number (WSID). The WSID number is to be recorded on both the manifest and the shipping container by the generator. The WSID number assists facility personnel to ensure that the waste is properly handled and incompatible materials are not mixed.

Upon material approval, an approval letter is sent to the generator specifying the waste stream has been approved for acceptance at USEI and that USEI is an authorized facility, has the appropriate permits necessary to handle the waste material described on the WPF, the applicability of the waste, the WSID number, and any special handling requirements. Figure 2-2 shows a typical Waste Acceptance Notification Letter.

USEI normally requires a one-week notice prior to a generator's shipment of material to the site. Copies of approved WPFs are maintained at the facility.

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2.2.2 PCB Shipment Identification[tc \l3 "2.2.2 PCB Shipment Identification]

When a generator requests authorization to send a PCB shipment to USEI, they are provided a PCB Control Sheet (Figure 2-3). The PCB Control Sheet provides specific information for an individual PCB shipment. The Control Sheet requests the following information:

- Generator name, address, and telephone number
- WSID approval number
- Type of material

- Shipment quantity
- Individual transformer information (as available)
  - Full, drained, drained and flushed status
  - Manufacturer and make
  - Serial number
  - KVA rating
  - Weight
- PCB concentration
- Out-of-service date (OSD)

A manifest and PCB Control Sheet is required by USEI to accompany each load of PCB material except bulk solids, for which only the manifest is used. If no control sheet is available, the generator is contacted to obtain the necessary information to ensure proper management of the material. This information is then recorded on the PCB Work Order (Figure 2-4).

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2.2.3 PCB Concentration Certification[tc \l3 "2.2.3 PCB Concentration Certification]

The generator PCB analysis must represent the range of PCB concentration prior to any type of physical or chemical processing of the waste stream. USEI confirms the generator PCB information and analysis by performing inspections, sampling, and analyses as described in Section 9.0 (Sampling and Monitoring Procedures). All discrepancies are resolved with the generator. Results of the lab evaluation are recorded in a laboratory log.

Generator certifications are also required when empty transformers are shipped to the facility. If the transformer contained PCB liquid with a concentration under 500 ppm PCB, the certification is necessary to confirm this concentration. If the transformer contained PCB liquid with a concentration ≥~~over~~ 500 ppm PCB, a certification is necessary to show that the transformer was drained and flushed according to the procedures of 40 CFR 761.60 (b)(i)(B). The certification must be signed and dated by the generator or another individual with designated authority for PCB handling. The certification must include the generator's name, the manufacturer, serial number (if known), and the fluid capacity. If USEI performs the draining or draining and flushing operation, a record of this is available on the PCB Work Order (Figure 2-4).

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USEI's PCB Control Sheet contains a generator certification regarding the PCB material offered for treatment, storage, and/or disposal: "In order for US Ecology to accept the waste material specified at the US Ecology – Grand View, Idaho or Beatty, Nevada facility, the undersigned, as an authorized employee of the generating company, hereby warrants and certifies to US Ecology that the waste material listed above, delivered to and accepted for disposal by US Ecology shall conform to the above description and that all waste material and packaging shall comply with all current state and federal regulations." In addition, each type of PCB waste material must have a separate profile, as described in Subsection 2.2.1.

PCB large capacitors, as defined by 40 CFR 761.3, are not permitted to be disposed of in the PCB landfill. When a PCB capacitor shipment is received, each container is opened to verify capacitor size. Small non-leaking capacitors, as defined by 40 CFR 761.3, are disposed of in the PCB cell. A separate WPF is required for each type of PCB item or waste; i.e. transformers, small capacitors, remediation soil, PCB liquids. ~~Section 9.0 (Sampling and Monitoring Procedures) provides details of the QA/QC process.~~

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2.2.4 PCB Processing/Disposal Records[tc \l3 "2.2.4 PCB Processing/Disposal Records]

The PCB Work Order is used to track and document each load through all phases of receipt, storage, processing, and/or disposal. When a PCB waste shipment arrives at the USEI facility, the vehicle driver registers at the security building and is directed to the weigh station. After the truck is weighed, the Receiving personnel collect the PCB Control Sheet, shipping papers, and manifest forms. Receiving personnel use these forms to initiate a PCB Work Order for the shipment.

The PCB Work Orders are individually and sequentially numbered. Receiving personnel electronically log the PCB Control Sheet number assigned to each shipment. Receiving personnel then record the following information on the Work Order:

- Generator name, address, phone number, and PCB Activity number
- Manifest number
- Shipment date/receipt date
- Specific shipment description
- Volume/quantity
- Transporter name and I.D. number

After Receiving personnel complete the receiving section of the PCB Work Order, a copy accompanies the load to operations. Relevant test data and shipment discrepancies such as piece count, size of capacitor, etc. are noted on the form. Discrepancies are resolved with the generator through Customer Service.

Operations personnel use the Work Order to document operating procedures. Landfill cell disposal location information is recorded on the form by operations when material is placed in the landfill cell. Once the vehicle is off-loaded, Receiving personnel record the vehicle empty weight.

Individual containers are marked with their respective PCB Work Order number to provide for inventory control and tracking.

Copies of the PCB Work Order are maintained at the facility. The PCB Work Orders are filed according to Work Order number for the current year and then placed in storage.

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2.2.5 PCB Inventory Control[tc \l3 "2.2.5 PCB Inventory Control]

After a PCB waste shipment is received and inspected, the material is available for processing. The Operations Department is responsible for tracking further movement of PCB shipments through processing, and disposal.

Container inventory is tabulated using the Work Order. An operating copy of this form accompanies the shipment during initial off-loading, inspections and processing.

When a container is processed or disposed of, Operations personnel complete the operating copy and forward it to receiving personnel. When a container is placed in the landfill cell, the location is noted and a report is sent to Receiving. When the waste is placed in the disposal location, the material disposed is recorded on the Work Order. Completed Work Orders are used in completing the burial coordinate grid in the computerized record keeping system.

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2.2.6 PCB Disposal Record[tc \l3 "2.2.6 PCB Disposal Record]

When PCB waste is placed in the landfill cell, Operations completes a Bulk Disposal Form (Figure 2-5) or records the disposal location on a copy of the Work Order. The Bulk Disposal Form is used to document landfill cell burial location for direct dispose, bulk waste material. The form and/or Work Order includes the date, the truck or Work Order number, the landfill cell number, the lift number, section number, and footage marker. On the Work Order, disposal marked "1665-1670/2" under the foot marker (Ft. Mkr.) column indicates the 1665-1670 length marker and the second tier marker. Information on the Bulk Disposal Form/Work Order is transferred to the electronic grid tracking system; all waste can be located using the electronic grid tracking system.

2.2.6.1 Certificate of Disposal

For each shipment of manifested PCB waste that USEI accepts for disposal, a Certificate of Disposal is generated and sent to the generator of the material. The certificate of disposal is sent to the generator identified on the manifest within 30 days of the date that disposal takes place, unless USEI and the generator contractually agree to some other time frame. The Certificate of Disposal contains the following required elements:

- Identity of the disposal facility, including the name, address, and EPA Identification Number
- The identity of the PCB waste affected by the Certificate of Disposal, including the manifest number associated with the shipment
- A statement certifying the fact of disposal of the identified PCB waste, including the date(s) of disposal, and identifying the disposal process used
- The certification defined in 40 CFR 761.3

USEI retains a copy of each Certificate of Disposal as required by 40 CFR 761.180(b). An example of a generated Certificate of Disposal is included as Figure 2-6.

For TSCA PCB materials that USEI ships offsite, a Certificate of Disposal from the disposer of the PCB waste is retained as required by 40 CFR 761.180(b).

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2.2.7 Disposal Trench Map[tc \l3 "2.2.7 Disposal Trench Map]

As required by 40 CFR 761.75 (b)(8)(iv), USEI has developed and maintains a waste segregation burial coordinate record (Section 4.0). This record provides a three-dimensional system of locating each PCB waste shipment in the landfill cell. Waste shipments are identified by Work Order Number.

2.2.8 Information Retrieval[tc \l3 "2.2.8 Information Retrieval]

USEI has developed and maintains an integrated recordkeeping and reporting system, which allows regulatory compliance and retrieval of information. Individual shipment information can be traced using some or all of the following pieces of information:

- Work Order number
- Waste generator name
- Shipment date
- Waste Stream Number
- Manifest/Shipping Document Number

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2.3 Regulatory Reporting Requirements[tc \l2 "2.3 Regulatory Reporting Requirements]

In addition to the waste management records discussed in Subsection 2.2, USEI is required to maintain records and to file reports with U.S. EPA on both incident specific and time- interval bases.

These PCB records and reports are discussed in this section.

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2.3.1 Annual Report[tc \l3 "2.3.1 Annual Report]

As required by 40 CFR 761.180 (b), USEI annually compiles and submits a document that presents information describing the type and quantity of PCBs managed by the facility during the previous calendar year. This information is compiled and submitted by July 15 of each year to the Regional Administrator or the delegated representative at the following address:

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U.S. EPA Region 10

M/S ~~15-H04AWT-150~~

1200 Sixth Avenue Suite 155

Seattle, Washington 98101

The document is labeled "PCB Annual Report" and is signed and dated by USEI.

This document will be maintained for a period of at least 30 years after the PCB landfill is no longer used for the disposal of PCBs and PCB items. The document is available at the facility for authorized inspection.

In addition, a written annual document log is generated from the computerized records for each calendar year. This log is generated by July 1 of the following year (for the previous calendar year) and maintained for inspection at the facility. This document contains all the data currently required by 40 CFR Part 761.180(b).

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2.3.2 PCB Incident Report

Reports required as a result of implementation of the Environmental Emergency Contingency Plan are discussed in Attachment 7, Contingency Plan, of USEI's RCRA Final Status Permit.

2.3.3 Unmanifested Waste Report

If USEI accepts for storage or disposal any PCB waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper as described by 40 CFR 761.211(e), and USEI cannot contact the generator of the PCB waste, then USEI notifies the Regional Administrator of EPA Region 10 of the unmanifested PCB waste so that the Regional Administrator can determine whether further actions are required before USEI may store or dispose of the unmanifested PCB waste. Additionally, USEI must prepare and submit a letter to the Regional Administrator within 15 days after receiving the waste. Required content of the report is outlined in 40 CFR 761.216.

Copies of these reports will be maintained for a period of at least 30 years after the PCB landfill is no longer used for the disposal of PCBs and PCB items.

2.3.4 One-Year Exception Report

When USEI acts as the generator of a TSCA-regulated material or item, and does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 35 days of the date the waste was accepted by the initial transporter, USEI will immediately contact the transporter and/or the owner or operator of the designated facility to determine the status of the PCB waste.

USEI shall submit an Exception Report to the EPA Regional Administrator for Region 10 if a copy of the manifest with the hand written signature of the owner or operator of the designated facility has not been received within 45 days of the date the waste was accepted by the initial transporter. The exception report shall be submitted to EPA no later than 45 days from the date on which USEI should have received the manifest. Required content of the report is outlined in 40 CFR 761.217.

Copies of these reports will be maintained for a period of at least 30 years after the PCB landfill is no longer used for the disposal of PCBs and PCB items.

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2.3.5 Shipment Rejection [tc \l3 "2.3.3 Shipment Rejection Report]

USEI maintains records of all shipments that arrive at the facility, but are not accepted. The records specify the reason for shipment rejection, which is maintained in USEI's operating record.

2.3.6 Groundwater Monitoring Records and Report[tc \l3 "2.3.4 Groundwater Monitoring Records and Report]

USEI samples facility groundwater monitoring wells semi-annually under the requirements of Module IX of the RCRA Final Status Permit; and Attachment 11, Groundwater Monitoring, of the RCRA Final Status Permit. Results of sample analysis are recorded and submitted to U.S. EPA Region 10. Appropriate groundwater monitoring wells are also sampled and analyzed for PCBs once each year (annually). If elevated PCBs are detected in any samples, Region 10 must be notified within five (5) working days of USEI receiving such finalized information.

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2.3.7 Observation Well Records and Report[tc \l3 "2.3.5 Observation Well Records and Report]

USEI inspects PCB trench/cell observation standpipes for trenches PCB 1, 2, 3, and 4, weekly. Any removable liquids detected during the inspections are removed, analyzed per the waste analysis plan, and disposed of. Any detections of liquids are recorded on form F-15 of USEI's RCRA Final Status Permit. Records are maintained of detected liquids (Section 14.2).

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2.3.8 Leachate Collection System Records

USEI inspects the primary leachate collection sumps of Cells 5, 14, 15, and 16 on a weekly basis and the secondary system on a daily basis. The primary and secondary leachate collection sumps of Cell 16 are inspected on a daily basis. Inspections can be found in Attachment 4, Inspection Plan, of USEI's RCRA Final Status Permit. Both systems are also inspected after precipitation events exceeding 0.5 inch of rainfall in 24 hours during the active life of the cells. If pumpable liquid is found, it will be pumped dry to the extent practical and the volume will be determined. In accordance with Section 8.0, if the secondary leachate collected and removed exceeds the action leakage rate (ALR), USEI will follow the Response Action Plan (RAP) found in Attachment 8 of USEI's RCRA Final Status Permit. A chronological record of pumping events and volume will be maintained on-site on the landfill inspection form.

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2.3.9 Inspection Records[tc \l3 "2.3.7 Inspection Records]

USEI has developed a comprehensive facility PCB Inspection Plan (Section 14.0). Results of facility inspections are recorded on inspection forms. These forms include the following information:

- Date and time of the inspection
- Name of the inspector
- Notation of observations
- Date and nature of corrective actions

These records are kept for a minimum of 3 years after the date of the inspection.

2.3.10 Personnel Training Records[tc \l3 "2.3.8 Personnel Training Records]

USEI provides operational and emergency response training to all appropriate facility personnel. This training is discussed in Section 17.0 (PCB Personnel Training Program). Records of job titles for each position at the facility, the name of the employee filling each job, a job description for each position, and documentation of the type and amount of introductory and continuing training are maintained. Records on current personnel will be kept until closure of the facility; training records on former employees are kept for a minimum of 3 years from the date the employee last worked at the facility.

