US ecology Nevada

Appendix B-1

FACILITY OPERATIONS PLAN

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1.0 FACILITY DESCRIPTION

US Ecology Nevada operates a Hazardous Waste Management Facility (Facility) in Nye County, Nevada, approximately 11 miles south of Beatty, in the Amargosa Desert. The Facility is owned by the State of Nevada, and is operated by US Ecology Nevada.

Operations at the site began in October 1962 on the Low Level Radioactive Waste Disposal Facility (LLRWDF). The Facility is approximately 80 acres in size and has been permitted for chemical waste disposal since 1971. The original lease to the Company covers 80 acres. However, since the transfer of the LLRWDF to the State of Nevada for custodial control and care, only two-thirds of the original lease is currently leased for the disposal of hazardous waste by the Company. The remaining portion of the original lease includes the closed LLRWDF. On December 30, 1997, the Nevada Department of Health (NDOH) accepted custodial care for the LLRWDF under terms of the 1977 lease, conditions of a 1993 settlement agreement, and provision of the NAC. Effective December 30, 1997, the Company is no longer the leasee, licensee, or operator of the LLRWDF.

The surrounding land is federally owned and administered by the Bureau of Land Management (BLM) as rangeland.

The Facility stores, manages and disposes polychlorinated biphenyl (PCB) wastes. This Facility Operations Plan sets forth standards and procedures implemented to ensure that these wastes will not present a threat to human health or the environment. The standards and requirements in this plan meet or exceed the requirements established by the U.S. Environmental Protection Agency (EPA) under the Toxic Substance control Act (TSCA).

Responsibility for the overall operation of the Facility resides with the Facility General Manager and the support of a team of individuals responsible for the safe

and environmentally sound operation of the Facility, in compliance with federal, state and local laws, regulations and permits. The Facility General Manager is supported by the management staff. Job descriptions identifying the technical qualifications for these individuals are included in Attachment 1.

2.0 FACILITY SECURITY

The Facility undergoes daily surveillance by Facility management and all employees in general during the normal course of their duties. Any deviation from established security measures will be promptly brought to the attention of Facility management for corrective action.

Unauthorized access to the Facility is prevented by means of a chain link fence approximately six feet (6') in height surrounding the Facility. The integrity of the perimeter fence is evaluated during the weekly inspection, and any problems noted are corrected in an expeditious manner.

Controlled access to the Facility is through the main gate (see attachment 2 – Site Map), which is located north of the office compound. The Main gate serves as the main entrance for Facility personnel, visitors, and waste transporters. This gate generally remains open during normal working hours under close supervision by Facility Personnel. Unauthorized access to the Facility during non-operational hours is controlled by maintaining the Facility gates closed and locked. A security guard is stationed at the front entrance and is on duty 24/7. After normal business hours security will sweep the perimeter of the facility a minimum of every two hours.

Visitors to the Facility must register at the main office. Waste transporting drivers are required to register at the Receiving office. After registration, waste transporter vehicles are subject to required inspection and paperwork review procedures and are then directed to the appropriate waste management unit for further inspection, sampling (if necessary), unloading, processing (as required) storage or disposal.

Other gates in the perimeter fence (see Attachment 2) remain locked and are used for the delivery of construction materials and equipment under proper supervision.

Warning signs are posted at each entrance to the active portion of the Facility and at other locations around the perimeter of the Facility such that they may be visible from any approach to the active portion of the Facility. Warning signs bear the legend "Danger – Unauthorized Personnel Keep Out" and are of sufficient size to be legible from a distance of twenty-five feet (25').

3.0 WASTE DISPOSAL, CHARACTERIZATION, INSPECTION, AND VERIFICATION PROCEDURES

3.1 PCB Waste Accepted for Disposal

The following PCB wastes are approved for disposal at the Facility [per 40 CFR 761.60 (b) and (c)]:

- **Non-Liquid PCBs:** Non-liquid PCB in the form of contaminated soil, rags, or other debris.
- **Dredged materials and municipal sewage treatment sludge that contain PCBs:** These materials shall be dewatered so as to pass the Paint Filter Liquid Test described in the most current approved version of SW-846, "Test Method for Evaluating Solid Wastes, Method 9095", prior to landfilling.
- **Drained PCB Transformers (≥500 pm PCB):** PCB transformers shall be drained of all free-flowing liquids, filled with a PCB-soluble solvent, allowed to stand for at least 18 hours, and then drained thoroughly. The transformer carcass shall then be disposed of.
- **PCB Electrical Equipment:** All PCB electrical equipment except capacitors shall be drained of all free-flowing liquids prior to landfill.
- **PCB contaminated Capacitors (containing between 50-500 ppm PCBs)**
- **PCB-Free Capacitors:** Any Capacitor determined to be PCB free as indicated by label, nameplate information, manufacturer's literature, or chemical analysis.

- **PCB Small Capacitors not owned by manufacturer:** PCB small capacitors owned by a person who did not manufacture or at any time manufacturer PCB capacitors or PCB equipment.
- **PCB Hydraulic Machines:** PCB hydraulic machines must be drained of all free-flowing liquids prior to landfill. If the liquid contains 1000 ppm PCBs or greater, the machine must be flushed with a PCB-soluble solvent containing less than 50 ppm PCBs prior to landfill.
- **PCB Articles at 500 ppm PCBs or greater:** PCB Articles containing PCBs at 500 ppm or greater shall be thoroughly drained of all free-flowing PCB liquids prior to landfill.
- **PCB Articles between 50 – 500 ppm PCBs:** PCB Articles containing between 50 and less than 500 ppm shall be thoroughly drained of all free-flowing PCB liquids prior to landfill.
- **Fluorescent Light Ballasts:** Fluorescent light ballasts containing PCBs in their potting material.
- **Undecontaminated PCB Containers:** PCB containers which have been used to contain PCB liquids 500 ppm or greater and which have not been decontaminated must be drained of any liquids prior to landfill.
- **PCB Containers exposed to less than 500 ppm PCBs:** Containers used to contain PCB liquids at less than 500 ppm can be:

  (1) Drained off any liquids prior to landfill or

  (2) The container of liquid PCBs with a concentration less than 500 ppm PCB may be disposed of if each container is surrounded by an amount of inert sorbent material capable of absorbing all of the liquid contents of the container [per 40 CFR 761.75(b)(8)(ii)] and providing that the total

amount of liquid per 55 gallon drum is equal to or less than 15 gallons.

- **Combined TSCA/RCRA Waste Streams:** PCB-containing wastes may be treated in Stabilization Tank #18 (Treatment Pan #4) and Stabilization Tank #19 (treatment Pan #5) when the presence of RCRA hazardous constituents in combined RCRA/TSCA waste requires treatment prior to land disposal.

In addition the following wastes are approved for disposal at the Facility:

- **PCB Remediation waste** [per 40 CFR 761.61]
- **PCB Bulk Product waste** [per 40 CFR 761.62]
- **PCB Household waste** [per 40 CFR 761.63]

All liquid PCBs (which cannot be appropriately landfilled) shall be transported off-site for disposal at an EPA-approved PCB disposal facility in accordance with 40 CFR 761.60(a).

3.2 Waste Characterization

The goal of US Ecology Nevada's waste characterization program is to obtain the necessary information on every potential waste stream to allow a determination as to the acceptability of the waste and to ensure the use of proper waste management practices upon acceptance. The information required for waste characterization may be provided by the waste generator or obtained by US Ecology Nevada through analysis of a representative sample of the waste.

US Ecology Nevada requires that all waste generators supply a description of the process generating the waste and a detailed description of the waste components using a Waste Product Questionnaire form or commonly

referred to as a profile (see Attachment 3). The generator may also be asked to certify that the waste is not prohibited from land disposal by federal and state regulations, that any samples of the waste provided to US Ecology Nevada were collected in accordance with US EPA approved methods and constitute representative samples of the waste or other information. Facility personnel review the information provided for technical adequacy. All waste streams for disposal at the Facility are co-approved by US Ecology Nevada personnel and the Nevada Division of Environmental Protection (NDEP). For further details on waste characterization and acceptance see the US Ecology Waste Analysis Plan (WAP) in Attachment 11.

3.3 Waste Inspection and Verification

The US Ecology Nevada waste stream verification program has been developed to inspect each waste shipment received at the facility to determine its acceptability and conformity to the waste profile developed during the approval process. All verification procedures are performed under the direction of General Manager/Designee.

The verification program includes procedures for inspection of the waste shipment upon arrival at the facility, and for sampling and analysis of the waste prior to processing. Minor discrepancies may be resolved through communication with the generator. If they are significant, analysis and/or investigation may be necessary. An unresolved discrepancy will result in shipment rejection. Discrepancies are documented on the manifest. Discrepancies, which may cause rejection of the waste, are also documented on the Unusual Occurrences Report, see section 4.7.

The manifest and/or shipping papers accompanying the waste shipment is reviewed prior to inspecting the load, to verify the following:

- The manifest has been properly completed and corresponds to the waste described on the profile.
- The amount of waste received is equivalent to the amount recorded on the manifest. A variation greater than ±10% bulk weight (or a piece count in containerized shipments) is considered a discrepancy.
- A complete Land Disposal Restriction (LDR) form or equivalent is included with the shipping papers of waste streams subject to 40 CFR 268 LDR standards, if appropriate.

Preliminary inspections of each waste shipment are conducted upon arrival at the facility, and prior to any off-loading. Upon unloading, every container in a containerized waste shipment must be opened and visually inspected. The Receiving Technician or operator will compare the load with the description of the waste previously provided by the generator, and contained on the profile. This description may include, but may not be limited to, the waste stream name, the generating process, odor, color, waste stream components and percentages, and any other relevant information. If during the shipment inspection it is determined that the waste received does not match the profile's description, the shipment will be subject to further investigation or verification testing and analysis.

During the shipment inspection, the presence or absence of free liquids and any potential dusting problems are visually determined. If a sorbent material has been used in a containerized shipment, US Ecology Nevada will visually evaluate the sorbent to ensure that the generator employed the non-biodegradable sorbent (or equivalent) specified in the component's breakdown section of the profile.

Shipment inspections are conducted by personnel who are provided with training in proper waste inspection procedures.