2.3.11 Equipment Cleaning Records[tc \l3 "2.3.9 Equipment Cleaning Records]

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To prevent migration of PCBs from the active waste handling areas, vehicles transporting waste materials into the landfill cells normally remain on clean cover material. Vehicles that may contact PCB bulk materials will be cleaned to remove visible contamination from wheels and other exterior surfaces of the vehicle. All waste transport vehicles that enter active waste management areas exit through the site vehicle wash and are externally washed prior to exiting the facility. The Vehicle wash consists of a concrete pad equipped with a 5.5-inch curb, 9-foot high walls and a sump to collect all generated wash waters from vehicle washing. Vehicles that pass through the vehicle wash are required to drip dry for 3 minutes before leaving the area. Water collected in the sump is analyzed annually to determine the appropriate treatment path prior to disposal. Collected waters may be stabilized and/or solidified prior to landfilling, disposed in the Evaporation Pond, or sent off-site for incineration depending on results of lab analysis.

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2.3.12 Retention of Special Records[tc \l3 "2.3.10 Retention of Special Records]

As required by 40 CFR 761.180 (f) (Retention of Special Records by Storage and Disposal Facilities), USEI will maintain the following records for 20 years after the facility ceases to accept PCB wastes:

- Documents, correspondence, and data that have been provided to the owner or operator of the facility by any state or local government agency and that pertain to the storage or disposal of PCBs and PCB items at the facility.
- Documents, correspondence, and data that have been provided by the owner or operator of the facility to any state or local government agency and that pertain to the storage or disposal of PCBs and PCB items at the facility.
- Applications and related correspondence sent by the owner or operator of the facility to any local, state, or Federal authorities in regard to wastewater discharge permits, solid waste permits, building permits, or other permits or authorizations such as those required by 40 CFR 761.70(d) and 761.41(c).

2.4 Property Transfers[tc \l2 "2.4 Property Transfers]

As required by 40 CFR 761.75 (c)(7), USEI will notify U.S. EPA at least 30 days before the transfer of ownership or operation of the PCB landfill. USEI will also submit to EPA at least 30 days before transfer a notarized affidavit signed by the transferee which states that the transferee will abide by the transferor's EPA TSCA chemical waste landfill approval.

3.0 SURFACE WATER HANDLING PROCEDURES[tc \l1 "3.0 SURFACE WATER HANDLING PROCEDURES]

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The PCB facility operated by USEI is located approximately 10 miles northwest of Grand View, Idaho, in rural north-central Owyhee County. The 328-acre site is rectangular-shaped and generally oriented in a north-south direction.

The site is situated on a plateau approximately 1 mile wide, which rises about 150 feet above the level of Castle Creek, located two (2) miles to the west of the site; the Snake River lies two (2) miles to the north. The maximum surface relief across the site is 90 feet, sloping from south (high) to north (low) at a mean elevation of approximately 2,565 feet above sea level.

As part of the site facilities, a surface drainage control system has been constructed to divert run-on around the active waste management areas and to collect on-site runoff that may have contacted active waste-handling areas. The main elements of the system are diversion and interceptor channels, diversion berms, surface runoff impoundments, and appurtenances. The constructed surface drainage system will be maintained to verify continuous serviceability throughout the operating life of the facility and during the post-closure period. The USEI PCB waste disposal facilities currently consists of closed trenches PCB-1, -2, -3, and -4, and lined landfill Cells 5, 14, 15 and 16. These PCB units are integral parts of the overall 328-acre waste disposal facility. In that regard, the surface drainage plan for these facilities is totally integrated with the facility drainage plans found in Attachment 10, Surface Water Management Plan, of USEI's RCRA Final Status Permit.

In the event of a site emergency, the Contingency Plan found in Attachment 7 of USEI's RCRA Final Status Permit is followed.

4.0 WASTE BURIAL COORDINATES[tc \l1 "4.0 WASTE BURIAL COORDINATES]

After construction, a marking system is installed in the landfill cell. The marking system is based on a permanent site benchmark and a survey plot. The site benchmarks are referenced to Bureau of Land Management coordinates. The approved landfill cell limits are thus clearly delineated by the limits of the excavation and the use of field marks. This system verifies that operators place all waste within the permitted area.

As required by 40 CFR 761.75(b)(8)(ii) and 761.180(d)(2), records are maintained which document the burial location of each item. When the waste is placed in the cell, the location information is recorded on the PCB Work Order (Section 2.0, Recordkeeping). This information is then transferred to a computer program that can produce a printout of any requested three dimensional locations within the landfill cell by PCB Work Order number.

Additional information on the three dimensional grid system utilized for landfill placement is located in Attachment 19, Process Description, of USEI's RCRA Final Status Permit and in Subsection 2.2.6 of this application.

5.0 EXCAVATION AND BACKFILLING[tc \l1 "5.0 EXCAVATION AND BACKFILLING]

5.1 General[tc \l2 "5.1 General]

In the past, PCB items at the site have been placed in trenches dedicated to the disposal of PCB waste materials. Collectively, these units are referred to as Past Practice Units (PPU's). Current and future practice is to co-dispose of PCB items in trenches also utilized for RCRA items. USEI's RCRA Final Status Permit provides design details for completed, operational, and planned disposal cells and associated geological and construction data.

The base levels of active disposal trenches vary from an elevation of 2513.5 ft. for Cell 5, an elevation of 2522.4 ft. for Cell 14, an elevation of 2547.00 ft. for Cell 15, and an elevation of 2549.26 ft. for Cell 16. Therefore, the bases of all active landfills are established at least 100 feet above the uppermost aquifer beneath those landfills. Groundwater cannot encroach on the base of any of the landfill units.

Exposed PCB wastes such as soils and debris will receive a daily cover of on-site soils, non-hazardous waste or a spray application of an emulsion type material. Other PCB articles such as transformers and containers will not normally receive daily cover. These articles and containers will have on-site soils or compatible, non-biodegradable and non-corrosive, bulk solid wastes placed over and around them to minimize any future subsidence. USEI will fill to 90% or crush containers that are to be landfilled. Electrical equipment will not be filled prior to disposal, but small pot transformers that have had their tops removed as part of the drainage operation will be placed in the landfill so that cover soils may enter through this opening during cover activity.

The following is a summary of the status of each of the dedicated PCB trenches and a description of "as built" conditions to the extent such information is known to USEI.

5.2 As Built Information[tc \l2 "5.2 As Built Information]

5.2.1 Trenches PCB-1 and PCB-2[tc \l3 "5.2.1 Trenches PCB-1 and PCB-2]

These trenches (PPU's) were excavated, filled, and closed prior to 1984. Limited information is available regarding design and construction. It is known that the trenches were not lined but do have leachate monitoring standpipes and were excavated with relatively steep side walls. Assuming the leachate monitoring standpipes were constructed at the low point in the trenches, PCB-1 and PCB-2 would have a maximum depth of 20 feet and 18 feet, respectively. It is believed by USEI that these trenches were shallow excavations; however, this has not been substantiated. The trenches were closed by covering with soil and graded to blend with the natural topography. Waste material was kept below original grade. The depth of cover is a minimum three feet in accordance with the requirements of the existing RCRA Final Status Permit.

PCB-1 was excavated in two sections in an east/west orientation, as shown on Drawing PRMI-T05, and lies between RCRA Trench 10, PCB-2, and PCB-3. The western section is approximately 20 feet wide by 560 feet long, and the eastern section is approximately 20 feet wide by 350 feet long. Actual floor grades are not known.

PCB-2 was excavated as a single trench in an approximate east/-west orientation between PCB-3 and CHEM 4B on the east. PCB-2 is approximately 40 feet wide and 1,300 feet long. Floor grades are not known.

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5.2.2 Trench PCB-3[tc \l3 "5.2.2 Trench PCB-3]

PCB-3 is filled and closed. The depth is not known but is believed to be shallow in depth. Side walls were cut as near to the vertical as possible. This trench is unlined and has a standpipe for a leachate observation well. The trench was closed by covering with soils from the site and graded to blend with the natural topography. Floor grades are not known. The depth of cover is a minimum three feet in accordance with the existing RCRA Final Status Permit.

PCB-3 is oriented in an east/west orientation, as shown on Drawing PRMI-T05, and lies between PCB-1 and PCB-2. The location and dimensions of PCB-3 as approved are as follows:

> Beginning at the northwest corner of PCB trench 3, which is located 2 feet south of the southwest corner of PCB trench 1; then 1,315.8 feet east; thence 85.23 feet south; thence north 871 2'W 1,315.8 feet; thence north 20.86 feet to the point of beginning. The southwest corner of PCB trench 1 is located west 521 59' south 568.77 feet from the north quarter corner Section 19 T4S, R2E, Boise Meridian.

Although the approved length of PCB-3 is 1,315 feet, wastes were only placed approximately in the eastern 600 feet, the remaining portion was not excavated nor used for PCB disposal.

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5.2.3 Trench PCB-4[tc \l3 "5.2.3 Trench PCB-4]

PCB-4 has been filled and closed with a final cap consisting of a 40-millimeter HDPE liner, a minimum of two feet of clay, and a minimum of 2.5 feet of cover soil. The trench was excavated with vertical sidewalls and does not have a synthetic liner. As-built Drawing D361L-LT4 shows the trench to be approximately 891 feet long by approximately 115 feet wide at grade and approximately 35 feet deep at the deepest point. The coordinates and distances, starting at the northeast corner, of PCB-4 are as follows:

> North 510,577.89; east 363,214.22; thence 890.78 feet south to a point, north 509,687.57; east 363,185.60; thence 104.52 feet west to a point, north 509,689.64; east 363,081.10; thence 889.42 feet north to a point, north 510,579.05; east 363,087.77; thence 126.46 feet east to the point of beginning.

Access ramps were included at the northern and southern ends. The floor elevation at the deepest point is 2,530 ft. The floor slopes at about 5 percent from both ends toward station 2+00 along the longitudinal axis. The trench does not have a leachate collection system, although a leachate observation well (standpipe) was installed along the west wall at station 2+00. Leachate is collected as described in Section 8.0.

The original Letter of Approval for PCB-4 provided for disposal to a point 3 feet below the original grade. ESII requested a partial above-grade lift for disposal in PCB-4, which was granted by EPA on February 20, 1986. This above-grade lift is shown on Drawing D361L-LT4. Final waste placement in PCB-4 was completed on August 7, 1986. The nominal capacity of PCB-4 was 110,000 cubic yards, including the

above-grade volume. A 36-inch final cover of on-site soils was placed over PCB-4 prior to final closure. Trench PCB-4 was closed, in accordance with the approved Closure Plan of March 1991, and certified as closed in November 1991.

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5.2.4 Cell 5 - As-Built and Modifications[tc \l3 "5.2.4 Cell 5 - As-Built and Modifications]

See Attachment 19, Process Description, of USEI's RCRA Final Status Permit for details on the design, construction and operation of Cell 5.

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5.2.5 Cell 14 Design[tc \l3 "5.2.5 Cell 14 Design]

See Attachment 19, Process Description, of USEI's RCRA Final Status Permit for details on the design, construction and operation of Cell 14.

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5.2.6 Cell 15 Design

See Attachment 19, Process Description, of USEI's RCRA Final Status Permit for details on the design, construction and operation of Cell 15.

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5.2.7 Cell 16 Design

See Attachment 18, Landfill Engineering Report, Cell 16, Subcells 16-1 and 16-2 and Attachment 19, Process Description, of USEI's RCRA Final Status Permit for details on the design, construction and operation of Cell 16.

5.3 Daily Cover[tc \l2 "5.3 Daily Cover]

See USEI's RCRA Final Status Permit for the details of daily cover as utilized in operating landfills by USEI.

5.4 Closure[tc \l2 "5.4 Closure]

5.4.1 General

PCB trenches 1, 2, and 3 have been closed by covering and compacting with native soils and grading to meet drainage requirements consistent with the site drainage plan. Certification of final capping for PCB Trench 4 was submitted to EPA, Region 10 in November 1991.

Final closure for Cell 5 was completed in 2005 and Certification of closure for Cell 5 was received on February 06, 2006. Details of the closure of Cell 5 is contained in Attachment 9 of USEI's RCRA Final Status Permit.

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5.4.2 Cells 14, 15, and 16

See Attachment 9, Closure and Post-Closure Plans, of USEI's RCRA Final Status Permit for the design and engineering detail of the closure of Cells 14, 15, and 16.

5.5 Closure of Silos[tc \l2 "5.5 Closure of Silos]

The three silos used for waste disposal at the Grand View site have been closed (PPU's). No waste has been placed into the silos since November 14, 1980. Table 5-1 lists the dates of the final waste placements in each of the silos.

ESII (previous site owner) certified the placement of the final cover and the cap, in accordance with the requirements of USEI's original RCRA Final Status Permit. A description of closure activities is provided in Attachment 22, Past Practice Units, of USEI's RCRA Final Status Permit. ESII (previous site owner) certified closure of the silos on October 30, 1989 to IDEQ and USEPA.

Table 5-1 Dates of Final Waste Placement in Silos

Operational Unit	Date of Last Waste Disposal
Silo 1 Area	December 17, 1979
Silo 2 Area	November 13, 1980
Silo 3 Area	November 14, 1980

6.0 VEHICLE AND EQUIPMENT MOVEMENT[tc \l1 "6.0 VEHICLE AND EQUIPMENT MOVEMENT]

6.1 Landfill Equipment Requirements[tc \l2 "6.1 Landfill Equipment Requirements]

USEI uses several types of equipment to place PCB waste into a trench. Equipment size and number has been chosen to provide safe handling and transportation of PCB wastes and efficient utilization of disposal space. The facility places the following types of PCB materials into the landfill:

- Bulk solid PCBs (e.g., dirt, debris, etc.).
- Solid containerized PCBs (e.g., small capacitors, etc.).
- Transformer and article carcasses (drained and/or drained and flushed as appropriate).
- Crushed empty containers.
- Stabilized RCRA/TSCA wastes.

Bulk solids shipped from the generator are sampled and analyzed per the procedures in Section 9.0 (Sampling and Monitoring Procedures) and then normally transferred to the landfill in the shipping vehicle. Solid material generated by the stabilization process is also sampled and analyzed according to the procedures in Section 9.0. Stabilized waste is normally conveyed directly from stabilization to facility trucks, which transfer the waste to the landfill.