US Ecology Nevada conducts verification sampling and analysis on incoming waste shipments to ensure that the waste conforms to the waste stream profile developed during the approval process, and to the description on the accompanying manifest and/or shipping papers. This sampling and analysis effort is not intended to characterize the waste stream; any sampling and analysis necessary for waste characterization is performed during the waste stream approval process.

The sampling and analytical requirements may be waived if the waste cannot be appropriately sampled and analyzed (e.g., glass, used safety equipment, debris, crushed or empty containers). If the chemical and physical nature of the waste is known in sufficient detail, such as in lab packs, outdated commercial chemical products or single source spills, sampling may not be necessary or appropriate.

Incoming waste shipments are subject to the following analysis:

- Paint Filter Liquid Test is used to determine the presence of free liquids.
- pH Screen (1% solution) indicates the pH range and the general corrosive nature of the waste. PH screen may not apply to certain waste types, e.g., organic waste, or insoluble solid waste.
- Water Reactivity is used to determine whether the waste has a potential to vigorously react with water to form gases or other products, or generate significant heat. This test does not apply to wastes for which sufficient analytical data exist that indicate no potential reactivity with water.
- Sulfide Screen (ASTM Method D 4978-89) is used to identify the presence or absence of sulfides in the incoming waste to determine the potential for changes in the waste's physical and chemical

properties. If the presence of sulfides has not been previously identified by the generator, a positive result may be indicative of changes in the waste properties, and will require further evaluation of the wastestream prior to acceptance.

- Cyanide Screen (ASTM Method D 5049-90) is used to identify the presence or absence of cyanides in the incoming waste to determine the potential for changes in the waste's physical and chemical properties. If the generator as part of the waste profile has not previously identified the presence of cyanides, a positive test result may be indicative of changes in the waste properties, and will require further evaluation of the wastestream prior to acceptance.

Bulk waste loads are sampled and analyzed, except where large volumes of a single waste stream are received from a single source, (e.g.; a site cleanup, a large volume generator, etc.). In such cases, all shipments are inspected and at least 10% of such loads are sampled and analyzed. Bulk waste may also be sampled in an original bulk container (e.g., rail tanker, gondola car, etc.).

4.0 LANDFILL OPERATIONS

Hazardous solid wastes are disposed of at the facility by burial in landfill Trenches. Trench 12 and Trench 13 are both active landfill disposal units at the facility. The landfills are constructed in a phased manner, with multiple subcells. Trench 12 is approximately 10.4 acres in size and consists of three subcells. Trench 13 is approximately 47.3 acres in size and consists of five subcells. Each subcell extends approximately 75 feet below grade and approximately 80 to 90 feet above grade.

The landfill disposal operations will include inspection and acceptance of the waste, preparation of burial instructions, burial operations, and vehicle release. This section describes specific procedures to follow in conducting these operations.

Waste that meets the LDR requirements and passes the Paint Filter test may be deposited within the active landfill trenches. All waste streams are evaluated during the approval process for potential incompatibility. Solid acidic waste and solid caustic waste are segregated within the landfill and separated by a berm of soil or select waste. Non-compatible materials must maintain at least three feet of horizontal and vertical separation distance with a barrier of soil or compatible material placed between them. The locations of the selected zones are dynamic within each trench and new areas are established as landfill development progresses. Wastes that are not compatible with PCB wastes are also segregated into a separate zone.

In addition, lab packed liquid wastes that are chemically compatible with PCB wastes may be disposed of in the same subcell.

Personnel will wear appropriate personal protective equipment to protect against dermal contact with or inhalation of PCBs or materials containing PCBs during all storage, treatment and disposal operations [per 40 CR 761.60(b)(8)].

4.1 Disposal of Containerized Waste

Normally, containerized waste will be removed from the transportation vehicle with a forklift equipped with drum-handling mechanisms. After the container is inspected, verified that it is at least 90% full, and sampled if required, the container is placed into the landfill in the appropriately indicated subcell. In the event that the receipt inspection reveals that the containers are less than 90% full, the void space is filled with site soil or suitable absorbent. Filling of the void spaces may be accomplished by hand or using a front-end loader or other equipment. Empty containers are crushed inside the cell to remove the void space with heavy equipment. Waste placement is performed to minimize void space and care will be taken during placement and backfill operations to avoid dropping, breaking or otherwise careless handling of containers. Materials placed in close proximity to the landfill liner components shall consist of select waste that is free of debris, large rocks, or sharp protrusions. Native soil should be used in these locations if select waste is not available.

Containers of PCB liquid with a concentration of less than 500 ppm and with a volume of less than 15 gallons of liquid will be placed in the landfill and surrounded by an amount of inert sorbent material, i.e., soil, which is capable of absorbing all of the liquid contents of the container.

4.2 Bulk Solids Disposal

The disposal of bulk solid waste will normally require that the transport vehicle be taken to the disposal cell to offload the waste. Special attention will be taken to prevent dusting during the off-loading operation. Waste streams are carefully evaluated to determine the potential for particulate emissions, odor, or dust generation. Waste streams, which pose a

potential for excessive emissions, may be rejected, or special packaging or handling arrangements made to manage them in a protective manner.

Clean Facility soil or suitable waste material, i.e., free of debris or large rocks will be placed directly against the synthetic liner.

4.3 Wind Dispersal Control

As a measure to control the potential for wind dispersal of particulates during landfill operations, US Ecology Nevada conducts in-depth evaluation of waste streams during the approval process to determine the waste stream's potential to generate excessive during off-loading. Special packaging and handling arrangements are made as necessary to contain the dust during off-loading or disposal.

Wind dispersal is further controlled by placing a minimum of six-inch soil cover, compatible non-hazardous waste or an alternate cover material at the end of each operating day.

4.4 PCB Management Procedures

In addition to PCB wastes received for direct disposal, US Ecology Nevada accepts a variety of PCB-containing materials (e.g., transformers, bushings) that require draining and flushing to remove PCB liquids contained in these materials prior to disposal. The PCB processing system currently consists of the PCB Processing Building, where storage, handling, draining, and flushing of transformers and capacitors takes place, and four (4) storage tanks located outside the PCB Processing Building for the temporary storage of drained liquid PCB and flushate. A smaller PCB holding tank is used to transfer liquids from the original

containers to the storage tanks. PCB liquids are transported to an off-site incinerator for disposal.

4.4.1 PCB Storage, Draining and Flushing

The PCB Draining and Flushing Area includes the PCB building and adjacent PCB tank farm. The building has a sealed concrete floor and is underlain by a 4-mil vapor barrier, and two sand-bedded 30-mil HDPE synthetic liners.

The draining and flushing of PCB items are performed in the PCB building. After inspection and acceptance by Facility personnel, PCB items are unloaded from trucks, using a suitable crane or other lifting device. Items are then placed on the concrete apron at the west end of the building and transported by forklift into the building for draining or draining and flushing.

Prior to beginning draining operations, the liquid level indicators on the PCB liquid storage tanks are inspected for sufficient volume capacity to conduct the draining operations. In addition to this initial inspection, the pump operator periodically checks the tank liquid level indicator gauges during draining operations to ensure tanks are not overfilled. Draining is accomplished by inserting the pump hose with a tube attachment into the item and pumping out the liquid. The PCB items are drained, one at a time, to one of the PCB holding tanks.

All storage holding tanks are equipped with audible liquid level alarms. The alarms are inspected routinely to ensure good working order. In addition, the secondary containment for the PCB storage

tanks is sized to contain twice the volume of the largest PCB tank plus the volume of a one hundred (100) year, 24-hour rain event.

Upon completion of the draining phase, all PCB transformers that contained PCB liquid less than 500 parts per million (ppm), all PCB-contaminated electrical equipment, and all other PCB articles and containers, are removed from the building for disposal in the designated disposal trench. All remaining transformers that contained PCB liquid in excess of 500 ppm, and all PCB hydraulic machines which contained PCB liquid in excess of 1000 ppm, are filled with No. 2 diesel fuel or another suitable solvent in which PCBs are soluble. At the end of an 18-hour flushing period, the solvent is drained and treated as PCB liquid.

Flushate can either be stored in the PCB storage tanks and sent of for incineration or it can be stored for reuse as long as it contains less than 50 ppm of PCBs.

All PCB liquids contained in the holding tank are transferred to the appropriate storage tank until transported off-site for incineration or treatment in accordance with all applicable state and federal regulations.

When the transformers or related items have been drained of flushing solvent, they are stored or removed for disposal in the designated disposal area. At the end of the operation, the Facility personnel will clean up all incidental spills, per the PCB Processing Facility Spill Prevention Control and Countermeasures Plan, see Attachment 4.

4.4.2 Commercial Storage of PCBs

PCB liquids generated from draining and flushing operations are containerized and stored in the PCB building or transferred to the PCB tank farm, pending transportation to an authorized disposal facility. Daily inspections (when operating) are conducted of the PCB storage building and the PCB tank farm to ensure that all facilities are operated in a manner that is protective of human health and the environment. The inspection includes assessing the storage tanks and containment structures for signs of corrosion, erosion or leaking fixtures or seams. The area immediately surrounding each tank is inspected for any obvious signs of leakage. A work order will be promptly initiated to repair any leaking equipment. The repair will be completed as soon as practicable.

4.4.3 PCB Disposal

Disposal of PCB-contaminated material is conducted in the specifically designated disposal areas. Other wastes not chemically compatible with PCBs are segregated from the PCBs throughout the waste handling and disposal process. PCB wastes are typically compatible with other PCB wastes when stored, blended in tanks or placed in contact in a landfill trench. PCB wastes will be co-disposed in the landfill with non-PCB wastes (this includes both RCRA and non-RCRA). PCBs are incompatible with strong oxidizers and strong acids but are generally chemically inert under normal conditions. Liquids containing PCBs will only be store in steel drums as PCBs have been know to attack some plastics.

USEN's approach is to categorize a waste by its reactive characteristics. USEN will use EPA-600/2-80-076, "*A Method for Determining the Compatibility of Hazardous Wastes*", as a guide to group PCB and other wastes into the different reactivity groups established. Additional information can be found in the USEN Waste Analysis Plan.