Drummed or containerized PCB wastes are normally unloaded from generator trucks at a dock facility. Individual containers are unloaded using a bobcat with a drum-handling attachment or other individual drum-handling equipment. Palletized containers are unloaded using a front-end loader equipped with a forklift attachment or other similar equipment. When individual drums are transported from one adjacent area to another, the bobcat or other drum-handling equipment is used. When palletized drums are moved, the front-end loader/forklift is used. Wastes are staged, sampled, analyzed, and approved prior to transport to the landfill. Reloading is accomplished using the front-end loader/forklift or bobcat. The containers are reloaded onto site flatbed trucks, which transport the material into the landfill.

Methods of handling transformers depend upon the size and weight of the unit. Extremely large transformers are normally unloaded using a crane. ~~Transformers are drained and flushed as required in the PCB processing building.~~ Drained/flushed transformers are ~~weighed again and then~~ transferred to the PCB cell, normally using a loader with forklift capabilities. If the transformer's weight exceeds the loader's capability, the drained and flushed transformer is loaded onto site flatbed trucks using the crane. Transformers are unloaded from the flatbed trucks into the landfill using a crane, or other appropriate equipment.

The primary liner will be protected from damage caused by items or operating equipment by placing buffer materials on the side slopes and by maintaining minimum distances between placed items and the liner system. This is accomplished by placing approximately two feet of soil or waste with a soil-like consistency over the side slope. When the buffer material has been placed, drums and other items will be kept a minimum of 2 feet away from the lined side slope of the trench and a minimum of 18 inches above the base

liner of the trench. Above grade, the drums and other articles may be placed adjacent to the interior slope of the above-grade soil containment dikes, no closer than 2 feet from the top of the trench waste limit.

When each waste is placed in the cell, the operator records the disposal location on the Disposal Form or Work Order. The operator signs and dates the form. This information is later transferred to the computerized record system. Cover material is placed over the PCB waste using equipment as described in Section 5.0 (Excavation and Backfilling).

6.2 Waste Control Procedures[tc \l2 "6.2 Waste Control Procedures]

The USEI facility is operated in a manner that minimizes the potential for migration of PCBs from the active waste handling areas to off-site locations. This is accomplished by establishing an access zone on the site. The access zone is a cleaning and monitoring area located between the active waste handling areas and the facility exit gate. Procedures have been developed that limit the migration of PCBs into the access zone. The access zone includes roads, structures, and areas between the site vehicle wash and the main entrance gate.

The procedures developed to minimize the potential for migration of PCBs can be categorized as follows:

- PCB cell operating procedures
- Vehicle cleaning procedures
- Spill inspection and cleanup procedures
- Closure procedures, as documented in the approved Closure Plan

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6.2.1 Cell Operating Procedures[tc \l3 "6.2.1 Cell Operating Procedures]

USEI has developed several operating procedures that minimize the potential for vehicles to contact previously disposed PCB waste and carry that waste from the cell:

- The number of vehicles that enter the PCB cell is controlled. Vehicles carrying PCB waste normally travel in the cell on clean cover material.
- When a vehicle or piece of equipment leaves an active waste management area, personnel inspect the vehicle for signs of waste adhering to the vehicle. The sides, tires, and undercarriage of the vehicle are checked. Waste material that clings to the vehicle is manually removed.
- Bulk solid shipments are covered daily to minimize wind and vehicle dispersal of PCBs within the disposal cell.

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6.2.2 Vehicle Cleaning Procedures[tc \l3 "6.2.2 Vehicle Cleaning Procedures]

An on-site vehicle wash station is provided for decontamination of equipment. This unit is used as a vehicle wash to spray vehicles that traverse landfill or other designated areas. This system will be used to keep potential contamination within the proper areas and avoid tracking onto the roadways. Drawing PRMI-T03, Typical Facility Site Plan, located in Attachment 20, Master Book of Drawings, Overall Facility, of USEI's RCRA Final Status Permit shows the location of the vehicle wash structure.

Site operations require each vehicle that enters the active portion of the facility to exit through the vehicle wash. This unit consists of a high-pressure washer (can be used with hot water) that provides a hand wand wash of the vehicles.

The purpose of the vehicle wash station is:

- To provide for the exterior washing of trucks and other vehicles.
- To minimize waste materials from leaving the site.
- The facility operations manager has overall responsibility for this program.

When on-site equipment used to handle PCB waste is moved from an active waste handling area to the site maintenance area, the equipment must pass through the vehicle wash, where it will undergo a high-pressure hot water wash. Liquids from the vehicle wash drain to a sump; the sump is pumped as needed and the water is treated/disposed as required based on the results of the annual analysis performed on the sump water.

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6.2.3 Spill Inspection and Cleanup Procedures[tc \l3 "6.2.3 Spill Inspection and Cleanup Procedures]

As outlined in Section 14.0 (PCB Inspection Plan), the facility is inspected daily for signs of spilled waste material. If a spill is detected, the remedial action section of the Inspection Form is completed and the spill is expeditiously cleaned up per the procedures in Section 16.0 (Preparedness and Prevention). Spills in the access zone and in the active waste handling area will be cleaned up in accordance with applicable standards found in 40 CFR 761 Subpart G.

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6.2.4 Closure Procedures[tc \l3 "6.2.4 Closure Procedures]

At the time of facility closure, sampling, and clean-up activities will be conducted as described in Section 18.0 (Closure, Post-Closure Plan and Financial Requirements).

7.0 USE OF ROADWAYS[tc \l1 "7.0 USE OF ROADWAYS]

7.1 Road Construction[tc \l2 "7.1 Road Construction]

The USEI site is located at the end of Lemley Road approximately 1.7 miles off State Highway 78. Lemley Road is constructed of bituminous concrete pavement (blacktop). Roads on the site are constructed of compacted gravel-bearing soil, flexible pavement, or asphalt. The compacted soil roads are graded as necessary and maintained throughout the year in a condition to allow transport vehicles and disposal machinery to operate safely and efficiently.

7.2 Waste Material Control Procedures[tc \l2 "7.2 Waste Material Control Procedures]

7.2.1 On-Site Roadways[tc \l3 "7.2.1 On-Site Roadways]

The USEI facility is divided into two general areas: an active waste handling area and an access zone. The active waste handling area consists of all buildings, structures, processing areas, and roads where waste handling activities routinely occur. The access zone consists of administrative buildings, structures, and roads located between the vehicle wash and the facility entrance gate (including the site entry scale).

USEI has developed several procedures designed to reduce the potential for PCB contamination of roads in the active waste handling area. Subsection 7.2.2 discusses USEI procedures for preventing PCB migration to off-site roads.

The following procedures were developed to minimize the potential for PCBs to migrate to roads in the active waste handling area:

- Vehicle movement in/out of the disposal cell is limited (Section 6.0, Vehicle and Equipment Movement).
- Vehicles entering the disposal cell travel on clean cover material (Section 6.0, Vehicle and Equipment Movement).
- If the vehicle contacts any contaminated material, it is manually removed from the vehicle before it leaves the disposal cell (Section 6.0, Vehicle and Equipment Movement).
- Roads are maintained on a regular basis and inspected daily for signs of spilled waste material (Section 14.0, PCB Inspection Plan).
- Detected spill material is expeditiously cleaned up (Section 16.0, Preparedness and Prevention).

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7.2.2 Off-Site Roadways[tc \l3 "7.2.2 Off-Site Roadways]

USEI has developed a program that minimizes the potential migration of PCBs to off-site roadways. The program is based on establishing an access zone, which provides a cleaning and monitoring area between active waste handling areas and the facility exit.

The following procedures have been developed to establish and maintain an effective access area:

- Adherence to the procedures described in Subsection 7.2.1.
- Vehicles and equipment exiting the access zone must be cleaned in the facility vehicle wash station (Section 6.0, Vehicle and Equipment Movement).
- The access zone roadway is inspected daily for signs of spilled waste (Section 14.0, PCB Inspection Plan).
- Active area roads are inspected daily for signs of spilled waste material (Section 14.0, PCB Inspection Plan).
- Detected spill material is expeditiously cleaned up (Section 16.0, Preparedness and Prevention).

8.0 LEACHATE COLLECTION SYSTEM[tc \l1 "8.0 LEACHATE COLLECTION SYSTEM]

8.1 PCB Trenches 1, 2, and 3[tc \l2 "8.1 PCB Trenches 1, 2, and 3]

8.1.1 General Description[tc \l3 "8.1.1 General Description]

PCB trenches 1, 2, and 3 have leachate observation wells (standpipes) in each trench. Standpipes are monitored for liquid accumulation. Any liquid that is found will be pumped out, analyzed, and disposed. A written record will be kept of the liquid level, date of pumping, volume, and analyses. No liquids have been detected in the standpipes. If any liquids with PCB concentrations are detected they will be shipped off-site for incineration/treatment. For reference, the facility is located in a desert environment with an estimated net evaporation rate of approximately 43" per year. The lack of water in the standpipes is expected due to the typical dry nature of the site.

8.2 PCB Trench 4[tc \l2 "8.2 PCB Trench 4]

8.2.1 General Description[tc \l3 "8.2.1 General Description]

A leachate-monitoring standpipe has been installed in PCB trench 4. The standpipe consists of a 6-inch PVC pipe (see Drawing D361L-LT4 for details). The bottom of the pipe, which is a section of well screen, is designed to collect fluids and is located where the trench bottom is at its lowest elevation. The standpipe is monitored for liquid accumulation. Any liquid that is found will be pumped out, analyzed, and disposed. -A written record will be kept of the liquid level, date of pumping, volume, and analyses. Liquids with PCB concentrations greater than or equal to 50 ppm will be shipped off-site for incineration/treatment.

8.3 Cell 5[tc \l2 "8.3 Cell 5]

The detailed layout of the leachate collection system for Cell 5 is shown in Drawings PRMI-L16, and PRMI-L18, Cell 5 – Phase I, Typical Sections and Details, and Cell 5 – Phase II, Typical Sections and Details, found in Attachment 20, Master Book of Drawings, Overall Facility, of USEI's RCRA Final Status Permit.

8.4 Cell 14[tc \l2 "8.4 Cell 14]

The detailed layout of the leachate collection system for Cell 14 is shown in Drawings PRMI-L24, Cell 14 – Phase 1, Typical Section and Details, PRMI-L26, Cell 14 – Phase 2 Typical Sections and Details, and 720C-G01, Piping Leachate Treatment System, Cell 14 Leachate Plan, found in Attachment 20, of USEI's RCRA Final Status Permit.

8.5 Cell 15

The detailed layout of the leachate collection system for Cell 15 is shown in Drawings 52-01-04 and 52-01-05, Sections and Details, Sheets 2 and 3, found in Attachment 20 of USEI's RCRA Final Status Permit.

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8.6 Cell 16

The detailed layout of the leachate collection system for Cell 16, Phase I is shown in Drawing 16-11-06, Sumps and Risers, Sections and Details, Appendix D.5.4 of Attachment 18 in USEI's RCRA Final Status Permit.

8.7 Description of Leachate Management (Cells 5, 14, 15 and 16)[tc \l2 "8.5 Description of Leachate Management (Cells 5 & 14)]

Leachate will be managed in accordance with the requirements of 40 CFR Part 268 and this application. The other details for leachate management are described in Attachment 19, Process Description, and Attachment 14, Bulk Material Tank Systems, of USEI's RCRA Final Status Permit.

9.0 SAMPLING AND MONITORING PROCEDURES[tc \l1 "9.0 SAMPLING AND MONITORING PROCEDURES]

9.1 Introduction[tc \l2 "9.1 Introduction]

The purpose of this section is to detail the waste sampling, analysis, and monitoring procedures of US Ecology Idaho's PCB waste treatment and disposal facility located in Grand View, Idaho. This section has been prepared to meet the requirements of 40 CFR 761.75(b)(8). The sampling and monitoring procedures establish standard analytical methods and procedures used to evaluate candidate wastes, confirm the identity of the wastes received, and to monitor treatment and disposal practices.

9.1.1 Facility Description[tc \l3 "9.1.1 Facility Description]

USEI operates a waste management and landfill facility for RCRA and TSCA regulated wastes at Grand View, Idaho. The TSCA wastes received by USEI include PCB wastes in the following categories:

- Small PCB capacitors: Less than 3 pounds of dielectric fluid
- PCB transformers: Greater than or equal to 500 ppm-drained and flushed
- PCB-contaminated transformers: Less than 500 ppm-drained
- PCB containers
- PCB articles and contaminated articles
- PCB electrical equipment and contaminated electrical equipment
- PCB remediation wastes, including, but not limited to soil, debris, and equipment
- PCB bulk product wastes

TSCA waste management activities at the site include stabilization of RCRA/TSCA materials, solidification of incidental liquids, containerization, and landfill disposal,. Upon receipt and acceptance of a shipment, PCB wastes may be stored temporarily in an approved container in a designated PCB storage area. According to regulatory requirement, no liquids are landfilled. Liquids with a PCB concentration greater than or equal to 50 ppm of PCBs may be collected, stored on-site in a container, and sent to an off-site incineration/treatment facility.

Figure 9-1 presents the overview of the management steps for each category of PCB waste. Details of the acceptance, storage, processing, and disposal of PCB wastes, as well as recordkeeping and quality assurance/quality control procedures are provided in subsequent parts of this section.

9.1.2 Sampling, Analysis, and Monitoring[tc \l3 "9.1.2 Sampling, Analysis, and Monitoring]

The objective of sampling, analysis, and monitoring is to provide the information required for the proper and safe management of PCB wastes through USEI's facility. This plan provides a framework for waste analysis and PCB waste management from pre-acceptance review through processing and disposition of a waste. Specific objectives of the plan are to provide:

- Standardized PCB waste acceptance, receipt control, and waste processing control procedures
- Environmental quality monitoring to ensure the proper containment of waste in designated storage, process, and disposal areas
- Standardized methods for sample collection and analysis (conducted in accordance with Attachment 2, Waste Analysis Plan, of USEI's RCRA Final Status Permit except as specifically provided within this document)
- Recordkeeping and quality assurance/quality control (QA/QC) procedures

For a given waste, three phases of control have been identified and developed in the establishment of a systematic waste handling protocol. The three phases include:

- The pre-acceptance protocol
- Waste receipt control
- Waste process control

The pre-acceptance protocol provides procedures that are applied to a candidate waste stream prior to its arrival at the site to determine whether a waste can be properly treated, stored, or disposed of according to approval requirements. Waste receipt control procedures are applied to each waste shipment to confirm that the waste stream received at the facility is the waste stream that was approved for receipt in the pre-acceptance evaluation.