Drained, and flushed if required, transformers or related items that were removed from the building are disposed in the designated disposal area. The transformers or related items are placed in the landfill in a manner that will prevent damage to the articles, [per 40 CFR 761.75(b)(8)(i)]. At the end of the operation, the Facility personnel will clean up all incidental spills, per the PCB Processing Facility Spill Prevention Control and Countermeasures Plan, see Attachment 4. The cleanup material is treated as contaminated and disposed of in the active disposal area. All contaminated personal protective clothing is also properly collected, macro-encapsulated if required and disposed in the active disposal trench.

4.4.4 PCB Stabilization

Leachate generated by the facility can be solidified provided the PCB concentration is less then 2 ppm.

Liquids with concentrations of less than 50 ppm can be solidified providing that the source of the PCB liquid is less than 50 ppm.

PCB waste (non-soils) at concentrations less then 50 ppm may be placed in the treatment pans when RCRA hazardous constituents in combined RCRA/TSCA waste require treatment prior to land

disposal. Soils that are determined to be characteristic under RCRA and are TSCA regulated may by treated in the pans provided that PCBs less then 1000 ppm. PCBs will be required to meet the land disposal restrictions outlined in 40 CFR §268.48.

The Facility determines PCB concentrations prior to stabilization of any liquid waste. The solidification process will reduce the liquid content or increase the solid content so that a non-flowing consistency is achieved to eliminate the presence of free liquids prior to final disposal in the specifically designated disposal areas.

When PCBs are being treated in stabilization pans #4 or #5 water will be used to keep dust emissions to a minimum.

The stabilization process will reduce the liquid content or increase the solid content so that a non-flowing consistency is achieved to eliminate the presence of free liquids prior to final disposal in the specifically designated disposal areas. Liquid waste will be stabilized by the addition of a chemical additive or with a dry inert absorbent. The waste must pass the Paint Filter Test, as identified in SW-846, prior to disposal.

Stabilization of liquids with concentrations of less than 50 ppm PCB can also be achieved by placing the waste in the Facility's evaporation tank.

The evaporation tank is inspected on a daily basis (when operating) to allow detection of a release within 24 hours, or at the earliest practicable time and to ensure that a minimum of six-inch freeboard is maintained in the tank to prevent overtopping due to wind action.

As a measure to prevent spills, facility personnel are trained in proper waste management procedures, including the observance of caution while unloading waste into the tank to avoid splashing or tank overfilling.

4.5 Vehicle Inspection and Cleaning Procedure

Any material spilled during off-loading activities will be collected and properly disposed of. The vehicle's floor will be swept clean of any remaining residue and spill absorbent material used, and the sweepings collected for further disposal, as appropriate.

After completion of the off-loading procedure, the trailer must be inspected for contamination and additional decontamination activities performed if needed.

Tailgates and tires of vehicles entering the disposal cell will be inspected prior to leaving the area and any residue present is removed with a scraper or broom. If this procedure is not effective in removing all residue, the vehicles are directed to the truck washing area for decontamination.

4.5.1 Vehicle Decontamination

Vehicle decontamination takes place at the truck washing facility. The contaminated portion of the vehicle is placed on the drain pad portion of the wash pad in such a way that all contaminated wash water is directed into the holding basin. High-pressure steam or water is then used to clean the contaminated portions of the vehicle. The steam is directed so that the contaminated wastewater is then held in the evaporation tank until evaporation of the water

is complete, or it may be sent off-site for disposal. The remaining solids are then collected and deposited in the disposal cell.

There is very little chance for adverse reaction because of the low concentrations of contamination in the wash water. Therefore, no segregation of material in the evaporation tank is planned.

4.6 Operational Backfill

Normally, at the end of each working day, all waste placed in the cell is covered with at least six (6) inches of soil, compatible non-hazardous waste or alternate cover material. However, the end of the drums, transformers, or other containers in the outermost row may remain exposed, to facilitate close placement of the next day's waste.

4.7 Unusual Occurrences

It is the responsibility of the General Manager/Designee to ensure that the reporting and recording of unusual occurrences are properly completed, and that all appropriate mitigating activities have been concluded.

An unusual occurrence will be defined as:

- Fire
- Explosion
- Spill or leak (as defined by the Facility Contingency Plan)
- Airborne waste release
- Major manifest discrepancy (e.g., piece count, unmanifested load)
- WDI discrepancy (e.g., unauthorized liquids)
- On-site motor vehicle accident
- Personnel exposure or reportable injury

- Any event which results in the implementation of the Facility Contingency Plan

Unusual occurrences shall be reported to the General Manager/Designee as soon as possible. The Unusual Occurrence will be investigated and attempt made to resolve the occurrence. If the Unusual Occurrence involves waste stream material, the customer may be notified and the information obtained from the customer considered in developing the incident resolution.

All unusual occurrences shall be documented according to the Record Keeping and Reporting Plan, see Attachment 5.

5.0 LOCATION OF WASTES

The Facility will maintain records of waste location within the disposal cell using a grid coordinate system. The system requires division of the disposal cell into rectangular grid blocks by a competent surveyor using appropriate surveying techniques.

The dimensions of the landfill grid blocks will be 50 feet long, 50 feet wide and 10 feet in depth. The grid blocks shall be described by elevation and horizontal coordinates to the nearest whole foot, maintaining accuracy within ten feet (10'). The grid system will be established in reference to elevation (of the waste) and horizontal benchmarks. Diagrams illustrating the grid system for Trench 12 and Trench 13 are contained in Attachment 6. To simplify the recording of coordinates, each grid is designated by a number and a letter. When the grid system is used in conjunction with waste elevation, an accurate location of waste placement can be maintained.

Wastes that are identified as incompatible shall be segregated within the landfill, as described previously in Section 4.0 of this Plan.

Grid markers will be weatherproof, distinctively identifiable from the next marker in any direction, oriented with and tied to the Facility grid.

The location of waste within the cell will be reported as follows:

- Grid coordinates (e.g., N8, EH) south and west of the waste location
- Distance of the load north from the north grid named above
- Distance of the load east from the east grid named above
- Distance the load extends north in even feet
- Distance the load extends east in even feet
- Top elevation

- Depth of load

On a daily basis the Landfill Supervisor will determine the daily coordinates being used and communicate those coordinates to USEN operations staff (example of daily sheet included in Attachment 6). The disposal grid coordinates including the elevation are hand written on the work order when the waste is disposed of. It is important the operator disposing the waste record both the X and Y coordinates from the grid system and the waste elevation to accurately reflect waste placement.

Irregularly shaped loads and bulk loads will be defined by the smallest grid block that completely encloses them. Shipments containing more than one waste stream of compatible waste may be buried and located in the same area and identified as such.

Waste location information will be recorded in the Workorder Supplement sheet (see the Record Keeping and Recording Plan included in Attachment 5).

6.0 SURFACE AND GROUNDWATER PROTECTION

There are no perennial streams within 10 miles of the Facility. The Facility is not located on a floodplain, shoreline, or a groundwater recharge area, and there is no known hydraulic connection between the site and potential standing or flowing surface water. The site is not subject to concentrated stormwater flows resulting from extreme rainfall events. Sheet flow, which might result from such a storm, is diverted away from the site by drainage ditches north and east of the site. These existing diversion features prevent off-site run-on from entering the Facility. Within the disposal area, any runoff, which might be generated by incidental precipitation, is retained within the disposal unit. Any future waste management area will be similarly protected.

The 100-year, 24-hour point rainfall is 2.6 inches with a runoff over the watershed of 0.43 inches. It was found that the 100-year, 24-hour storm peak flow of 2,056 cfs would be carried into the six channels of the Amargosa River with a flow depth of 0.13 feet. Since the site is at least four feet above the nearest channel, it would not be impacted by the 100-year, 24-hour flow in the Amargosa River. Therefore, the site is not within a 100-year floodplain. The Flood Insurance Rate Map of the area also shows the area does not fall within the 100-year flood boundary.

6.1 Run-On Control

Run-on control minimizes the erosion of Facility containment structures, the surface discharge of waste constituents, and the downward percolation of liquid through wastes. This protection is provided in several ways. The area surrounding an operational disposal cell will be graded so that surface waters, if any, will be directed away from the active disposal area. The earthen covers of inactive disposal cells will be graded to provide good drainage away from the active disposal area.

The run-on control ditches are inspected weekly and after every storm to ensure that the design capacity is maintained. Necessary maintenance activities are conducted to ensure that accumulated debris or obstructions do not reduce the system's capacity.

6.2 Run-Off Control

With the run-on control measures in-place at the facility, the only water expected to come in contact with the waste in the disposal unit is rainfall. No run-off is expected from the disposal unit since precipitation run-off is contained within the active disposal area and collected by the cell's leachate collection and removal system. All liquids collected will be managed properly and will not be discharged.

7.0 FACILITY INSPECTION

US Ecology Nevada's inspection Plan (Attachment 7) provides for the overall inspection of the Facility operations on a daily, weekly, monthly and quarterly basis. The inspection schedule has been established to ensure that the areas with the highest potential for deterioration or malfunction are inspected most frequently. The schedules combine inspection of general aspects of the Facility operation, such as emergency and safety equipment and perimeter fence integrity, with process specific inspection requirements, such as inspection of the active disposal cell.

Attachment 7 contains samples of the Facility Inspection Forms used to document each type of inspection. Each form identifies the areas subject to inspection and the type of problems to look for during the inspection. All forms are provided for example purposes only, and may be substituted by equivalent forms.

Any malfunction or deterioration of equipment or a structure identified during an inspection is promptly brought to the attention of the General Manager/Designee. The deficiency is evaluated for environmental or human health hazard potential, taking into consideration the location and nature of the problem, the potential for waste migration and human exposure, and the availability of control mechanisms such as secondary containment. Appropriate response times, interim measures, and corrective actions are determined based on the hazard evaluation.

Remedial activities are prioritized according to the nature or seriousness of the problem and are conducted in an expeditious manner.

The Facility Inspection Report corresponding to each type of inspection (daily, weekly, monthly and quarterly) is completed to document performance of the inspection. The designated inspector must include his or her name, the date and time of the inspection, and a notation of any observations made during the

inspection. When corrective measures are necessary, the inspector must complete and sign the Inspection Deficiency and Corrective Action report (also included in example form in Attachment 7), indicating the nature of the deficiency and the date and type of corrective action undertaken. Inspection reports are compiled and maintained as part of the Facility operating record. Records are to be maintained at the Facility for at least three (3) years.