Waste process control procedures are applied during processing steps to ensure that wastes are managed properly based on the characteristics of the waste, the treatment/disposal process capabilities, and the approval requirements for the USEI facility.

This section is organized to describe the three phases of control, and describe the waste sampling and analyses which will be conducted and how the data will be used to control waste management during each of these three phases. The plan also describes the sampling and analysis procedures and the quality assurance program which has been developed.

9.2 Waste Pre-acceptance[tc \l2 "9.2 Waste Preacceptance]

The pre-acceptance protocol has been designed so that only waste streams that can be properly and safely stored, treated, and/or disposed of by the USEI facility are approved for receipt at the facility. A two-step approach is taken by USEI. The first step is the chemical and physical characterization of the candidate waste stream by the generator. The second step is the pre-acceptance evaluation of this data performed by USEI's technical staff to determine the acceptability of the waste for receipt at the facility. During the pre-acceptance evaluation, USEI will also determine the waste compatibility group, develop a treatment/processing scheme, and identify any required process control and receipt control fingerprint analysis parameters for the waste.

9.2.1 Generator Waste Characterization[tc \l3 "9.2.1 Generator Waste Characterization]

The generator's characterization includes the submittal of two documents:

- A completed generator's Waste Profile Form (WPF) (See Section 2.0, Figure 2-1), describing the PCB concentration of the wastes and the source of any PCB contaminated solids with the client's signature certifying the accuracy of information submitted.
- Analysis, when available, of ≥50 ppm liquids and PCB-contaminated articles/electrical equipment containing free liquids.

This information is reviewed by USEI to determine whether the waste must be rejected, or be conditionally accepted for disposal at USEI.

9.2.2 Pre-acceptance Evaluation[tc \l3 "9.2.2 Preacceptance Evaluation]

USEI's pre-acceptance evaluation begins with a technical review of the generator's waste characterization, as presented on the PCB WPF, attached sample analyses and certifications. If the WPF is not complete, additional information is obtained or it is returned to the generator. Once it is complete, it is screened to determine if the waste should be denied acceptance at the facility or if it may be accepted. Once screened, USEI's approach to the pre-acceptance evaluation is as follows:

- Determine the compatibility characteristics of the PCB waste stream.
- Determine the specific waste processing, treatment and disposal methodologies necessary for proper waste management.
- Select any required process control parameters for proper treatment, storage, and disposal.

9.2.3 Determine Waste Compatibility Characteristics[tc \l3 "9.2.3 Determine Waste Compatibility Characteristics]

The key compatibility concern at this stage of the evaluation is waste/waste compatibility. Waste/container compatibility, waste/stabilization equipment compatibility, and waste/landfill liner compatibility have been established for PCB wastes based on available compatibility references, and are discussed in this subsection.

PCB wastes are typically compatible with other PCB wastes when stored/blended in containers or placed in contact in a landfill trench. PCB wastes will be co-disposed in a landfill with non-PCB wastes. Confirming the PCB waste compatibility group and identifying incompatibilities are important to:

- Prevent the intermingling of incompatible wastes or contact of waste streams or leachate from wastes that are not compatible.
- Properly handle, store, treat, and dispose of the waste in a manner that does not adversely impact the environment.
- Protect facility personnel.

USEI's approach is to categorize a waste by its reactive characteristics. USEI has used EPA-600/2-80-076, "A Method for Determining the Compatibility of Hazardous wastes", as a guide to group the PCB and other wastes into the different reactivity groups established. The reactivity groups that are mutually compatible

have been composited to form eight compatibility groups. The method for assigning a waste to a compatibility group is described in detail in USEI's approved RCRA Waste Analysis Plan found in Attachment 2, Waste Analysis Plan, in USEI's RCRA Final Status Permit. The results of this determination are used to segregate drummed and bulk wastes for landfill disposal.

9.2.4 Develop Treatment/Processing Scheme[tc \l3 "9.2.4 Develop Treatment/Processing Scheme]

The treatment, handling, and disposal steps are determined during pre-acceptance review for each candidate waste stream based on its characteristics and USEI process capabilities. The route of the waste through the facility is selected from the options available in Figure 9-1 (e.g., PCB-contaminated transformer to staging, PCB storage, draining, and landfill disposal). The development of this waste routing identifies each processing step. USEI then checks the waste against the regulatory limitations for each processing step in order to ensure proper management of the waste according to the facility's permit and current regulations. The waste then undergoes process-specific evaluation to determine how to process the waste and what process control parameters should be analyzed to properly handle, treat, or dispose of the waste. The following processing steps are available for PCB wastes:

- Storage of drums, articles, and other PCB items
- Solidification of incidental liquids
- Containerization
- Stabilization
- Draining
- Flushing
- Landfill disposal

9.2.5 Develop Process Control Parameters[tc \l3 "9.2.5 Develop Process Control Parameters]

The determination of processing conditions and development of process control parameters is discussed in the subsections that follow.

9.2.5.3 Stabilization[tc \l4 "9.2.5.3 Stabilization]

Stabilization is used to chemically fix wastes prior to landfill disposal. Stabilization is limited to wastes that meet regulatory concentration restrictions (liquids less than 50 ppm PCB). Waste type and PCB concentration are important process control parameters. These parameters are typically analyzed prior to acceptance at the facility. The waste/stabilization equipment and waste/stabilization materials compatibilities are established for PCB wastes.

The objectives of stabilization treatment are to encapsulate the waste particles within a dense, hydrated crystalline medium and to chemically incorporate free liquids into the material to eliminate the potential for migration of free liquids from the stabilized waste.

Stabilization using Portland cement or pozzolans is an established technology that has been demonstrated to treat liquids by chemical stabilization rather than absorption. Based on USEI's experience with cement and pozzolanic stabilization, the use of lime-bearing compounds in the process input and achieving the Land

Disposal Restrictions (LDRs) treatment standards for PCB's as a RCRA Underlying Hazardous Constituent (UHC) while passing the paint filter test will ensure that chemical stabilization will be achieved. The test methods used to evaluate these criteria are specified in Subsection 9.5. The "optimum" mix will be conservatively selected to ensure that chemical stabilization is achieved.

The design of the optimum stabilization mix is normally completed during the pre-acceptance evaluation for large volume waste streams that will not be blended prior to stabilization. Waste mixtures formed on-site by the combination of waste streams in the tanks require pre-mix testing to design the stabilization mix prior to full-scale stabilization of the waste that are developed based on USEI's experience and then tested for the required parameters (i.e., free liquids) as output process parameters.

Input process control parameters include constituents and flash point (for liquids). If running a pre-tested mix design the output parameters will be ensuring the waste meets paint filter criteria and review of the actual mix used compared to the specified mix design. For mix batches, the output parameters are ensuring the waste meets the paint filter criteria.

9.2.5.4 Solidification[tc \l4 "9.2.5.4 Solidification]

Solidification is used to absorb incidental free liquids from waste. It is typically used when the conveyances containing the wastes are found to contain some incidental free liquid Cement, pozzolan, and/or clay absorbent material is added to the conveyance until no free liquids are observed. . A visual inspection, including the bottom of the container/conveyance, is performed to ensure that free liquids which might go undetected are not present at the bottom.

9.2.5.5 Draining and Flushing[tc \l4 "9.2.5.5 Draining and Flushing]

PCB contaminated transformers and articles (less than 500 ppm PCB) are characterized by the generator prior to receipt at USEI, as outlined in Subsection 2.2. The generator must certify that the PCB contaminated transformers and articles conform to what is described in both the WPF and PCB Control Sheet. PCB contaminated transformers and articles are typically drained of liquid through either valves or top inspection plates, as available. Visual inspection is specified for purposes of process control to confirm that all liquid capable of being drained has been removed. Since the liquid is to be incinerated, it will not be tested by USEI for PCB content.

PCB transformers (greater than or equal to 500 ppm PCBs) are characterized by the generator prior to receipt at USEI, as outlined in Subsection 2.2. The generator must certify that the PCB transformers conform to what is described in both the WPF and PCB Control Sheet. PCB transformers are drained of fluid, inspected to confirm complete drainage, filled with suitable flushate, allowed to sit for a minimum of 18 hours, drained of flushate, and reinspected to ensure complete drainage. Liquid >500 ppm PCB is designated for off-site incineration/treatment.

The primary processing area is dedicated to PCBs, so only one compatibility class of waste is processed, thus minimizing the potential for combination of incompatible materials. All liquids are containerized where process control parameters for these operations are utilized.

9.2.5.6 Landfill[tc \l4 "9.2.5.6 Landfill]

Landfill process control parameters are selected to confirm that wastes will meet the regulatory limitations for landfilling.

Waste/liner compatibility has been established for PCB wastes. Stabilized waste and bulk wastes must be determined to be compatible with adjacent wastes in accordance with the compatibility group determination described in Subsection 9.2.3, or must be tested for waste-to-waste compatibility prior to landfilling. Wastes assigned to different compatibility groups based on chemical constituents may be in a sufficiently stable form to prevent incompatible reaction (e.g., soil containing spilled amine, Group D, and PCB solids, Group E). Similarly, pozzolanic stabilization often renders previously designated hazardous wastes nonhazardous or immobile. In these cases, many previously incompatible wastes can now be safely land disposed adjacent to each other. The procedure for the landfill waste-to-waste compatibility test is described in Subsection 9.4. Compatibility is determined on a case-by-case basis. In addition, containerized wastes are accumulated and stored by compatibility group and landfilled together in a lift and segregated from other compatibility groups, as described in Subsection 9.4.

Containerized wastes are inspected prior to disposal to ensure that the containers are at least 90 percent full and that they are obviously solid or pass the paint filter test. Containerized wastes found to contain incidental free liquids may be solidified/stabilized in a container, according to current regulations, and checked for free liquids prior to routing to the landfill. Alternatively, they may be routed to draining or the stabilization/solidification unit. Stabilized/solidified material is inspected for free liquids as an output process control parameter.

9.2.6 Develop Fingerprint Parameters for Receipt Control[tc \l3 "9.2.6 Develop Fingerprint Parameters for Receipt Control]

With the completion of waste characterization and process routing, USEI has developed a "fingerprint" describing what the waste's characteristics are, how the waste will be processed, and what process control analyses will be necessary. Next, technical personnel determine which analytical parameters to specify for waste receipt control. The minimum receipt control testing required is as follows:

- Appearance/description: All PCB wastes
- Free liquid: All PCB wastes

Technical personnel will evaluate whether these requisite "fingerprint" parameters are sufficient to confirm the identity of each waste shipment received or if a unique waste characteristic necessitates additional testing. These fingerprint analyses provide a control point to prevent the acceptance and processing of wastes that have not been approved by USEI, are restricted by USEI, do not meet USEI's approval limitations, or regulatory restrictions for individual treatment/disposal steps. Some supplemental analyses may be selected as fingerprint analyses if they are expected to be present or are associated with the generating process and affect waste processing. An example includes:

- RCRA fingerprint parameters (from RCRA Waste Analysis Plan) if the material is a mixed RCRA/TSCA waste.

Once the fingerprint parameter selection is confirmed, technical personnel ensure sufficient data is available for all fingerprint parameters selected during pre-acceptance, and determines an acceptable range of results based on:

- WPF characterization
- Regulatory limitation (e.g., $\geq$50 ppm PCB liquids cannot be stabilized and landfilled.)

- Pre-acceptance analysis results for the fingerprint parameters

The minimum receipt control program and process control analyses program specified in the pre-acceptance review are summarized in Table 9-1.

Table 9-1 Minimum Waste Receipt and Process Control Parameters[1]

	Receipt Control	Drum Storage	Stabilization Input	Stabilization Output	Solidification	Drain and Flush	Landfill
Visual inspection for appearance/description	X					X	X
Free liquid	X						X[4]
PCBs			X		X	X[2]	
Compatibility test							X[3]
PCB's as a UHC				X			
Flash Point (greater than 140°F)			X		X		

[1]Process control parameters performed during receipt control need not be repeated unless there has been an intermediate processing step that changes their characteristic.

[2]For PCB-contaminated liquids in transformers (≥500 ppm).

[3]If landfilled adjacent to a different compatibility group.

[4]Incidental

9.2.7 Pre-acceptance Decision[tc \l3 "9.2.7 Preacceptance Decision]

At this point, the technical personnel decide to approve or reject the material based on regulatory and processing requirements. If the material is acceptable based on this evaluation, the customer is notified regarding acceptance of the material, including any special instructions. If the material is rejected, the customer is notified of the reason for rejection.

9.2.8 Annual Recertification[tc \l3 "9.2.8 Annual Recertification]

In accordance with Attachment 2, Waste Analysis Plan, of USEI's RCRA Final Status Permit, a WPF/waste profile re-evaluation will be repeated as necessary to ensure that it is accurate and up to date. At a minimum, the analysis must be conducted when one of the following occurs:

- A generator notifies USEI that the process generating the waste has changed; or
- The results of inspection or analysis indicate the waste received at the facility does not match the identity of the waste designated on the accompanying manifest (or shipping paper).

The above analysis is in addition to the annual review and recertification required for each approved TSCA waste stream received for disposal at the facility.

9.3 Waste Receipt Control[tc \l2 "9.3 Waste Receipt Control]

The purpose of the waste receipt control program is to verify that each waste that arrives at the USEI site is representative of the waste stream approved for receipt and processing. Most PCB waste shipments will be accompanied by a PCB Control Sheet, which gives specific information on the waste shipment (See Section 2.0, Figure 2-3).

All wastes and each container are opened and inspected upon receipt at the facility. The wastes are sampled for fingerprint analyses in accordance with the methods and schedules specified in this section. Information derived from the inspection, the manifest, and fingerprint parameter results, must be consistent with the pre-acceptance waste characterization in order for the wastes to be accepted for processing. The waste receipt control procedure outlined in the WAP, Attachment 2 of USEI's RCRA Final Status Permit, is illustrated in Figure 9-2.

Waste shipments to the facility are normally scheduled in advance. The scheduled date of arrival, the form of shipment, the number of containers, and the identification of the transporters are available to Operations for scheduling of sampling and analysis personnel. The laboratory supervisor, or a chemist, is responsible for determining the acceptability of each waste material received based on a comparison of fingerprint analytical results with the pre-acceptance waste characterization.