8.0 PERSONNEL TRAINING PROGRAM

The US Ecology Training program is in compliance with 29 CFR §1910.120 which covers hazardous waste operations and emergency response. The training program implementation is the responsibility of the General Manager/Designee. The General Manager/Designee functions as Training Coordinator, responsible for selecting qualified instructors, planning and organizing the training sessions, and ensuring proper adherence to documentation and record keeping procedures. The identification of training needs of each job position and development of the training program's content will ensure adequate instruction relevant to each position is provided.

Training on new environmental regulations pertaining to Facility operations and compliance with environmental standards will also be provided. Training lesson plans will be developed to address specific areas of the regulations for which personnel training is required. Training may first be provided to key Facility management personnel who may be responsible, once trained, for training other personnel.

8.1 Trainer's Credentials / Instructor Qualifications

US Ecology shall ensure that a person trained (as described in 29 CFR §1910.120(p)(7)(iii)) in hazardous waste management procedures of 29 CFR §1910.120(p) shall direct the training program, and shall teach facility personnel hazardous waste management procedures relevant to their employment position.

The required qualifications for the individuals responsible for training implementation include knowledge of state, federal, and local regulations pertinent to hazardous waste management and disposal.

8.2 Training Program Description

US Ecology Nevada's training program is designed to ensure that the amount and type of training offered to Facility personnel is adequate to allow efficient and safe performance of the tasks associated with each job position. The training program focuses on the training needs of the Hazardous Material Workers. This classification includes all job positions assigned to work in the active areas of the Facility where hazardous wastes are received, stored, handled or disposed. The program incorporates additional levels of training to fulfill the needs of employees requiring specialized training (i.e., Heavy Equipment Operator), and of those whose job positions do not have primary waste management responsibilities, but need a general understanding of the Facility's operations and procedures to react properly in an emergency situation.

All new employees who fall under the general category of Hazardous Material Worker will be given an initial 24 hour training as defined by 29 CFR §1910.(e)(3)(iii), which is for hazardous material workers regularly on site who work in areas which have been monitored and fully characterized. Only workers who have completed their initial 24 hour training may have un-supervised access to the areas in which hazard waste operations are being performed. These areas include but not limited to Trench 12 and 13, CMS building, Stabilization (both indoor and outdoor) and the PCB processing building. Those workers who have yet to completed the initial 24 hour training will be required to be supervised at all times.

8.2.1 Waste Receiving Technician

The Waste Receiving Technicians are required, upon hiring, to participate in an in-house training program intended to familiarize them with environmental regulations pertinent to the Facility's

waste stream evaluation and approval procedures, Facility environmental permits, company policies regarding waste acceptance, and relevant aspects of Facility operations. Employees which may show by documentation and/or certification that their work experience and/or previous training has resulted in training equivalent to the one required to perform the duties associated with their job description, may be exempt from environmental regulations training, as appropriate. The in-house training provided to such employees will be focused on Facility-specific permits and procedures, and company policies. Completion of the qualification training shall be documented.

The requirement for annual review of the initial training is satisfied through the in-house training program intended to keep the Receiving Technician up to date with newly promulgated regulations. The Receiving Technician may also participate in training courses or seminars offered by independent organizations.

8.2.2 Hazardous Materials Worker

Newly hired employees, who will be assigned to work in the active areas where hazardous wastes are received, stored, handled or disposed, will be required to undergo initial 24 hour qualification training as Hazardous Materials Worker Trainees. The initial qualification training addresses the following subjects:

- Respirator Training
- Basic Facility Safety Requirements
- Facility Tour – Explanation of Operations
- Emergency Contingency Plan
    - Location and use of emergency equipment

  - Various contingencies (i.e., fire, spill, gas release) and appropriate responses
  - Agreements with off-site response agencies
- Use and Location of Self-Contained Breathing Apparatus (SCBA)
- Fire Extinguishers Locations, Use, Limitations
- Location and Use of Emergency Eye Wash/Shower
- General Overview of EPA/DOT Markings and Labeling
- General Overview of RCRA and TSCA Permits
- Hazard Communication
- Personal Protective Equipment – Locations, Use, Limitations
- Medical Surveillance Requirements
- Decontamination Procedures
- Other

The employee's completion of the qualification training shall be documented. No employee will be allowed to work in active areas of the facility without direct supervision of a qualified Hazardous Material Worker until all initial qualification training is complete.

As part of the qualification process, each new employee receives a complete medical evaluation and is properly fitted for respirator use prior to being allowed direct handling of waste materials or access to the active disposal area. Any employee assigned a job position requiring operation of heavy equipment will receive specific training on the operation of each piece of equipment he or she will operate.

8.2.3 Specialized Training

Specialized training is required for several job positions where specific skills are necessary to fulfill the responsibilities and duties of the position. The employee may initiate the specialized training during or after the initial qualification process.

8.2.3.1 Heavy Equipment Operator

In addition to the 24-hours of initial training, qualification of Heavy Equipment Operators (HEO's) includes a period of supervised on-the-job training and performance evaluation by the immediate supervisor in conjunction with the General Manager/Designee.

The training program is designed to produce an HEO who is proficient in the operation of all Facility heavy equipment. A qualified operator is expected to demonstrate the ability to use the equipment as designed, and to have working knowledge of preventative maintenance and equipment safety practices. At a minimum, a HEO must be able to demonstrate:

- Knowledge of operational controls, pinch points, lifting or load limits, load charts, steering, and brake mechanisms.
- Ability to perform routine checks and servicing of equipment to the degree that the person understands all operational functions.
- Working knowledge of specific operational features of the equipment to be operated.

Once these skills are demonstrated, the supervisor indicates in the employee training record all heavy equipment on which the employee has obtained qualification. The HEO is then qualified as a replacement operator and may be allowed to begin unsupervised operation of the particular units for which training was completed.

8.2.4 General Training

Facility employees who do not work in active areas (for example, secretarial personnel, accountants, security guards, etc.) will receive sufficient instructions so as to understand the posting of active areas, the general operations conducted in those areas, and the restrictions imposed on their entrance and access to such areas. This generalized training program will be offered to each employee during the first six months of employment, and includes training on basic Facility safety requirements, the Facility's emergency preparedness program and contingency plans.

Visitors and contractors whose functions at the Facility require access to active areas of the Facility for extended periods of time may be subject to some level of training, if determined necessary. Visitors and contractors will be required to read and sign the Visitor/Contractor On-Site Authorization Record, see Attachment 8, which contains general guidelines to follow in case of an emergency. When additional training is provided, training shall be documented.

8.3 Training Techniques

The Facility training program combines orientation meetings and classroom instruction with on-the-job training and other teaching aids, e.g. videotape presentations. Training Lesson Plans (TPL's) may be used to aid instructors in the presentation of employee training. These lesson plans will be developed, and updated as necessary by Facility and/or corporate personnel, to cover both general and Facility specific subjects. All TLP's are to be approved by the General Manager/Designee prior to use at the Facility. Written examinations may be incorporated as part of the TLP, and when used, are entered into the individual's training records. When a TLP is used for employee training, it is noted in the individual's training records.

Emergency drills are employed as another training tool. Drills involving the implementation of the contingency plan will be conducted at least twice per year. A record of all personnel who participate in the drill will be made and noted in the employee's training record.

8.4 Continuous Training Program

On an annual basis all employees will complete an 8 hour OSHA/HAZWOPR refresher training course. The course involves subjects addressed during the initial training as well as other topics related to hazardous waste management and the Facility's industrial hygiene and safety program. Employee participation in these sessions is documented on the Sign-In form (see Attachment 9)

Subjects addressed during the continuous training program will include, at a minimum, the following:

- Review of basic chemistry as it relates to hazardous materials

- General Facility safety and security procedures, practices and requirements
- Contamination Control
- Physical and chemical hazards associated with waste materials
- U.S. DOT packaging, manifesting, labeling, and placarding requirements for hazardous waste
- Proper use of respiratory protection including emergency use equipment
- Proper use of personal protective equipment
- Proper equipment and personnel decontamination procedures
- Proper procedures for receipt, inspection, handling, disposal and location of waste material
- Review of the Facility Emergency Preparedness and Contingency Plan requirements
- Review of emergency response equipment, communication equipment and operational procedures necessary to carry out the Contingency Plan emergency response operations
- Proper use of Facility fire extinguishers
- Basic first aid procedures
- Review of Facility Hazard Communication Program
- Review of Facility Hearing Conservation Program
- Review of Facility Medical Evaluation Program
- Review of applicable RCRA and TSCA regulations governing the storage and disposal of waste materials
- Review of permit requirements governing Facility operations

8.5 Documentation and Recordkeeping

The responsibility for maintenance of training records at the Facility relies on the General Manager/Designee. Training records for current

employees will be retained at the Facility as long as the Facility is in operation; on former employees, records will be retained at least three (3) years after termination of company employment.

The documents that will be retained as constituents of the training record include:

- Job titles and description for each position related to hazardous waste management and name of employee filling the position.
- Written job description for each position related to waste management, describing the required qualifications, duties of the position, and the type and amount of introductory and continuing training required for every position.
- Training documentation records for each employee, which may include:
  - Hazardous Materials Worker Trainee Qualification Record and 24-hour Training Certificate
  - Hazardous Materials Worker Qualification Record
  - Written Examinations (if any)
  - Hazard Communications Training Certification
  - Medical Evaluation Clearance

9.0 GROUNDWATER MONITORING PROGRAM

Groundwater monitoring has been performed at the facility pursuant to federal and state hazardous waste (RCRA) regulations since 1984. The current groundwater monitoring network was designed to comply with 40 CFR Subpart F regulations.

Detailed descriptions of monitoring wells, sampling methods, analytical procedures, and data recording and analysis requirements are described in the Environmental Monitoring Plan, which is included in the USEN RCRA Part B Application. UESN will notify US EPA Region IX in writing within 7 days after discovering the presence of PCBS in any groundwater monitoring well.

10.0 LEACHATE COLLECTION AND REMOVAL SYSTEM

Trench 11, Trench 12 and Trench 13 include double liner systems with a primary leachate collection and removal systems (LCRS) and a secondary leak detection system (LDS). The dual-lined system meets the requirements of 40 CFR §761.75(b)(7)(ii).

US Ecology Nevada will monitor and evaluate the Leachate Collection and Detection systems as specified in the Facility Response Action Plans (RAP).

On a Quarterly basis every sump from Trench 11, Trench 12, and Trench 13 that generates pumpable liquids will be collected and analyzed for the following parameters:

- Inorganic constituents including, metals, cyanide, fluoride, chloride, nitrite-nitrate, and sulfate
- pH, total organic carbon (TOC), total organic halides (TOX)
- Specific Conductance
- Pesticides and PCBs
- Radioisotopes; Gross Alpha, Gross Beta, Radium 226 & 228, and Tritium.
- Volatile Organic Compounds (VOCs).

Any instance of a confirmed detection of PCBs greater than 2 ppm at any of the leachate collection sumps will be reported in writing to EPA Region IX within 10 calendar days.

Collected leachate will be stored in totes in the landfill and a representative sample will be analyzed for PCBs. Leachate can be recycled and used for dust suppression in the active landfill if PCB concentrations are < 0.5 μg/L. Leachate with PCBs > 0.5 μg/L will be treated to remove PCBs (i.e., processed through a carbon bed filter and re-analyzed for PCBs) or disposed in the evaporation tank.

11.0 USE OF ROADWAYS AND VEHICLE AND EQUIPMENT MOVEMENT

The site is surrounded by an approximately six 6 foot chain-link fence topped by three 3 strands of barbed wire. Unauthorized access to the facility during non-operational hours is controlled by maintaining the facility gates closed and locked.

The only public road in the vicinity of the Beatty facility is US Highway 95, which is a two-lane, all-weather, hard-surfaced road bordered by BLM range fence (which is a deterrent to off-road vehicle travel). The facility entrance off the southwest side of US Highway 95 is a one hundred (100) foot wide asphaltic concrete apron transitioning into a two-lane unimproved-surface road.

The entrance road, which is well crowned and has graded shoulders and ditches, continues westward for one-half a mile across land leased by the State of Nevada from the BLM. It enters the facility property at the north end of the buffer zone and administration area through a security gate. This gate remains open during normal business hours under the surveillance of facility personnel.

The soils of the bajada on which the facility is built are consolidated, lightly cemented sands and gravels, and covered with a thin, unconsolidated layer of approximately the same material. When a few inches of the top material have been graded off, the underlying material forms a firm, trafficable surface. Continual traffic, grading, and an occasional application of water as a dust suppressant or application of a dust suppression chemical improves the road's stability. Although the load-bearing capacity of the roads and parking areas has not been tested quantitatively, a conservative estimate of its capacity would be about 230 to 380 pounds per cubic inch, which is the site soil bearing capacity as determined from a geotechnical evaluation conducted during construction of other waste management units at the facility.

After entering the facility, vehicles proceed to the truck holding area, where they remain until the shipment and accompanying documentation are reviewed to confirm their acceptability. Once the shipment's acceptability is confirmed, the transporting vehicle is directed to the designated waste management unit for processing or storage.

Although the entire facility surface is stable enough to drive or park on, roadways that will accommodate two-way traffic to and from disposal units are defined by grading and use. Roads built to accommodate future facility development will be similar to existing roads.

Trucks needing to load or unload containers may do so at either the CMS building (CMU #16) or at the PCB building (CMU #1). At the CMS building, the containers are unloaded and sorted by waste type, waste compatibility and intended disposal and/or treatment process. They are then transported as needed to the next on-site storage, treatment or disposal location. This includes the PCB building if the wastes contain PCBs subject to TSCA Approval requirements, or if the wastes are RCRA and must be transported off-site for treatment and/or disposal.

Loading and off-loading of trucks with containers that will be stored and managed in the PCB building, and temporary staging of containers pursuant to the loading/off-loading activities, can occur on the adjacent pad associated with the former low temperature thermal desorption (LTTD) unit (Staging area). Use of this pad minimizes the transport distance over the dirt roadway from the CMS building to the PCB building of RCRA and TSCA wastes, reduces vehicular congestion at the west end of the PCB building where trucks would otherwise direct load and off-load, increases the safety of the loading and off-loading

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operations, and improves the overall efficiency of waste container management. Loading and off-loading of containers in the former LTTD concrete pad is restricted to the Staging area which lies on the east end of the former LTTD concrete pad. The Staging area, when used, is clearly demarcated by painted lines and/or portable barriers, is separate from other non-waste storage uses on the concrete pad, and has a designated spill kit that contains such items as liquid booms, absorbent pads, floor dry and hand tools. Any containers placed in the Staging area will be temporary, only present during the work shift or purposes of loading and off-loading, with no over-night storage. The Staging area is subject to the quarterly testing for PCBs per the TSCA Approval, to spill clean-up protocols, to closure testing and disposal requirements, and to closure cost estimating.

12.0 RECORDKEEPING AND REPORTING

The Recordkeeping and Reporting Plan included in Attachment 5 describes the recordkeeping and reporting procedures in place at the Facility to comply with all applicable provisions of the Facility's TSCA approval and RCRA permit.

13.0 EMERGENCY PREPAREDNESS AND CONTINGENCY PLAN

The Facility's Contingency Plan include in Attachment 10 will be implemented as needed to prevent harm to personnel, facilities, or the environment. Specific events, which may trigger the implementation of the Contingency Plan, include:

- Fire
- Explosion
- Earthquake or seismic activity that causes damage to the disposal cell
- Release of hazardous waste or hazardous constituents to the air; soil, surface, water, or groundwater, which could threaten human health or the environment.

14.0 Facility Health and Safety

The Facility Health and Safety Plan (HASP) addresses potential hazards associated with activities to be performed at the US Ecology facility. Site operations include the transport, storage, treatment, and disposal of hazardous waste. The U.S. Environmental Protection Agency (EPA) has established regulations governing these types of activities. These regulations are found in 40 CFR (Code of Federal Regulations) 264 and overseen by the EPA, under the Resource Conservation and Recovery Act (RCRA). Nevada has received primacy in the implementation of the RCRA program and has promulgated regulations governing these types of activities. The facility's HASP establishes the general chemical safety criteria and safety standards as required by 29 CFR 1910.120 for Treatment Storage and Disposal Facilities (TSDF) and RCRA and state regulations, to ensure that all facility operations involving hazardous wastes are conducted in a consistent and safe manner.

All work will be performed in accordance with the regulations and guidelines outlined in:

- Occupational Safety and Health Administration (OSHA) Title 29 CFR 1910 "Safety and Health Regulations for General Industry"
- OSHA Title 29 CFR 1926 "Safety and Health Regulations for Construction"
- OSHA Title 29 CFR 1926.65 “Hazardous Waste Operations and Emergency Response”
- 40 CFR 264

The HASP has been written for the use of US Ecology, its employees, visitors, and subcontractors. However, US Ecology does not guarantee the health or safety of any person entering this site.

Strict adherence to the health and safety guidelines set forth herein will reduce the potential for injury at this site. The health and safety guidelines in the HASP were prepared specifically for this site and should not be used on any other site without prior research by trained health and safety professionals.

Attachment 1

Facility Job Descriptions / Management Resumes

JOB DESCRIPTION

Job Title: **General Manager**
Department: **Administration**
Reports to: **President / CEO**

EEO Group: **1 – Officials and Managers**
Job Group: **001 – Executives**
Location: Beatty, NV

SUMMARY

Plans and directs all aspects of business and operations activities at assigned waste disposal facility. Ensures all projects, initiatives, and processes are in conformance with organization's established policies, objectives and initiatives, and in compliance with federal, state and local regulations. Manages resources to accomplish identified facility priorities. Performs the following duties personally or through subordinate managers and supervisors.

ESSENTIAL DUTIES AND RESPONSIBILITIES

- Manages activities of operations, environmental health and safety, customer service, laboratory services, and other functions to optimize operational efficiency while protecting workers and the environment.
- Directs and coordinates organizational activities to obtain optimum efficiency and economy of operations to maximize profits.
- Develops and recommends business plans and engineering alterations to the facility.
- Coordinates activities with sales and operations to achieve revenue generation, cost and quality control, and to expand capabilities to respond to emerging business opportunities.
- Ensures compliance with federal, state, and local regulations and practices.
- Develops operating and capital expenditure budgets and reports. Analyzes department budget requests to identify areas in which reductions can be made, and allocates operating budget.
- Monitors disposal cell utilization rates.
- Manages future facility expansions to ensure adequate capacity is maintained for incoming waste volumes.
- Manages contractor selection process and contracted activities per capital budget projects and other contracted work.
- Confers with management, reviews activities and operations to determine changes in programs or operations required and to develop long objectives.
- **Performs other, related duties as assigned.** These are duties which may not be specifically listed in the class specification or position description, but which are within the general occupational series and responsibility level typically associated with the employee's class of work.
- **Supervisory Responsibilities:** Directly supervises employees and departments per organization chart. Carries out supervisory responsibilities in accordance with the organization's policies and applicable laws. Responsibilities include interviewing, hiring, and training employees; planning, assigning, and directing work; appraising performance; rewarding and disciplining employees; addressing complaints and resolving problems.

HEALTH AND SAFETY DUTIES AND RESPONSIBILITIES

While performing this job, the employee is responsible for continuous adherence to the Company's Health & Safety Program. This includes: the health and safety of themselves and their coworkers, completing tasks in a safe manner, attending safety meetings and mandatory H&S training, and reporting any unsafe conditions, acts or unanticipated hazards to their Supervisor, General Manager or Health and Safety Specialist. Duties and responsibilities are detailed in the H&S Program Master Document and will be provided by the H&S Specialist and/or the direct supervisor during new-hire orientation, training sessions or upon request.

ENVIRONMENTAL COMPLIANCE

Employees are required to report any concerns associated with environmental compliance to their supervisor, General Manager or Environmental Manager. Employees are also required to complete training in hazardous waste management procedures, emergency response and other topics as outlined in the facility's training program and/or an individual training matrix.