9.3.1 Waste Inspection[tc \l3 "9.3.1 Waste Inspection]

After a shipment of waste has arrived at the facility, personnel review the documents that accompany the shipment, including the PCB Control Sheet. The documents are checked for completeness and correctness. The shipment is inspected for integrity of containers, proper labeling, and consistency with the shipment manifest, including the number and types of containers and wastes. Individual containers are inspected for potential leaks.

Each waste is then visually inspected by field technicians. For containerized wastes, 100 percent of the containers are opened for inspection. Each bulk shipment is opened or uncovered and visually inspected.

Visual inspection is used to determine that the waste matches the physical characteristics in the pre-acceptance characterization and the description on the manifest/shipping papers. Each filled container is probed with a tube to identify waste stratification and the possible presence of free liquids. If the evidence of possible free liquids is found, the lab will perform a paint filter test. The inspector notes if each container is at least 90 percent full (if it will be routed to the landfill), and if any discrepancies in anticipated waste characteristics are visibly present. Many discrepancies can be identified by visual inspection alone. If discrepancies exist between the observed physical characteristics and those expected based on the manifest and pre-acceptance characterization, the shipment is placed on hold in the offload area (generally Pad 4 or Pad 7) and the generator notified. If the generator indicates that a manifest error has occurred and has shipped a different waste that is also approved by the facility, the waste may be processed with appropriate receipt control analysis and manifest discrepancy documentation. Non-conformances with the WPF will be documented on the Work Order Form. Discrepancies will be documented on the Resolution Form and will be included with Work Order Form documentation. If the waste is not an approved waste or the generator believes that no discrepancy exists, the waste is sampled and analyzed to check for possible significant discrepancies. If the discrepancy cannot be resolved through the analysis and consultation with the generator, the shipment is rejected. Non-conforming wastes, such as those that contain free liquids, will be rejected back on the truck on which they arrived.

9.3.2 Sampling and Analysis[tc \l3 "9.3.2 Sampling and Analysis]

Following inspection, a representative sample of waste is taken, as necessary. Samples of any liquids found in containers are collected. Subsection 9.5 summarizes the method, sample point, and required equipment for sampling PCB wastes. Paragraph C.4 of Attachment 2, Waste Analysis Plan, from USEI's RCRA Final Status Permit provides the details of these sampling procedures. Waste shipments are normally analyzed by USEI's on-site laboratory according to the methods listed in Subsection 9.5 and detailed in paragraph C.5 of Attachment 2, Waste Analysis Plan, from USEI's RCRA Final Status Permit. The laboratory maintains a computerized or written record of analytical results for each sample.

Containerized wastes that are solids are sampled, as required, and subjected to a probing or the paint filter test to determine whether free liquid is present should there be doubt as to its physical state.

The fingerprint results are compared against the WPF and pre-acceptance evaluation data to confirm that the waste received is that which is listed on the manifest and meets the characteristics of the waste previously approved for receipt at USEI.

If the values for the fingerprint parameters conform to the waste profile, Operations is notified that the waste shipment may be processed. Receipt control documentation is completed, and filed for ready access while the waste is in process at the facility. If the waste is to be directly processed, supplementary samples of the waste may be collected for process control parameter analysis, if necessary.

If the fingerprint test results do not conform (for example, waste fails the paint filter, flammability, or water reactivity tests) to the waste profile, thereby precluding the receipt of the waste, technical personnel request additional analyses with or without resampling to confirm the original fingerprint results. The additional analyses could include a recheck of selected fingerprint parameters as well as supplementary parameters that augment the fingerprinting of the waste. If this further analysis demonstrates that the waste shipment is not representative of the waste stream that was found to be acceptable in the pre-acceptance evaluation, the waste shipment is directed to a holding area on the pad where it was received. The generator is contacted as to the nature of the discrepancy. If the tests confirm a discrepancy where the waste is not within regulatory

restrictions for the process routing approved on pre-acceptance, the generator may request acceptance based on a different waste stream routing (e.g., off-site incineration/treatment). The waste stream is then reevaluated based on its new characteristics or rejected, as described in the subsections that follow.

9.3.3 Discrepancies[tc \l3 "9.3.3 Discrepancies]

If possible, manifest discrepancies are resolved by contacting the generator to properly complete the needed information on the waste shipment. Significant manifest discrepancies will necessitate the completion of a Manifest Discrepancy Report if they are not resolved within 15 days.

Significant manifest discrepancies are differences in the quantity or type of waste received. Significant discrepancies in quantities are:

- Greater or less than 10 percent difference in manifested weight for bulk shipments
- Incorrect piece count for smaller size multiple container shipments

Significant discrepancies in waste type are obvious differences that can be discovered by inspection or waste analysis as conducted using fingerprint procedures; such as a waste flammable solvent substituted for a PCB-contaminated liquid. These are resolved with the generator, if possible, by correctly identifying the waste. If it is identified as another approved waste stream, it is tested and may be accepted if it matches the correct WPF characterization. Significant discrepancies that cannot be resolved with the generator may result in rejection of the shipment and its return to the generator.

9.3.4 Re-evaluation of Waste Acceptance[tc \l3 "9.3.4 Reevaluation of Waste Acceptance]

When USEI detects from inspection (physical characteristics) and/or fingerprint analysis for waste receipt control (chemical characteristics) that the waste lies outside the range of variation specified in the pre-acceptance evaluation (i.e., discrepancy in waste characteristics), USEI may, after communicating with the generator, reevaluate the waste for acceptance. Figure 9-3 presents a schematic of the reevaluation procedures.

USEI utilizes the results of fingerprint analyses and consultation with the generator to determine the correct range of waste components or characteristics. If necessary, the WPF will be amended and the waste pre-acceptance evaluation will be thoroughly reviewed to determine:

- Does the waste remain within the regulatory limitations for the originally specified processing scheme?
- If not, can the waste be accepted for processing under an alternative processing scheme?
- Does the waste remain in the same compatibility group?
- Do the selected waste receipt controls (fingerprint), process control parameters or their specified ranges require revision?

These questions and others pertaining to the pre-acceptance protocol are resolved and the necessary revisions to the pre-acceptance evaluation made. The waste is either accepted or rejected based on the ability of USEI to process the waste within its approval limitations as described in Subsection 9.2 for the pre-acceptance protocol.

9.4 Waste Process Control[tc \l2 "9.4 Waste Process Control]

Wastes accepted for receipt by the facility are managed through a processing route that was selected in the pre-acceptance evaluation. Waste process control testing is intended to monitor the movement of wastes through the facility and to assist in achieving treatment objectives. Waste process control measures are taken so that the PCB wastes received by the facility are properly and safely treated, stored, and disposed of according to the handling and processing criteria that were established in the pre-acceptance evaluation.

Intermediate waste processing steps include:

- Storage of drums, articles, and other PCB wastes
- Stabilization
- Solidification of Incidental Liquids
- Draining and flushing

The disposition of any waste received at the facility can generally be categorized as follows:

- Off-site processing or disposal or both
- On-site processing or disposal or both

For each movement among the processing units, the physical and chemical waste characteristics are used to determine if the particular unit can process the waste. Similarly, the physical and chemical characteristics of waste materials after treatment are used to evaluate the performance of the treatment method.

Process monitoring may involve visual inspections or require sample collection for analysis in the laboratory. The sampling techniques used by USEI are discussed in Subsection 9.5.

For monitoring that requires sample analyses, USEI personnel collect the necessary samples, place the samples in properly prepared and labeled containers, transport the containers to the laboratory, and record the samples in the logbook. The number of parameters tested for a given process stream varies from a single test to a range of analyses. These process control parameters are developed in the pre-acceptance review for each waste stream, as described in Subsection 9.2. Table 9-1 shows the process control parameters that must be monitored for each waste stream. Many of the waste stream parameters specified for process control are previously tested during receipt control according to requirements specified in the pre-acceptance review. If an intermediate processing step has changed the characteristics of the waste (e.g., stabilization), the processed waste is reviewed again for necessary process control parameters. The results of these reviews are compared with regulatory and process performance criteria before a waste is processed or a processed waste is released for subsequent waste processing.

In the subsections that follow, methodologies for process control of storage, processing, and disposal of wastes are detailed. Waste/waste compatibility issues are addressed, as well as the procedural precautions taken to avoid the accidental contact or mixing of incompatible wastes during handling and processing of the wastes.

9.4.1 Waste Routing[tc \l3 "9.4.1 Waste Routing]

Once a shipment of waste has been received, inspected, sampled if required, and analyzed the material may be accepted for processing at the facility. The routing of the waste through the facility will be assigned based on the scheme developed in the pre-acceptance evaluation.

Waste containers are typically routed as follows:

- Placement of solids: Small capacitors (<3-pounds dielectric fluid), empty and flushed PCB transformers, empty PCB contaminated transformers, PCB-contaminated soil, rags, clothing, tools, equipment, articles, and other items are placed in the landfill.

The USEI facility has the capability of either solidifying PCB-contaminated incidental liquids with clay/soil or other absorbent material, or chemically stabilizing the waste with a combination of pozzolans and alkaline materials. The available waste processing routes are presented in Figure 9-1.

9.4.2 Storage of Drums and Articles[tc \l3 "9.4.2 Storage of Drums and Articles]

Once the wastes have been accepted under the waste receipt control procedure described in Subsection 9.3containerized solids can either be placed in the segregated storage areas or directly routed to the landfill after appropriate process control testing.

PCB spills detected during inspections or during regular operation are cleaned up expeditiously upon detection following the procedures described in Section 16.0, Preparedness and Prevention. The containment areas can hold 110 percent of the maximum drum volume. Collected liquids are analyzed to determine the appropriate treatment-disposal methods. Spill clean-up materials with a PCB concentration equal to or greater than 50 ppm will be managed as PCB wastes. Spill clean-up materials that are solid will be landfilled.

Safety equipment, emergency response supplies, and processing equipment are also checked regularly for proper operation and/or adequate supply.

9.4.3 Tank Storage[tc \l3 "9.4.3 Tank Storage]

The PCB storage tanks were removed and disposed April 11, 2016. USEI does not store PCB wastes in tanks at this time.

9.4.4 Stabilization[tc \l3 "9.4.4 Stabilization]

Stabilization with Portland cement, clay soil, or other pozzolanic material is utilized to chemically fix certain wastes containing free liquids prior to land disposal. The treatment may also be used to treat certain sludges and solids. These materials must meet the following process input restrictions:

- PCB concentration of the waste: Liquid wastes ≥50 ppm PCBs are only accepted for subsequent incineration/treatment at a permitted off-site facility.

Stabilization process control parameters include:

- PCB concentration of the raw waste
- Free liquid of the raw waste
- Flash point of the waste (must be greater than 140°F for processing.)

The PCB concentration determines the suitability of the waste for eventual landfilling. Other tests determine the requirements of the process mix. PCB concentration, flash point, and free liquid are determined by the test methods found in Subsection 9.5 and paragraph C.5 of Attachment 2, Waste Analysis Plan, from USEI's RCRA Final Status Permit.

The input waste may be fed from a tank truck, drums, or other containers. The treatability study for large volume waste streams, which are treated without blending with other waste streams, will normally be conducted during pre-acceptance. The pre-acceptance treatability study evaluates the treatment conditions (waste: additive ratio) required to achieve stabilization for the range of potential waste moisture contents. The input waste will be analyzed for moisture or solids content (if applicable) and any other input process control parameters specified. The mix ratio will be selected according to the treatability study results. Upon approval of the waste, the material may be processed.

Any new waste stream or unique combination of waste streams that may be fed into a single stabilization batch may be tested in a bench-scale pre-mix test prior to treatment to determine the required additive mix and demonstrate performance. The operating conditions are obtained directly from this study. The pre-mix test is described in Subsection 9.2. Each batch is tested after mixing to ensure it meets the required output parameters of paint filter test and PCB concentration as a RCRA UHC, before placement in the landfill.

As a quality control measure, the treated waste is inspected to ensure it passes paint filter and is thoroughly mixed and that the proper mix was utilized.

Upon laboratory approval, the waste is transported to the landfill for disposal. If the output parameters do not meet the requirements, more additives will be blended with the material until it meets the output requirements.

9.4.5 Solidification[tc \l3 "9.4.5 Solidification]

USEI is approved to dispose of solids at the Grand View, Idaho facility. After fingerprinting the incoming wastes, approved bulk loads of solids are placed directly into landfill trenches designated for PCB wastes. When wastes tested under receipt control procedures are found to contain incidental free liquids, they may be processed by solidification.

Cement, pozzolan, clay soil, or other adsorbent is added to the conveyance until no free liquids are observed. The waste is then inspected for free liquids. Upon laboratory approval, the waste is transported to the landfill for disposal.

9.4.6 Draining and Flushing[tc \l3 "9.4.6 Draining and Flushing]

Draining and flushing activities do not occur at the facility at this time. However, PCB transformer and PCB contaminated transformers and equipment may be accepted if they have been drained and/or flushed in accordance with 40 CFR 761.60.

Transformers are clearly identified prior to or upon receipt with the designation of PCB (≥500 ppm) or PCB-contaminated (<500 ppm). Upon receipt, PCB-contaminated transformers with <500 ppm PCBs are inspected to confirm that no free liquids are present. The transformer is then approved for transfer to the landfill for disposal. Additional absorbent may be added to the transformer carcass prior to landfilling to ensure no free liquids upon placement in the landfill

PCB transformers with ≥ 500 ppm PCB's must arrive drained and flushed in accordance with 40 CFR 761.60(b)(1)(B). PCB transformers are inspected as described above., Absorbent may be added to the transformer carcass prior to landfilling to ensure no free liquids upon placement in the landfill. The transformer is then approved for landfill disposal.

9.4.7 Landfill[tc \l3 "9.4.7 Landfill]

USEI disposes of both bulk and containerized wastes in landfills. Containerized wastes are tracked through disposal using a computerized system that produces a Work Order as shown in Section 2.0, Figure 2-4. The following information is required: Waste identity, disposal date, Landfill Cell, and tier number (see Section 2.0).

Bulk solid loads are sampled and inspected according to Subsection 9.5. Solids can include soil, clothing, and debris. In addition, emptied and rinsed transformers, small capacitors, and other contaminated items are placed directly in the landfill.