JOB LEVELS

SKILLS/KNOWLEDGE/ABILITIES (SKA):

- **Education and/or Experience**
  Bachelor's degree from a four-year College with at least five years of regulatory and management experience; or equivalent education/training and experience. Expertise in a variety of the field's concepts, practices, and procedures.
- **Required Training**
  Initial training will consist of 24 hours of HAZWOPER training and 8 hours field experience, in accordance with 29 CFR 1910.120; additional departmental training as needed. Annual training will consist of 8 hours of HAZWOPER Refresher training, in accordance with 29 CFR 1910.120; review of initial training and additional departmental training as needed.
- **Certificate, Licenses, Registrations**
  None required.
- **Language Skills**
  Ability to read, analyze, and interpret common scientific and technical journals, financial reports, laws and regulations. Ability to interact effectively with customers, regulatory agencies, or members of the business community. Ability to effectively present information to top management, public groups and/or boards of directors.
- **Mathematical Skills**
  Ability to work with mathematical concepts such as fractions, percentages, ratios, proportions, to apply to a variety of practical, variable and non-standard situations.
- **Reasoning Ability**
  Ability to apply common sense understanding to carry out detailed written or oral instructions. Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form. Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables. Ability to comprehend the consequences of various problem situations and to make sound decisions or to refer problems to appropriate people for decision-making.

COMPLIANCE STATEMENT

The personal and physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

PERSONAL DEMANDS

While performing the duties of this job, the employee may work alone, work extended hours or special shifts, with frequent interruptions and repetitious operations. This work requires high concentration with a moderate level of stress. Required to travel. Employee shall at all times demonstrate cooperative behavior with colleagues, clients, customers and vendors.

PHYSICAL DEMANDS

While performing the duties of this job the employee is frequently required to walk. The employee is occasionally required to use hands to handle, feel, reach and grasp, hands and arms are used to reach;

the employee is required to climb or balance; talk, hear and smell. Specific vision abilities required by this job include close vision, color vision, depth perception and the ability to adjust focus.

WORK ENVIRONMENT
Generally an office environment. While performing the duties of this job, the employee is occasionally exposed to fumes or airborne particles, toxic or caustic chemicals, and risk of radiation. The noise level in the work environment is usually moderate.

US Ecology is an Equal Opportunity/Affirmative Action Employer. We consider all qualified applicants without regard to race, religion, color, sex, national origin, age, sexual orientation, disability or veteran status, among other factors.

Approved by: _____

Date: _____

We consider all qualified applicants without regard to race, religion, color, sex, national origin, age, sexual orientation, disability or veteran status, among other factors.

JOB DESCRIPTION

Job Title: **Manager - Operations**
Department: **Operations**
Reports To: **General Manager**
FLSA Status: **Exempt**

Job Group: 001 – Officials & Managers
AEC Job Group: 003 – Senior Managers
Location: Beatty, NV

SUMMARY

Supervises and manages all on-going treatment, storage, and disposal operations consistent with permit conditions and applicable state and federal regulations (RCRA). Coordinates constructions management activities (including subcontractors). Oversees the daily operations schedules and activities to ensure that production and quality meet requirements. Responsible for coordinating and making recommendations on projects management, plant finance, materials, human resources and efficiency of operations.

ESSENTIAL DUTIES AND RESPONSIBILITIES

- Ensures that the operations of the site are accomplished within budget and to company, regulatory and industry standards.
- Provides technical support to project management.
- Makes recommendations for improvement in workflow and project management.
- Oversees the daily administration, construction, operations, regulatory compliance, quality assurance, safety and customer relation functions for the location.
- Ensures compliance with health, safety, environmental, and other regulatory standards.
- Reviews and controls operating budget and ensures that the entire facility operates within associated budgetary constraints and to company, regulatory and industry standards.
- Works with governmental and regulatory agencies and maintains community relations.
- Responsible for staffing and training personnel for site; implements personnel programs.
- Conducts day operations in accordance with company policy and procedure.
- Keeps the Facility Manager informed.

- **Performs other, related duties as assigned.** These are duties which may not be specifically listed in the class specification or position description, but which are within the general occupational series and responsibility level typically associated with the associate's class of work.

Supervisory Responsibilities: Supervises associates per organization chart, directly or through subordinate foremen or supervisors who directly supervise the workers. Carries out supervisory responsibilities in accordance with the organization's policies and applicable laws. Responsibilities include interviewing, hiring, and training associates; planning, assigning, and directing work; appraising performance; rewarding and disciplining associates; addressing complaints and resolving problems.

JOB LEVELS

One level

HEALTH AND SAFETY DUTIES AND RESPONSIBILITIES

While performing this job, the associate is responsible for continuous adherence to the Company's Health & Safety Program. This includes: the health and safety of themselves and their coworkers, completing tasks in a safe manner, attending safety meetings and mandatory H&S training, and reporting any unsafe

conditions, acts or unanticipated hazards to their Supervisor, General Manager or Health and Safety Specialist. Duties and responsibilities are detailed in the H&S Program Master Document and will be provided by the H&S Specialist and/or the direct supervisor during new-hire orientation, training sessions or upon request.

ENVIRONMENTAL COMPLIANCE
Associates are required to report any concerns associated with environmental compliance to their supervisor, General Manager or Environmental Manager. Associates are also required to complete training in hazardous waste management procedures, emergency response and other topics as outlined in the facility's training program and/or an individual training matrix.

SKILLS/KNOWLEDGE/ABILITIES (SKA)
To perform the duties of this job, the associate must have extensive knowledge of complex federal and state regulations specific to the waste industry; must be knowledgeable of current waste treatment, storage, and disposal operations. Essential competencies to perform this job include good organizational and problem solving skills; be detail oriented to pay meticulous attention to all aspects of a situation or task. Associate must possess good judgment to form sound opinions or make decisions by evaluating available information. Must be able to work under pressure and adapt to a changing work environment; possess technical aptitude to relate to topics which require an understanding or specialized knowledge.

- **Education and/or Experience**
  Bachelor's degree (B. A.) from four-year college or university in engineering or a related field and 7 – 10 years related experience and/or training; or equivalent combination of education and experience. Relies on extensive experience and judgment to plan and accomplish goals. Familiarity with a variety of concepts, practices, and procedures.

- **Required Training**
  Initial training will consist of 24 hours of HAZWOPER training and 8 hours field experience, in accordance with 29 CFR 1910.120; additional departmental training as needed. Annual training will consist of 8 hours of HAZWOPER Refresher training, in accordance with 29 CFR 1910.120; review of initial training and additional departmental training as needed.

- **Certificates/Licenses/Registrations**
  May be required to meet certain certifications in field of operation.

- **Language Skills**
  Excellent written and oral communication skills. Ability to read, analyze, and interpret common scientific and technical journals, financial reports, and legal documents. Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community. Ability to write reports that conform to prescribed style and format. Ability to effectively present information to management.

- **Mathematical Skills**
  Ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry and trigonometry. Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

- **Reasoning Ability**
  Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

COMPLIANCE STATEMENT
The personal and physical demands described here are representative of those that must be met by an associate to successfully perform the essential functions of this job. The work environment characteristics described here are representative of those an associate encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

PERSONAL DEMANDS
While performing the duties of this job, the associate must be capable of working in a fast pace environment with accuracy and able to handle several projects and tasks simultaneously. He/she may work alone, work extended hours or special shifts, with frequent interruptions and repetitious operations. This work requires high concentration with a high level of stress.

PHYSICAL DEMANDS
While performing the duties of this job, the associate is frequently required to walk sit, and talk or hear. The associate must occasionally lift and/or move up to 25 pounds.

WORK ENVIRONMENT
While performing the duties of this job, the associate is occasionally exposed to moving mechanical parts, fumes or airborne particles, toxic or caustic chemicals, outside weather conditions, and risk of radiation. The noise level in the work environment is usually high.

Approved by: _____

Date: _____

We consider all qualified applicants without regard to race, religion, color, sex, national origin, age, sexual orientation, disability or veteran status, among other factors.

Job Description

Job Title: **Manager Environmental Compliance**
Departments: **Environmental**
Reports To: **General Manager**
FLSA Status: **Exempt**

EEO Group: 1 – Officials & Managers
Job Group: 002 - Senior Managers
Location: Beatty, NV

SUMMARY

Responsible for managing all the activities related to the facility's environmental permits, programs and policies to ensure compliance with pertinent regulatory agencies and ensuring a safe work environment for facility employees, contractors, and visitors by performing the following duties directly or through subordinate employees.

ESSENTIAL DUTIES AND RESPONSIBILITIES

- Plans and directs environmental compliance practices. Ensures, directly or through subordinates, that the company is in compliance with all pertinent federal, state and local regulations.
- Provides regular reports as required by governmental agencies and senior management.
- Participates with management personnel in establishing procedures for administering regulatory compliance programs.
- Review reports and records of control sites quality assurance records
- Conducts site surveillance and facility over site functions. Directs environmental monitoring program to determine necessary changes in levels.
- Reviews environmental legislative developments to determine changes in legal requirements and probable effects on company activities. Keeps all professionals and managers informed of changes in compliance requirements.
- Maintains current all site permits and interacts with regulatory agencies. Prepares permit applications and modifications. Prepares for and testifies in permit proceedings.
- Directs retention of data and preparation of documents for use by self or other company personnel during inquiries concerning problem areas.
- Interfaces with environmental auditing activities to ensure conformance to departmental standards and company environmental policies and guidelines.
- Acts as primary site technical contact for waste profiling activities.
- Assists facility Laboratory Manager in development of problematic waste treatment recipes.
- Interfaces with facility operations staff to ensure safe, regulatory compliant and expeditious processing of hazardous wastes.
- Makes recommendations for improvement in workflow and project management.

- **Performs other, related duties as assigned.** These are duties which may not be specifically listed in the class specification or position description, but which are within the general occupational series and responsibility level typically associated with the employee's class of work.

Supervisory Responsibilities: Directly supervises employees and departments per organization chart. Carries out supervisory responsibilities in accordance with the organization's policies and applicable training programs; planning, assigning, and directing work; appraising performance; and applicable laws. Responsibilities include interviewing, hiring, and rewarding and disciplining employees; addressing complaints and resolving problems. Responsible for all facility operations in the General Manager's absence**.**

HEALTH AND SAFETY DUTIES AND RESPONSIBILITIES
While performing this job, the employee is responsible for continuous adherence to the Company's Health & Safety Program. This includes: the health and safety of themselves and their coworkers, completing tasks in a safe manner, attending safety meetings and mandatory H&S training, and reporting any unsafe conditions, acts or unanticipated hazards to their Supervisor, General Manager or Health and Safety Specialist. Duties and responsibilities are detailed in the H&S Program Master Document and will be provided by the H&S Specialist and/or the direct supervisor during new-hire orientation, training sessions or upon request.