Containerized wastes (excluding articles) are inspected prior to disposal to confirm that the containers are at least 90 percent full. Those that are found to be less than 90 percent full have additional material added to them (such as soil, pozzolans, etc.) until they meet or exceed the 90 percent criteria.

Stabilized waste product and bulk loads of solids for landfilling are checked for compatibility to determine if they are in the same compatibility groups in accordance with Subsection 9.2. If wastes of different compatibility groups will be placed in contact, either horizontally or vertically, waste-to-waste compatibility testing is first conducted with each of those wastes in accordance with the procedures given in Subsection 9.5.

If an incompatibility is observed by the compatibility test procedure, a different location in the landfill will be evaluated for compatibility with the newly arrived waste. The compatibility screening and testing will be repeated until an acceptable location is found.

Drummed wastes are landfilled with other wastes in the same compatibility grouping. Different compatibility group wastes are located in separate segregation areas within the landfill. Incompatible wastes are located in different segregation areas separated by 3 feet of clean fill or other mutually compatible material.

Leachate or runoff generated in the landfill trenches is sampled, collected, transferred to containers, or pumped directly to a surface impoundment or to tank trucks for transfer to a surface impoundment, storage tank, or treatment unit for proper disposal.

In each system, perforated collection pipes conduct leachate to the point of lowest elevation in the trench. Subsection 9.5 summarizes the sampling frequency, method, and equipment applicable to leachate monitoring.

Leachate detected in the primary collection systems of the active landfill cells is removed and consolidated in a RCRA permitted tank prior to filtration and discharge to the site Evaporation Pond. Combined leachate is sampled annually. If leachate is detected in the primary collection systems of the PCB trenches, it will then be sampled. Pumpable quantities will be removed using a submersible pump. Analysis of the sample for PCB concentration determines the way in which the leachate is managed for disposal, which would be as follows:

1. PCB Trenches 1, 2, 3 and 4
   - <50 ppm: Transfer the leachate and runoff to the treatment system/surface impoundments.
   - ≥50 to <500 ppm PCBs: Off-Site treatment / incineration
   - ≥500 ppm PCBs: Transfer the leachate to a container designated for high-level PCB waste storage only. Arrange for off-site treatment/incineration.
2. Cell 5, 14, 15, and 16: Leachate regulated under 40 CFR 268 (PCB as a UHC)

9.5 Waste Sampling and Analysis Procedures[tc \l2 "9.5 Waste Sampling and Analysis Procedures]

9.5.1 Waste Sampling Procedures[tc \l3 "9.5.1 Waste Sampling Procedures]

USEI has adopted standard sampling procedures and obtained the required sampling equipment for collecting representative samples from various waste sources and environmental media. The specific sampling procedures are described in detail in Paragraph C.4 of Attachment 2, Waste Analysis Plan, of USEI's RCRA Final Status Permit. Considerations made in choosing the procedures and equipment are as follows:

- Physical properties of various PCB wastes (i.e., viscosity, pumpability, solids content, content of free liquid, etc.)
- Type of containers
- Recommended sampling guidelines:
  - EPA, Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW 846)
  - ASTM, Annual Book of Standards
  - APHA, Standard Methods for the Examination of Water and Wastewater
  - Title 40 of the Code of Federal Regulations (CFR), Part 260-267
  - EPA, TSCA Inspection Manual, Volume 2, Government Institutes, Inc., publishers, April 1982
- Parameter to be tested
- Required accuracy of analysis

- Dependability of sampling equipment
- Personnel safety

USEI's typical sampling procedures are summarized in Subsection C.4 of Attachment 2, Waste Analysis Plan, in USEI's RCRA Final Status Permit. Drained PCB equipment (i.e., transformer that the client identifies as drained and flushed) is opened to verify that it is empty.

9.5.2 Waste Analysis Procedures
[tc \l3 "9.5.2 Waste Analysis Procedures]

9.5.2.1 Analytical Procedures[tc \l4 "9.5.2.1 Analytical Procedures]

For the analysis of raw waste, processed waste, and environmental samples, USEI uses standard procedures described in EPA SW-846. APHA's Standard Methods for the Examination of Water and Wastewater, 23rd Edition, 2017, and ASTM's Annual Book of Standards are used for sampling and analyses not provided in SW-846. In some cases, the recommended method offers the analyst a choice of equally valid options in certain procedural steps. In addition, to facilitate daily decision-making, USEI uses verified procedures to complete all necessary daily and regularly scheduled analyses. Details of analytical procedures are found in Subsection C.5 of Attachment 2, Waste Analysis Plan, of USEI's RCRA Final Status Permit.

9.5.2.2 Quality Assurance and Quality Control[tc \l4 "9.5.2.2 Quality Assurance and Quality Control]

Quality assurance (QA) and laboratory analysis quality control (QC) program requirements are outlined in Attachment 2, Waste Analysis Plan, of USEI's RCRA Final Status Permit.

10.0 GROUNDWATER MONITORING[tc \l1 "10.0 GROUNDWATER MONITORING]

Groundwater monitoring is performed in accordance with Attachment 11, Groundwater Monitoring, of USEI's RCRA Final Status Permit. The RCRA groundwater program is far more extensive than the requirements under TSCA and as a result, only the unique TSCA elements are described in this application. Additionally, USEI will submit a single Groundwater Report that will be sent to both RCRA and TSCA regulatory personnel and will include a discussion of all RCRA and TSCA groundwater sampling requirements, as necessary.

The additional analytical parameter of PCB, analyzed by Method 8082 in accordance with the third or latest Edition of SW-846, is added to the following wells on an annual (once per year) basis to conform with unique TSCA requirements:

Table 10-1 Monitoring Well Summary

Well No.	Well Type[a]	Well Material[b]
UPPER AQUIFER:		
Background Wells		
U-4	Exist	SS
U-13	Exist	SS
U-14	Exist	SS
U-15	Exist	SS
PCB Trench 4		
U-17	Exist	SS
U-18	Exist	SS
U-19	Exist	SS
Silo 3		
UP-6	Exist	SS
Silo 2		

Well No.	Well Type[a]	Well Material[b]
U-21	Exist	SS

Silo 1		
U-22	Exist	SS
PCB Trenches 1, 2, and 3		
U-9	Exist	SS
U-10	Exist	SS
Cell 5		
U-48	Exist	SS
U-49	Exist	SS
U-23	Exist	PVC
U-24	Exist	SS
U-25	Exist	SS
Cell 16		
U-48	Exist	SS
U-49	Exist	SS
U-54	Exist	PVC

LOWER AQUIFER:

Background Wells			
L-35	Exist	PVC	
L-38	Exist	PVC	
Cell 14			
L-28	Exist	SS	(monitors 14-1)
L-29	Exist	SS	(monitors 14-2)
L-30	Exist	SS	(monitors 14-3)
L-32	Exist	SS	(monitors 14-4)
L-33	Exist	SS	(monitors 14-5)
L-39	Exist	SS	(monitors 14-6)
Cell 15			
L-41	Exist	SS	
L-42	Exist	SS	
L-43	Exist	SS	
L-44	Exist	SS	
L-45	Future		
L-47	Exist	SS	
L-36	Exist	PVC	
L-37	Exist	PVC	

a Well Types:
"Exist" designates the requirement to maintain an existing monitoring well pursuant to this approval.
b Well Materials: Material below static water level
SS = Either 304 Stainless Steel or Schedule 80 PVC
PVC = Schedule 40 Polyvinyl Chloride

11.0 SPILL PREVENTION CONTROL AND COUNTER MEASURE PLAN[tc \l1 "11.0 TSCA SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN]

US Ecology Idaho, Inc. previously maintained a Spill Prevention Control and Countermeasure (SPCC) Plan for the Site B facility, located 10.5 miles west of Grand View, ID. The SPCC Plan was maintained due to the location on site of two above ground PCB storage tanks used to store PCB contaminated oil, dielectric fluid, and contaminated solvent that had been used for flushing transformers and other PCB equipment prior to landfill disposal.

The SPCC Plan was maintained to comply with the regulations of 40 CFR 761.65(c)(7)(ii), which directs owners and operators of facilities using stationary storage containers for PCB liquid storage to "prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan as described in part 112 of this title. In complying with 40 CFR part 112, the owner or operator shall read "oil(s)" as "PCB(s)" whenever it appears.

With the removal of the PCB tanks on April 11, 2016, USEI is no longer governed by the requirement of 40 CFR 761.65 to "prepare and implement a SPCC Plan". The facility design and location eliminate the possibility that oil in quantities that would be harmful will be discharged from the site. The PCB operation is fully contained and any water that might flow near the area due to rainfall would not come into contact with PCBs. In addition, the water from the area around the PCB Building is diverted to Pond 3 and never flows out of the facility boundary. Pond 3 has sufficient capacity to contain both the rainfall from a 25-year, 24-hour storm and rainfall from a 100-year storm event. There is no potential for oils or other PCB contaminated media to discharge into or upon the navigable waters of the United States, and therefore, no SPCC Plan is required at this time.

12.0 SECURITY MEASURES[tc \l1 "12.0 SECURITY MEASURES]

This information is provided in Attachment 3, Security Procedures, of USEI's RCRA Final Status Permit.

13.0 UNAUTHORIZED WASTE PLACEMENT[tc \l1 "13.0 UNAUTHORIZED WASTE PLACEMENT]

USEI has developed an approval and identification verification process which prevents the acceptance of unauthorized wastes. No waste is scheduled for receipt without prior waste approval by facility management. The approval process includes the data submission and review procedures outlined in Section 2.0 (Recordkeeping).

Wastes which arrive at the USEI facility are accompanied by identifying shipping papers. Shipping information is compared to information in the Waste Profile Form to verify that the load has been approved for acceptance/disposal.

Waste identification is further confirmed according to the procedures of Section 9.0 (Sampling and Monitoring Procedures). Significant discrepancies in type or amount in the shipping papers, laboratory analysis, or actual waste received, are resolved with the generator prior to final treatment or disposal. If a discrepancy is not resolved, the waste is returned to the generator. Unapproved wastes are not accepted by the facility for disposal.

When the received waste is approved, site personnel assure that waste handling methods are in accordance with Attachment 2, Waste Analysis Plan, found in USEI's RCRA Final Status Permit.

14.0 PCB INSPECTION PLAN[tc \l1 "14.0 PCB INSPECTION PLAN]

14.1 General Facility Inspection Requirements[tc \l2 "14.1 General Facility Inspection Requirements]

The intent of the USEI Inspection Plan is to identify potential problems at the USEI PCB waste processing and disposal facility before they might endanger human health or the environment. This plan provides an inspection schedule and specific facility inspection requirements. A copy of this plan will be kept at the site in the Administrative offices.

The inspections outlined in this plan are for units that are operated at USEI under TSCA/PCB authority only. Specifically the closed PCB Trenches (PCB 1, PCB 2, PCB 3, and PCB 4). All other PCB units are operated under both TSCA/PCB and RCRA authority. The inspection routines for these jointly operated units are provided in Attachment 4, Inspection Plan, of USEI's RCRA Final Status Permit.

Records of inspections and the inspection schedule are kept on-site in the Administrative offices. These records will be retained for a period of at least 3 years from the date of inspection.

14.1.1 Inspection Schedule[tc \l3 "14.1.1 Inspection Schedule]

Table 14-1 presents the minimum schedule for inspecting unique PCB facilities. This schedule and listing of inspection locations may be periodically revised during the life of the approval to reflect operational and administrative requirements, updates, and/or permanent or temporary closures.

14.1.2 Frequency of Inspection[tc \l3 "14.1.2 Frequency of Inspection]

The inspection schedule and requirements identified are based on an analysis of the rate of possible deterioration of the equipment involved and the probability of an environmental or human health incident if any deterioration, malfunction, or operator error were to go undetected between inspections.

The minimum inspection interval considered in the analysis is daily when a unit is currently in use. It should be recognized that all facility units where waste is actively being handled will effectively be under continual inspection for spills, malfunctions, and operator error.

In accordance with the facility Contingency Plan (Attachment 7 of USEI's RCRA Final Status Permit), any spill, malfunction, or operator error with the potential for endangerment of human health or the environment will be responded to immediately. The probability of the occurrence of such incidents in light of the provisions of the Contingency Plan was considered during the development of the inspection schedule. The probability of incidents that could endanger human health or the environment occurring between scheduled inspections and going undetected by the continual inspection of site personnel is extremely low.

In all areas subject to spills, a scheduled daily inspection is provided. There is no equipment utilized in these areas that could reasonably be expected to deteriorate sufficiently to cause an incident within one working day.

Other areas are subject to weekly or monthly inspections. There is no basis to reasonably expect that any of the equipment in these areas would be subject to deterioration that could lead to a potential endangerment of human health or the environment within that time.

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14.2 Specific Facility Inspection Requirements[tc \l2 "14.2 Specific Facility Inspection Requirements]

14.2.1 Waste Staging/Unloading/Loading Areas Inspection (Normal Working Day)

Figure F-12 of Attachment 4, Inspection Plan, of USEI's RCRA Final Status Permit is the form to be utilized during the inspection of Waste Staging/Unloading/Loading areas. These areas are inspected daily on all normal working days. Daily inspections will provide timely detection of discrepancies that could impact the facility. During inspections, items such as warning signs, spillage, aisle space, and maintenance will be inspected.

14.2.2 Closed PCB Landfill Area Inspection (Weekly)[tc \l3 "14.2.4 Closed PCB Landfill Area Inspection (Quarterly)]

Attachment 4, Inspection Plan, of USEI's RCRA Final Status Permit shows the form to be utilized during the inspection of a closed PCB landfill. Weekly inspection will provide timely detection of erosion and other necessary maintenance items before serious conditions develop that could impact the integrity of the closed facility. During the post-closure period, all fencing will be inspected to verify that it prevents entrance to the facility. Insect and rodent control needs will be evaluated. Drainage ditches will be inspected for signs of blockage. Erosion control structures will be maintained, inspected, and repaired, if necessary. The leachate systems and groundwater monitoring systems will be inspected and maintained. The final cover will be inspected for erosion, pooling of water, subsidence, and odors.