ENVIRONMENTAL COMPLIANCE
Employees are required to report any concerns associated with environmental compliance to their supervisor, General Manager or Environmental Manager. Employees are also required to complete training in hazardous waste management procedures, emergency response and other topics as outlined in the facility's training program and/or an individual training matrix

JOB LEVELS
One level

SKILLS/KNOWLEDGE/ABILITIES (SKA)
To perform the duties of this job, the employee must have extensive knowledge of complex regulations specific to the waste industry; must be knowledgeable of current waste treatment, storage, and disposal operations. Essential competencies to perform this job include analytical, organizational and problem solving skills; must be detail oriented and possess technical aptitude. Ability to work under pressure, exercise independent judgment and select effective course of action while controlling resources and expenditures.

- **Education and/or Experience**
  Bachelor's degree (B.S.) from four-year College or university with a degree in a scientific field and regulatory and management experience; or equivalent combination of education and experience.

- **Required Training**
  Initial training will consist of 24 hours of HAZWOPER training and 8 hours field experience, in accordance with 29 CFR 1910.120; additional departmental training as needed. Annual training will consist of 8 hours of HAZWOPER Refresher training, in accordance with 29 CFR 1910.120; review of initial training and additional departmental training as needed.

- **Certificate, Licenses, Registrations**
  None required.

- **Language Skills**
  Ability to read, analyze, and interpret common scientific and technical journals, financial reports, and legal documents. Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community. Ability to write speeches and articles for publication that conform to prescribed style and format. Ability to effectively present information to top management, public groups, and/or boards of directors.

- **Mathematical Skills**

Ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry and trigonometry. Ability to apply concepts such as fractions, percentages, ratios, and proportions, to practical situations.

- **Reasoning Ability**
  Ability to apply common sense understanding to carry out detailed written or oral instructions. Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form. Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

COMPLIANCE STATEMENT
The personal and physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

PERSONAL DEMANDS
While performing the duties of this job, the employee may work alone, work extended hours or special shifts, with frequent interruptions and repetitious operations. This work requires high concentration with a moderate level of stress. Employee shall at all times demonstrate cooperative behavior with colleagues, clients, customers and vendors.

PHYSICAL DEMANDS
While performing the duties of this job the employee is frequently required to walk. The employee is occasionally required to use hands to handle, feel, reach and grasp, hands and arms are used to reach; the employee is required to climb or balance; talk, hear and smell. The employee must occasionally lift and/or move up to 75 pounds. Specific vision abilities required by this job include close vision, color vision, depth perception and the ability to adjust focus.

WORK ENVIRONMENT
While performing the duties of this job, the employee is frequently exposed to hot surface, moving mechanical parts; fumes, or airborne particles; toxic or caustic chemicals, outside weather conditions, including extreme heat and cold. The noise level in the work environment is usually loud.

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Approved by: _____

Date: _____

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JOB DESCRIPTION

Job Title: **Health and Safety Manager**
Department: **Health & Safety**
Reports To: **General Manager**
FLSA Status: **Exempt**

EEO Group: 2 – Professional
Job Group: 004 - Professional
Location: Beatty, NV

SUMMARY
Plans, directs, and implements safety and health programs for the company. Establishes and promotes the maintenance of a safe, accident free and healthy work environment by performing the following duties.

ESSENTIAL DUTIES AND RESPONSIBILITIES

- Ensures that health and safety projects are conducted in a safe manner, according to company, industry and regulatory safety and health standards. Develops and/or implements appropriate procedures.
- Inspects or tours facilities to detect existing or potential accident and health hazards, and recommends corrective or preventative measures where indicated. Ensures compliance with OSHA and other rules and regulatory requirements.
- Ensures that effective occupational health, safety, and hygiene programs are in effect and effective.
- Develops and delivers health and safety training to associates. Devises, supervises, and coordinates training programs or media which will increase proficiency in safe practices and promote safety consciousness.
- Monitors accidents to determine corrective actions required. Studies and analyses industrial accidents causes and hazards to health for use by company and outside agencies as applicable.
- Controls associate expose to hazardous waste, chemicals and/or radiation.
- Coordinates with insurance carriers and workers' compensation insurance regarding claims and to proactively avoid claims.
- Acts as advisor to clients and other departments on health and safety issues.
- Consults with departments on design and use of equipment, fire prevention and safety programs.
- Keeps managers and associates alerted as to the hazards of working with toxic fumes, dangerous chemicals, radiation, and any other hazardous substances.
- Compiles and submits accident and other reports required by regulatory agencies and company management.
- Represents the company in community or industry safety groups and programs.
- Maintains safety files and health records as required by regulations and management.
- May manage a lab, radiological control program, permitting/licensing, medical surveillance program, environmental monitoring, DOT program, industrial hygiene, groundwater monitoring or specific parts of a safety and health program depending on location.
- **Performs other, related duties as assigned.** These are duties which may not be specifically listed in the class specification or position description, but which are within the general occupational series and responsibility level typically associated with the associate's class of work.

- **Supervisory Responsibilities:** This position directly supervises associates on the safe performance of their duties. Is responsible for the overall direction, coordination, and evaluation of safe processes.

Carries out supervisory responsibilities in accordance with the organization's policies and applicable laws. Responsibilities may include interviewing and training associates; planning, assigning, and directing work, appraising safe performance; rewarding and disciplining associates on the safe handling of duties and responsibilities; addressing complaints and resolving problems.

HEALTH AND SAFETY DUTIES AND RESPONSIBILITIES

While performing this job, the associate is responsible for continuous adherence to the Company's Health & Safety Program. This includes: the health and safety of themselves and their coworkers, completing tasks in a safe manner, attending safety meetings and mandatory H&S training, and reporting any unsafe conditions, acts or unanticipated hazards to their Supervisor, General Manager or Health and Safety Specialist. Duties and responsibilities are detailed in the H&S Program Master Document and will be provided by the H&S Specialist and/or the direct supervisor during new-hire orientation, training sessions or upon request.

JOB LEVELS

- **Level I: Safety & Health Manager I:** Responsible for a functional area at a single small to medium size site/location.
- **Level II: Safety & Health Manager II:** Responsible for a functional area at a large site or for multiple functions at smaller sites.
- **Level III: Safety & Health Manager III:** Responsible for multiple functions at a large site.
- **Level IV: Safety & Health Manager IV:** Responsible for the company's health and safety program.

SKILLS/KNOWLEDGE/ABILITIES (SKA)

Knowledgeable in governmental regulations specific to the environmental waste industry to include DOT drug testing. Knowledge of current industrial safety practices and industrial hygiene measures and of Company waste treatment, storage, and disposal operations.

Education and/or Experience

- Bachelor's degree (B. S.) from four-year college or university in safety, health sciences, engineering or related degree and related experience or equivalent combination of education and experience.

Required Training

- Initial training will consist of 24 hours of HAZWOPER training and 8 hours field experience, in accordance with 29 CFR 1910.120; additional departmental training as needed. Annual training will consist of 8 hours of HAZWOPER Refresher training, in accordance with 29 CFR 1910.120; review of initial training and additional departmental training as needed.

Certificates/Licenses/Registrations

- May require a Certified Safety Professional (CSP) certification or other health and safety certification.

Language Skills

- Ability to read, analyze, and interpret common scientific and technical journals, financial reports, and legal documents.
- Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community.
- Ability to write reports and materials that conform to prescribed style and format.
- Ability to effectively present information to top management, public groups, and/or boards of directors.

Mathematical Skills

- Ability to work with mathematical, concepts such as probability and statistical inference, and fundamentals of plane and solid geometry and trigonometry.
- Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

Reasoning Ability

- Ability to define problems, collect data, establish facts, and draw valid conclusions.

- Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

COMPLIANCE STATEMENT
The personal and physical demands described here are representative of those that must be met by an associate to successfully perform the essential functions of this job. The work environment characteristics described here are representative of those an associate encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

PERSONAL DEMANDS
While performing the duties of this job, the associate may work alone, work extended hours or special shifts, with frequent interruptions and repetitious operations. This work requires high concentration with a moderate level of stress. The associate shall at all times demonstrate cooperative behavior with visitors, coworkers, and supervisors. Occasional travel.

PHYSICAL DEMANDS
While performing the duties of this job the associate is frequently required to walk. The associate is occasionally required to use hands to handle, feel, reach and grasp using hands and arms. The associate may be asked to climb and balance and needs to talk, hear and smell. The associate must occasionally lift and/or move up to 25 pounds. Specific vision abilities required by this job include close vision, depth perception and the ability to adjust focus.

WORK ENVIRONMENT
While performing the duties of this job, the associate is exposed to long periods to sitting in an upright position, ergonomic stresses and conditions and continuous shifting while in the office environment. The office environment noise level is normally moderate. Occasionally, while performing the duties of this job, the associate is exposed to moving mechanical parts; fumes or airborne particles; toxic or caustic chemicals; outside weather conditions; and risk of radiation. The noise level in the work environment is usually loud.

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Approved by: _____

Date: _____

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JOB DESCRIPTION

Job Title: **Operator Heavy Equipment/Landfill**
Department: **Operations**
Reports To: **Supervisor - Landfill**
FLSA Status: **Non-Exempt**

EEO Job Group: 007 - Operative
AEC Job Code: 009 – Semi-Skilled Crafts
Census Code: 859 – Miscellaneous Material Moving Equip Oper

SUMMARY

Operate, care and maintenance a variety of heavy equipment in a safe and efficient manner. Operate earth-moving equipment as needed to maintain integrity of landfill. Assist in off-loading trucks. Receive and interpret information for waste disposal. Work requires physically demanding manual labor work.

ESSENTIAL DUTIES AND RESPONSIBILITIES

- Assist in off-loading trucks and unloading waste.
- Receives written or oral instructions from supervisor regarding material to move or excavate.
- Sample and store hazardous waste pending analysis from lab.
- General housekeeping and daily maintenance and operation of equipment.
- Assist in the coordination of operations as needed.
- Receive and interpret written or oral instructions for waste disposal.
- May act as waste transfer agent. Involved in deconing and cleaning to control contamination.
- Pushes levers, depresses pedals, etc. to move equipment.
- Observes markings on ground, hand signals, or grade stakes to remove material, when operating machine at excavation site.