14.2.3 Leak Detection/Observation Well Inspections (Weekly)[tc \l3 "14.2.5 Leak Detection/Observation Well Inspections (Quarterly)]

Each week, the observation wells for all leachate collection systems are inspected for liquids. Any liquids found in the observation wells are sampled and analyzed. Based on the analysis, the liquid will be removed and disposed of appropriately. Pipes are inspected to note any clogging or general obstructions. Figure F-15 of Attachment 4, Inspection Plan, located in USEI's RCRA Final Status Permit shows the leachate system inspection form utilized when inspecting the leachate collection system.

Table 14-1 Inspection Schedule

LOCATION	POTENTIAL PROBLEMS	MINIMUM FREQUENCY (Typical Figure Reference)
PCB Staging/Loading/Unloading Areas	Signs, Spillage, Aisle Space, Maintenance	Normal Working Day (F-12[1])
Closed PCB Landfills	Inadequate cover, settlement, erosion, standing water	Weekly (F-4a[1])
Leak Detection/Observation Wells	Presence of liquids, observation well integrity	Weekly (F-16[1])

[1] **Figure located in Attachment 4, Inspection Plan, in USEI's RCRA Final Status Permit**

15.0 PCB OPERATIONS[tc \l1 "15.0 PCB OPERATIONS]

15.1 PCB Solidification/Stabilization Process[tc \l2 "15.1 PCB Solidification/Stabilization Process]

15.1.1 Introduction[tc \l3 "15.1.1 Introduction]

The process facilities include the Stabilization Building and the Stabilization Facility. More detail on the facilities used in solidification and stabilization is found in the Attachment 15, Outdoor Stabilization Facility, and Attachment 14a, Debris Building Process Treatment System, of USEI's RCRA Final Status Permit.

Soils that are RCRA hazardous for metals only and meet the requirements of 40 CFR 268.32(b), and low-level PCB liquids accepted for processing are sampled and fingerprinted, if required, per the procedures detailed in Section 9.0 (Sampling and Monitoring Procedures) to confirm that the PCB concentration is less than 50 ppm PCB prior to solidification/stabilization processing. RCRA/TSCA hazardous debris received for encapsulation is inspected prior to treatment to ensure that it conforms to the approved WPF.

15.1.2 Requirements for Solidification/Stabilization[tc \l3 "15.1.2 Requirements for Solidification/Stabilization]

An individual Waste Profile Form must be completed by every waste generator/broker for each PCB waste type. A PCB Control Sheet must accompany each PCB load unless the shipment consists of bulk solids or liquids. Only PCB wastes with a Generator confirmed PCB concentration of less than 50 ppm, incidental liquids, or certification on the Waste Profile Form are approved for the solidification/stabilization process. Solidified/stabilized wastes are sampled and analyzed per Section 9.0 to determine the adequacy of treatment. If the solidified/stabilized waste is found to contain free liquid, the waste will be further treated. More detail on the stabilization process may be found in Attachment 2, Subsection C.8.3.1 Stabilization, of USEI's RCRA Final Status Permit.

15.1.3 Safety Equipment[tc \l3 "15.1.3 Safety Equipment]

Whenever PCB wastes are being handled, plant personnel will utilize appropriate protective equipment. Equipment required includes hard hat, safety glasses, half-face or full-face respirator with organic vapor or organic vapor/acid cartridges (worn as required for the specific waste stream being handled), PCB-resistant gloves, safety boots with Tyvek boot covers, Tyvek coveralls, and a PCB-resistant suit or apron (worn as required for the specific waste stream being handled).

In addition, eyewash and body-wash stations and portable or wheeled fire extinguishers have been strategically located throughout the facility. These stations provide additional safety protection in the event of a spill, splash, or fire.

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15.4 PCB Container Storage[tc \l2 "15.4 PCB Container Storage]

USEI does not currently have a dedicated PCB container storage building on-site.

Pad 4, Pad 5, Pad 6, Pad 7, Pad 8, the Stabilization Facility, and the truck aprons of the Indoor Stabilization Building may be used for temporary waste receipt processing and staging prior to disposal as allowed by 40 CFR 761.65. PCB wastes are staged in these areas for processing such as documentation, piece counts, and weights. Multiple loads may arrive at the site at the same time. Due to space restrictions, waste may be staged in the areas for a short amount of time during the receipt process. Inspections of wastes are done on Pad 4 and Pad 7. The detail of construction and management of these areas may be found in Attachment 13, Container Management, of USEI's RCRA Final Status Permit.

These container storage areas are inspected each working day in accordance with the procedures in Section 14.0 (PCB Inspection Plan). The storage areas are checked for the presence of spilled material and/or any leaking containers. If either of these conditions exists, corrective activities are instituted to clean up and limit the spread of material. The container storage areas are inspected for the presence of structural failure. Should structural failure occur that appears to be significant or may develop into a major failure, repair activity will be initiated.

15.5 General Landfilling Procedures[tc \l2 "15.5 General Landfilling Procedures]

The landfill liner system (bottom and side slope) requires protection from waste transport vehicles and placement equipment. The bottom liner system is protected with 12 to 18 inches of leachate collection zone sand overlain with a 6-inch thick protective soil layer. The side slope liner system is protected as the waste level rises. This is accomplished by overlaying the synthetic drainage net leachate collection system with a layer of geotextile filter fabric and approximately 2 feet of soil or waste that has a soil-like consistency, which is free of sharp objects that could puncture the net or liner. Careful operating procedures during placement of this material will be used in order to prevent damage by operating equipment. Proper construction of this buffer is the key to protection of the liner system.

The landfills used for PCB waste disposal are all permitted RCRA disposal landfill cells. Information on the design, construction and operation/maintenance of these landfill cells is found in Attachment 19, Landfill Units, of USEI's RCRA Final Status Permit.

15.6 Transport Vehicle Unloading and Waste Placement Procedures[tc \l2 "15.6 Transport Vehicle Unloading and Waste Placement Procedures]

All waste placement and transport vehicle unloading is conducted in accordance with the specifications found in Attachments 6, Hazards Prevention Plan, 13, Container Management Units, 14,Bulk Material Tank Systems, and 19, Landfill Units, of USEI's RCRA Final Status Permit.

15.7 Compatibility Assurance[tc \l2 "15.7 Compatibility Assurance]

Compatibility assurance is provided in accordance with the procedures found in Attachments 2, Waste Analysis Plan, 13, Container Management Units, 14, Bulk Material Tank Systems, and 19, Landfill Units, of USEI's RCRA Final Status Permit.

16.0 PREPAREDNESS AND PREVENTION[tc \l1 "16.0 PREPAREDNESS AND PREVENTION]

This section provides a description of standard facility procedures conducted to prevent the occurrence of potentially harmful situations. The specific prevention procedures, structures, and equipment associated with each PCB operation are discussed.

16.1 Security[tc \l2 "16.1 Security]

Hazards are prevented by strictly regulating access to the site. Section 12.0 provides a more detailed discussion of site security measures.

16.2 Preventive Procedures, Structures, and Equipment[tc \l2 "16.2 Preventive Procedures, Structures, and Equipment]

16.2.1 High-Level PCB Processing Safety Procedures[tc \l3 "16.2.1 High-Level PCB Processing Safety Procedures]

After quality control and material approval, PCB transformers are unloaded at the appropriate location. All personnel are required to wear appropriate protective clothing when processing PCBs as required by USEI's Health and Safety Plan.

As combustible solvents may be used in the transformer flushing operations, sources of sparks, open flames, and smoking are prohibited in the area. Eye-washes and portable and wheeled fire extinguishers are located in the area.

During all draining and flushing operations, all pumps, hoses, and connections are inspected for signs of leaks and rupture. In addition, the building is regularly inspected per the procedures of Section 14.0 (Inspection Plan).

Before material is pumped into a storage tote, storage tote volume is checked to verify that there is adequate volume to receive the drained liquid. After processing is completed, the area is inspected for signs of spills or leaks. Any detected spill material is immediately cleaned up.

16.2.2 Other PCB Operations[tc \l3 "16.2.2 Other PCB Operations]

All other PCB operations and procedures, (e.g., bulk solids and liquids unloading, ignitables, reactives, incompatibles, etc.) are conducted in accordance with the procedures found in Attachments 2, Waste Analysis Plan, 13, Container Management Units, 14, Bulk Material Tank Systems, and 19, Landfill Units, of USEI's RCRA Final Status Permit.

16.3 PCB Personnel Protection Equipment[tc \l2 "16.3 PCB Personnel Protection Equipment]

An inventory of the safety and respiratory equipment necessary to handle PCB materials is retained on-site by USEI. The inventory is checked monthly as part of the facility Inspection Plan (Section 14.0)

Site personnel are informed by the site Technical Manager, Health & Safety Manager, Environmental Manager, or other qualified personnel as to the safety equipment appropriate for each particular working area and each PCB waste mixture. With the assistance of the Technical staff, the appropriate safety equipment is determined for each work procedure and waste stream. USEI fit tests each operator for respirators and instructs operators in the use of all safety equipment (Section 17.0, Personnel Training). If the employee notices a defect, it is his/her responsibility to replace the equipment or notify the appropriate personnel to facilitate timely repair. Each individual is responsible for safe operational activities, and if he/she determines that a particular task does not comply with safe operating practices, he/she is responsible for notifying each individual up the chain of command as to the nature and the corrective action necessary for the safe completion of the task in question. To facilitate this process, all required employees are trained in the safe operating practices to be used in handling PCB materials.

16.4 Emergency Contingency Plan[tc \l2 "16.4 Emergency Contingency Plan]

USEI follows the procedures in Attachment 7, Contingency Plan, of USEI's RCRA Final Status Permit for response to facility emergencies, emergency evacuations, and response to PCB spills.

17.0 PCB PERSONNEL TRAINING PROGRAM[tc \l1 "17.0 PCB PERSONNEL TRAINING PROGRAM]

The intent of this PCB Training Plan is to provide that employees of the US Ecology Idaho, Inc. (USEI) PCB waste facility have the necessary knowledge and training required to safely and properly manage and operate the facility in compliance with applicable regulations and in a manner that minimizes hazards to human health and the environment.

Attachment 5, Training Plan, of USEI's RCRA Final Status Permit contains the majority of the information on personnel training at USEI. The personnel who are trained in RCRA waste management are the same personnel who perform PCB waste management activities at USEI. USEI's organization, position descriptions, contingency training, required safety training, and records of all Site B employees are found in Attachment 5, Training Plan, of USEI's RCRA Final Status Permit.

The information in this section outlines the personnel training program for the USEI facility specific to the management of PCB wastes. All personnel will receive the listed PCB specific training within six (6) months of their assignment to a PCB waste management operation. Until the training is completed, they will be under the direct supervision of an individual who is trained and experienced in PCB waste management.

A copy of this plan will be maintained at the site.

17.1 Outline of Training Program[tc \l2 "17.1 Outline of Training Program]

17.1.2 Introductory and Continuing Training Program Topics[tc \l3 "17.1.2 Introductory and Continuing Training Program Topics]

USEI's program for training employees in the safe handling of PCB and hazardous wastes has been organized into a series of formal training classes. Specific safety and/or regulatory presentations are also included as part of these classes to keep site personnel up to date and aware of new information and procedures. All site personnel are trained in implementation of the RCRA Contingency Plan, found in Attachment 7 of USEI's RCRA Final Status Permit, and as such, the potential exists for any person working at the facility to be on the emergency response team. Provisions are also made for updating and revising the course content as necessary to reflect current regulations, operations, and technical advancements. The topics designated in the training program will not be deleted in such revisions without prior approval from the Agency.

During the PCB training program, employees are given instruction in the following areas as applicable to their assigned duties:

17.1.2.1 Introduction[tc \l4 "17.1.2.1 Introduction]

- A description of PCBs including chemical properties, hazardous properties, and exposure effects.

17.1.2.2 PCB Regulations[tc \l4 "17.1.2.2 PCB Regulations]

- Regulation of PCBs by the Toxic Substance Control Act (TSCA) including a discussion of the purpose of TSCA, TSCA requirements, and the importance of maintaining compliance.
- PCB marking requirements as they relate to the USEI facility.
- Classification of PCB waste types (e.g., transformer categories) and approved methods of handling and disposing of each specific type at the USEI facility.
- PCB recordkeeping requirements as they relate to the USEI facility and facility documents.
- Specific USEI QA/QC procedures required to identify PCB waste.
- Personal Protective Equipment (PPE).[tc \l4 "17.1.2.3 Protective Equipment] Required PCB personal protective clothing and equipment specific to PCB operations is covered with each employee in accordance with internal SOP's, and the facility Health and Safety Manual.

17.1.2.4 Contingency/Evacuation Procedures[tc \l4 "17.1.2.4 Contingency/Evacuation Procedures]

- Procedures related to emergency response, evacuation, and the Contingency plan, found in Attachment 7 of USEI's RCRA Final Status Permit.
- PCB decontamination procedures.

17.1.2.5 Handling Requirements[tc \l4 "17.1.2.5 Handling Requirements]

- Specific PCB processing, and disposal operations at USEI, the location of PCB management areas, and the hazards associated with facility PCB operations.
- Proper handling and storage procedures of PCBs, including specific procedures for:
    - PCB waste characterization.
    - PCB Container storage.
    - PCB liquid management.
    - Transformer decommissioning.
    - Capacitor handling and disposition.
    - Disposal of PCB materials and waste placement requirements.

17.2 Implementation of Training Program[tc \l2 "17.2 Implementation of Training Program]

A new operator will normally undergo about 24 hours of basic training. This training will cover both RCRA and TSCA materials and will provide the employee with the minimum instruction necessary to function at the facility. The training on the TSCA regulations includes a discussion regarding injury and possible hazards related to PCB handling.

On-going training is provided to employees as needed in varying formats – live training sessions, computer – based training, and training provided by outside companies. Training on TSCA and PCBs is provided as part of the annual training for all affected employees, as outlined in Attachment 5, Training Plan, of USEI's RCRA Final Status Permit. If significant changes occur in the Contingency Plan, facility design or operation, or in regulations that affect site PCB operations, updated training sessions will be scheduled as deemed necessary.

18.0 CLOSURE, POST-CLOSURE PLAN AND FINANCIAL REQUIREMENTS[tc \l1 "18.0 CLOSURE, POST-CLOSURE PLAN AND FINANCIAL REQUIREMENTS]

18.1 General[tc \l2 "18.1 General]

The plan provides for closure and post-closure care of the PCB facility in a manner that minimizes the need for long-term maintenance while it controls, minimizes, or eliminates threats to human health and the environment, and post-closure escape of PCB wastes, PCB waste constituents, leachate, contaminated rainfall, or waste decomposition products to groundwater, surface water, or to the atmosphere. A copy of this plan is kept at the USEI facility. Further details of the facility closure/post closure plan are provided as Attachment 9 of USEI's RCRA Final Status Permit.

18.1.1 Relation to RCRA Closure Plan[tc \l3 "18.1.1 Relation to RCRA Closure Plan]

This plan is intended to address only those activities specifically related to the closure/post-closure of USEI PCB facilities. RCRA facility closure is included in Attachment 9, Closure and Post-Closure Plans, of USEI's RCRA Final Status Permit. This plan does not address the closure of PCB/RCRA common facilities. Closure of these areas will occur when RCRA activity ceases.

18.1.2 Facility Description[tc \l3 "18.1.2 Facility Description]

The USEI facility provides services for the treatment and disposal of PCB wastes. Specific PCB waste processes are as follows:

- Small PCB capacitors - received for landfill disposal
- PCB transformers ≥500 ppm PCB - received for landfill disposal of the drained/flushed carcass. Transformer must be certified drained and flushed per 40 CFR 761.60(b)(1)(B) and must contain no free liquids.
- PCB contaminated transformers ≥50 ppm but <500 ppm- received for direct landfill. Transformer must contain no free liquids.
- PCB contaminated solids - received for landfill disposal, RCRA stabilization, or encapsulation. These include but are not limited to contaminated clothing, rags, environmental media, debris and equipment.
- PCB containers - received for disposal in the landfill. The contents of each container are managed based on the type of PCB material present (solids, transformer, capacitor, etc.). Containers must contain no free liquids.

- PCB articles and electrical equipment - articles/electrical equipment are received for direct landfill. Articles and equipment must contain no free liquids.
- PCB contaminated articles and electrical equipment - articles/electrical equipment are received for direct landfill. Articles and equipment must contain no free liquids.
- PCB remediation waste – remediation wastes such as soil, concrete, asphalt, etc. are received for landfill disposal. Waste must contain no free liquids.
- PCB bulk product waste – PCB bulk product wastes including paint, caulk, mastics, sealants, and building surfaces that have been coated with these products are received for landfill disposal. Waste must contain no free liquids.

All accepted wastes are reviewed and approved prior to receipt. All received wastes are checked per the procedures in Section 9.0 (Sampling and Monitoring Procedures) prior to acceptance.

18.1.3 Facility Contacts[tc \l3 "18.1.3 Facility Contacts]

18.1.3.1 Primary Contact[tc \l4 "18.1.3.1 Primary Contact]

This subsection provides the contact listings for the facility's operating life, closure period, and the post-closure period.

The primary facility contact is:

Mrs. Erica Bartlett, General Manager
US Ecology Idaho, Inc.
P.O. Box 400
Grand View, Idaho 83624
1-208-834-2275

Over the post-closure period, it is reasonable to assume that the primary contact will change. During this period, any change in the facility contacts will be reported to the Regional Administrator.

18.1.3.2 Other Facility Contacts[tc \l4 "18.1.3.2 Other Facility Contacts]

Other facility contacts are as follows:

Mr. Noel Bailey
Technical Manager
US Ecology Idaho, Inc.
P.O. Box 400
Grand View, Idaho 83624
1-208-834-2275

18.1.4 Site Personnel and Equipment[tc \l3 "18.1.4 Site Personnel and Equipment]

Located at the site is a fleet of specialized equipment for excavation, hazardous materials handling, spill containment, monitoring, treatment, and removal. Supply inventories are maintained including sorbents, safety gear and clothing, drums, fire-fighting supplies, etc.

The combination of trained personnel, subcontractors, and specialized equipment offers a quick-response team to properly address both closure and post-closure activities.

18.1.5 Facility Recordkeeping[tc \l3 "18.1.5 Facility Recordkeeping]

This subsection addresses the recordkeeping requirements of 40 CFR 761.180(b).

18.1.5.1 General Facility Records Policy[tc \l4 "18.1.5.1 General Facility Records Policy]

As required by 40 CFR 761.180(d), USEI plans to maintain records generated during the facility's operating life, for a post-closure period of 30 years. See Section 2.0 (Recordkeeping) for a list of documents to be maintained.

Some records, including manifests, analyses, etc., are computerized and this information may be stored on magnetic disks. In addition, hard copies of all records will be kept.

18.1.5.2 Property Ownership[tc \l4 "18.1.5.2 Property Ownership]

As required by 40 CFR 761.75(c)(7), USEI will notify EPA at least 30 days before transferring ownership of the property.

18.2 Closure Plan[tc \l2 "18.2 Closure Plan]

18.2.1 Closure Schedule[tc \l3 "18.2.1 Closure Schedule]

Since the landfill will be the final active PCB management unit at the site, the closure year estimate for site PCB activities is based on the operational life of the landfills.

18.2.1.1 Final Closure Year[tc \l4 "18.2.1.1 Final Closure Year]

The parameters used to determine the projected year that the PCB units will begin final closure activities are as follows:

- Estimated remaining capacity of Cell 14, 15, and 16 is approximately 1.0 million cubic yards constructed and approximately 10 million cubic yards permitted.
- The landfills routinely operate 260 days/year.
- The estimated daily disposal volume is 500 to 1000 cubic yards.

Based on these assumptions, the expected year of closure of the PCB facilities is the year 2050.

18.2.1.2 Partial Closure of PCB Operation[tc \l4 "18.2.1.2 Partial Closure of PCB Operation]

It is not anticipated that any on-site PCB facilities will undergo partial closure.

18.2.1.3 Final Closure Schedule for PCB Facilities[tc \l4 "18.2.1.3 Final Closure Schedule for PCB Facilities]

Final closure of PCB units will involve closure of the PCB only storage and processing areas [PCB Processing Building].

It is anticipated that the following events will occur prior to final closure of the PCB facilities:

- Adequate PCB disposal capacity will be reserved in the landfill area to accept all PCB materials generated by final closure activities for container storage, treatment facilities, and decontamination debris.
- All inventories of PCB waste will be removed from storage, treated and disposed. Inventories will be removed prior to implementation of final closure.
- PCB facilities will be demolished and disposed.
- Notifications will be made as described in Subsection 18.2.2.
- Final closure will be executed in accordance with this plan.

18.2.1.4 PCB Operational Units Requiring Closure[tc \l4 "18.2.1.4 PCB Operational Units Requiring Closure]

The USEI facility is operated with some separate areas used for PCB and hazardous waste treatment and disposal. If the facility ceases PCB activities, the units listed below would require closure under the PCB Closure Plan, as discussed in this subsection.

- PCB Processing Building

18.2.2 Facility Closure Notification[tc \l3 "18.2.2 Facility Closure Notification]

As required by 40 CFR 761.180 (b), USEI will notify U.S. EPA Region 10 within 60 days that the facility has ceased PCB disposal activities. The notice will specify where the required facility documents will be stored.

18.2.3 Closure of PCB Processing Building[tc \l3 "18.2.3 Closure of PCB Processing Building]

This subsection addresses the requirements for closure of the PCB Processing Building. This closure activity will relate to the removal and disposal of PCB inventories followed by the removal of the building. Sampling and environmental remediation of the area surrounding the building will be conducted as part of the RCRA closure activity in accordance with the requirements found in Attachment 9, Closure and Post-Closure Plans, of USEI's RCRA Final Status Permit.

18.2.3.1 Maximum Inventory[tc \l4 "18.2.3.1 Maximum Inventory]

PCB containers and transformers are potentially stored in the PCB Processing Building. The storage inventory of the building has been calculated on the "worst case" assumption that all containers are drums of liquids requiring off-site treatment/incineration. Under this scenario, there could be a maximum of 256 containers (55-gallon drums) for a total volume of 14,080 gallons of liquid for off-site treatment/incineration.

18.2.3.2 Closure Personnel[tc \l4 "18.2.3.2 Closure Personnel]

Trained qualified personnel will complete removal and processing of the container inventory in a safe, professional manner. The personnel who will perform these tasks are employees of USEI and/or subcontractors.

18.2.3.3 Final Closure of the PCB Processing Building[tc \l4 "18.2.3.3 Final Closure of the PCB Processing Building]

All PCB wastes in the PCB Processing Building were shipped off-site for incineration/treatment.

The PCB Processing Building was constructed of welded steel plates and beams and a wood framed - metal sided building. This building collapsed after the November 17, 2018 incident and was disposed.All solid PCB debris and waste residues were disposed in the onsite TSCA – approved landfill. The steel floor and curbing remained in place and were decontaminated with solvent to meet the standards of 40 CFR 761.79(b)(3)(i) prior to being converted to RCRA permitted container storage.

The surface areas surrounding the building were sampled and any contaminated soils were removed and the area backfilled with clean soil from the site.

During final facility closure, the surface areas underlying the PCB Processing Building will be inspected for visual evidence of leaks and spills. The regular inspections of the container storage areas will normally have identified any failure in the containment systems and any spills that may have occurred during unloading/loading and transfer operations. A visual spot check of adjacent areas will be made for identification of any obvious stained/contaminated soils. Sampling and testing of the area under the building will be conducted according to the procedure found in Attachment 9, Closure and Post-Closure Plans, of USEI's RCRA Final Status Permit. Contaminated soils >25 ppm PCBs identified through either of these methods will be removed to a TSCA approved landfill. The area will be backfilled with clean soil a minimum of 6 inches deep.

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18.2.4 Closure of PCB Storage Tanks

The PCB Storage Tanks were closed, removed and disposed on April 11, 2016. Sampling of the area under and around the location of the tanks will take place during final facility closure. [tc \l3 "18.2.4 Closure of PCB Storage Tanks]

18.2.5 Closure of PCB Tank Containment Area[tc \l4 "18.2.4.5 Closure of PCB Tank Containment Area]

The PCB Tank Containment was closed, removed and disposed on April 11, 2016. The tank storage area was demolished in a safe, professional manner. The tank containment area steel structure was handled as follows:

- Debris, waste, etc. that was on the surface was removed by broom and/or vacuum. Those materials were disposed of in the on-site PCB landfill.
- The tank containment was then placed in the on-site PCB landfill.
- Sampling of the area under and around the location of the tanks will take place during final facility closure.

18.2.6 Equipment Cleaning[tc \l3 "18.2.5 Equipment Cleaning]

Equipment used during site operation and closure activities will be cleaned in a safe and professional manner by trained, qualified hazardous materials technicians using procedures and safety equipment in accordance with OSHA requirements. Vehicles will be cleaned at the vehicle wash station, and visually inspected. All other equipment will be decontaminated with solutions designed to remove PCBs, rinsed with water, and wipe tested. These processes will be repeated as often as necessary to bring PCB concentration levels to below 100 micrograms/100 square centimeters. All cleaning residues and disposable supplies will be treated as PCB wastes and treated/disposed of in accordance with Federal regulations.

Any safety gear utilized during closure (respirators, suits, gloves, boots, masks, air-monitoring instruments, sampling devices, etc.) will either be cleaned (verified by wipe testing) or properly disposed of according to Federal regulations.

The Operations Manager will administer all cleaning activities. All personnel will be instructed as to the required safety equipment and decontamination procedures to be used during closure.

18.3 Post-Closure Plan[tc \l2 "18.3 Post-Closure Plan]

This subsection addresses the requirements for post-closure care, monitoring, and maintenance. Post-closure activities are not required for current RCRA and former TSCA tanks, containers, or their respective areas. The PCB trenches (PCB Trenches 1 through 4) are maintained in Post-Closure through the RCRA Post Closure requirements as Solid Waste Management Units. The only PCB Post-Closure requirement is the additional analytical for PCBs during groundwater monitoring.

18.3.1 Post-Closure Requirements[tc \l3 "18.3.1 Post-Closure Requirements]

18.3.1.1 Groundwater Monitoring[tc \l4 "18.3.1.1 Groundwater Monitoring]

All groundwater monitoring wells and devices will be maintained in good repair and kept operational in accordance with Attachment 11 of USEI's RCRA Final Status Permit.

Annually, during Post-Closure USEI will provide PCB analysis of the groundwater samples from the monitoring wells located in Table 10-1.

18.3.1.2 Recordkeeping[tc \l3 "18.3.2 Recordkeeping]

Recordkeeping during the post-closure period will be maintained in accordance with the requirements of 40 CFR 761.180 (d).

The location of all records will be specified in the PCB closure notice required by 40 CFR 761.180 (b).

18.4 Closure Cost Estimate[tc \l2 "18.4 Closure Cost Estimate]

This subsection provides the estimated cost for closure of the USEI PCB areas in a manner that cleans the facility and prepares it for non-PCB use, or disposes of the facility as applicable. This estimated closure cost is based on physical capacities. The estimated cost was based on the "worst possible scenario."

Unit costs are based on subcontractor costs to perform closure operations. Costs include all overhead, profit, supervision, equipment, and site facilities to accomplish the work. The closure cost estimate is provided as Attachment 18-1.

18.5 Post-Closure Cost Estimate[tc \l2 "18.5 Post-Closure Cost Estimate]

The post-closure cost estimate is provided in Attachment 18-1.

18.6 Financial Assurance for Closure and Post-Closure Care[tc \l2 "18.6 Financial Assurance for Closure and Post-Closure Care]

18.6.1 Certificate of Insurance for Closure and/or Post-Closure Care

USEI has established an insurance bond for financial assurance for closure and post-closure care. This insurance bond is combined with the RCRA insurance bond. A copy of the current Certificate of Insurance for Closure and/or Post-Closure Care is provided as Attachment 18-2.

18.6.2 Liability Insurance[tc \l3 "18.6.2 Liability Insurance]

USEI maintains insurance coverage which complies with current RCRA requirements.

18.7 Closure Certification[tc \l2 "18.7 Closure Certification]

At the completion of closure activities, a Professional Engineer (PE) will certify that the closure activities have been carried out in compliance with the approved closure plan for the site. This certification shall include a historical record of that engineer's involvement throughout the closure process (i.e., documentation of inspection/witnessing of key activities/milestones for each process area, observations of cleaning and/or rinsing operations, placement of approved caps, etc.).

The thrust of the certification is to document in detail that the engineer has been integrally involved and verifies that each significant component/operation of closure has been completed in a satisfactory manner according to the approved closure plan.