Performs other, related duties as assigned. These are duties which may not be specifically listed in the class specification or position description, but which are within the general occupational series and responsibility level typically associated with the employee's class of work.
Supervisory Responsibilities: This job has no supervisory responsibilities.

JOB LEVELS

- **Level I: Equipment Operator I:** Entry-level position requiring at least one year of experience in an industrial work environment. Learning position
- **Level II: Equipment Operator II:** Mid-level position requiring over 3-5 years of experience an meets superior performance and required equipment operational objectives, Handles routine assignments and requires senior guidance to complete intermediate tasks.
- **Level III: Equipment Operator III:** Intermediate position requiring over 5+ years of experience in an industrial work environment and or superior performance on specific equipment. Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision.
- **Level IV: Equipment Operator IV- Lead**: with extensive experience and has board knowledge of company policies and procedures and is authorized to handle a broader array of issues autonomously than lower level operators. May act as the lead of a staff of operators. May be responsible for training lower level associates. Requires at least 5 years of experience in the field or in a related area. Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals. Performs a variety of complicated tasks. Typically reports to a manager. Top level operator position. 5+ years of experience in an industrial work environment

SKILLS/KNOWLEDGE/ABILITIES (SKA)

Education and/or Experience
High school diploma or equivalent. One-year certificate from college or technical school or related experience and/or training or equivalent combination of education and experience.

Required Training
Initial training will consist of 24 hours of HAZWOPER training and 8 hours field experience, in accordance with 29 CFR 1910.120; additional departmental training as needed. Annual training will consist of 8 hours of HAZWOPER Refresher training, in accordance with 29 CFR 1910.120; review of initial training and additional departmental training as needed.

Certificates/Licenses/Registrations
Certificate or license as required by state law.

Language Skills
Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals. Ability to write routine reports and correspondence. Ability to speak effectively and present information in one-on-one and small group situations to customers, clients, and other employees of the organization.

Mathematical Skills
Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to compute rate, ratio, and percent and to draw and interpret graphs. Ability to perform these operations using units of American money and weight measurement, volume, and distance.

Reasoning Ability
Ability to apply common sense understanding to carry out detailed written or oral instructions. Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form. Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

COMPLIANCE STATEMENT
The personal and physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

PERSONAL DEMANDS
The personal demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee may work alone, work extended hours or special shifts, with frequent interruptions and repetitious operations. This work requires high concentration with a moderate level of stress.

PHYSICAL DEMANDS
The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job.

While performing the duties of this job, the employee is regularly required to sit; use hands to finger, handle, or feel; and reach with hands and arms. The employee is occasionally required to climb or balance. The employee must occasionally lift and/or move up to 90 pounds. Specific vision abilities required by this job include distance vision, peripheral vision, and depth perception. Subject to repetitious operations and frequent interruptions. Could work extended hours or shift work.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently exposed to moving mechanical parts. The employee is frequently exposed to fumes or airborne particles and toxic or caustic chemicals; exposed to extreme heat, cold, wind, and dust conditions; risk of electrical shock; risk of radiation; and vibration The noise level in the work environment is usually loud.

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Approved by: _____

Date: _____

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JOB DESCRIPTION

Job Title: **Supervisor – Landfill**
Department: **Operations**
Reports To: **Manager - Operations**
FLSA Status: **Non-exempt**, over 20% of the work performed in a workweek is also performed by subordinates.

EEO Group: 6 – Craft Workers Skilled
Job Group: 008 – Hourly Supervisors
Location: Beatty, NV

SUMMARY

Supervises and coordinates the operation activities of the landfill such as off-loading of trucks, unloading of waste, and operation of various equipment to dump, stock, transfer or remove material. Maintains landfill grounds properly marked for equipment operation safety. Responsible for cleaning to control site contamination.

ESSENTIAL DUTIES AND RESPONSIBILITIES

- Oversees the safe operation of the off-loading of trucks and unloading of waste.
- Reviews orders to ascertain specifications and compliance with scheduling plans.
- Plans operations, establishing priorities and sequences of operations.
- Inspects machines and equipment to ensure specific operational performance and optimum utilization.
- Ensures compliance with quality assurance, safety and customer specifications.
- Reviews production and operating reports and helps resolve problems to ensure minimum costs and prevent operational delays.
- Maintenance of landfill site such as markings, grade stakes, for proper handling of equipment at excavation site.
- Implements and enforces operational and working practices and observes workers to ensure compliance with standards.
- Compiles, stores, and retrieves landfill production data.
- Ensures that materials, labor, equipment, supplies and other requirements are in order at an optimum time and cost.
- **Performs other, related duties as assigned.** These are duties which may not be specifically listed in the class specification or position description, but which are within the general occupational series and responsibility level typically associated with the employee's class of work.
- **Supervisory Responsibilities:** Supervises 1 – 3 employees per organization chart. Carries out supervisory responsibilities in accordance with the organization's policies and applicable laws. Responsibilities may include: interviewing, hiring, and training employees; planning, assigning, and directing work; appraising performance, rewarding and disciplining employees; addressing complaints and resolving problems.

HEALTH AND SAFETY DUTIES AND RESPONSIBILITIES

While performing this job, the employee is responsible for continuous adherence to the Company's Health & Safety Program. This includes: the health and safety of themselves and their coworkers, completing tasks in a safe manner, attending safety meetings and mandatory H&S training, and reporting any unsafe conditions, acts or unanticipated hazards to their Supervisor, General Manager or Health and Safety Specialist. Duties and responsibilities are detailed in the H&S Program Master Document and will be provided by the H&S Specialist and/or the direct supervisor during new-hire orientation, training sessions or upon request.

ENVIRONMENTAL COMPLIANCE
Employees are required to report any concerns associated with environmental compliance to their supervisor, General Manager or Environmental Manager. Employees are also required to complete training in hazardous waste management procedures, emergency response and other topics as outlined in the facility's training program and/or an individual training matrix.

JOB LEVELS
- One level

SKILLS/KNOWLEDGE/ABILITIES (SKA)

- **Education and/or Experience**
  High school diploma or general education degree (GED) plus certificate from technical school or college and 4 – 7 years of related experience and/or training; or equivalent combination of education and experience. . Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals.

- **Required Training**
  Initial training will consist of 24 hours of HAZWOPER training and 8 hours field experience, in accordance with 29 CFR 1910.120; additional departmental training as needed. Annual training will consist of 8 hours of HAZWOPER Refresher training, in accordance with 29 CFR 1910.120; review of initial training and additional departmental training as needed.

- **Certificates/Licenses/Registrations**
  None

- **Language Skills**
  Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals. Ability to write routine reports and correspondence. Ability to speak effectively before groups of customers or employees of organization.

- **Mathematical Skills**
  Ability to add, subtracts, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to calculate figures and amounts such as proportions, percentages, area circumference, and volume. Ability to compute rate, ratio, and percent and to draw and interpret graphs.

- **Reasoning Ability**
  Ability to apply common sense understanding to carry out detailed written or oral instructions.
  Ability to solve practical problems and deal with a variety of variables in situations where only limited standardization exists. Ability to interpret a variety o instructions furnished in written, oral, diagram, or schedule form.

COMPLIANCE STATEMENT
The personal and physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

PERSONAL DEMANDS
While performing the duties of this job, the employee may work alone, work extended hours or special shifts, with frequent interruptions and repetitious operations. Ability to work under the stress of meeting many requests from various departments and individuals, sometimes with conflicting deadlines. Employee shall at all times demonstrate cooperative behavior with collegues, clients, customers and vendors.

PHYSICAL DEMANDS
While performing the duties of this job, the employee is frequently required to stand; walk; use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and talk or hear. The employee is occasionally required to sit. The employee must occasionally lift and/or

move up to 50 pounds. Specific vision abilities required by this job include depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently exposed to moving mechanical parts. The employee is frequently exposed to fumes or airborne particles and toxic or caustic chemicals; exposed to extreme heat, cold, wind, and dust conditions; risk of electrical shock; risk of radiation; and vibration The noise level in the work environment is usually loud.

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Approved by: _____

Date: _____

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JOB DESCRIPTION

Job Title: **Supervisor-Off-Site Disposal Services**
Department: **Operations**
Reports To: **Operations Manager**
FLSA Status: **Exempt, Salary**

Job Group:
AEC Job Group:
Census Code:
Location: Beatty, NV

SUMMARY
Supervises the operation of the storage and transfer of non-disposal waste. Manages RCRA waste accepted for storage and shipment offsite. Works with the Off-Site Services Manager and operations team to facilitate off-site disposal services including the collection, packaging, recycling, treatment and disposal of hazardous and non-hazardous waste. Works with the Off-Site Services Manager to determine the proper, safe and legal treatment of hazardous waste for off-site disposal services. Works with the Off-Site Services Manager to arrange transportation, logistics, packaging, and labeling for all off-site shipments of waste.

ESSENTIAL DUTIES AND RESPONSIBILITIES
- Coordinate with the Off-Site Services Manager to arrange transportation with off-site vendors.
- Ensure all off-site loads meet all compliance standards and regulatory standards.
- Inspect incoming off-site shipments to ensure waste is properly packaged and meets vendor profile requirements in order to prevent surcharges.
- Coordinate with Off-Site Services Manager for obtaining waste product approvals, scheduling off-site transportation and disposal, completing required paperwork, and coordinating off-site shipments.
- In coordination with operations and the Off-Site Services Manager, manages on-site generated waste disposal including, characterization, profiling, and off-site disposal facility scheduling.
- Ensure approved waste discrepancies are resolved through coordinated input by all departments and regular discussions/meetings are held to resolve outstanding issues.
- Confer with laboratory, environmental and safety managers on a regular basis.
- Manages RCRA waste accepted for storage and shipment off-site. Maintains a tracking log of both.
- Supervises and trains equipment operators assigned to the PCB building in the proper handling of PCB liquids and RCRA waste.
- Manages daily workload in conjunction with the Receiving office.
- Receives written and oral instruction from the Operations Manager.
- Oversees deconning and cleaning of PCB's to control contamination.
- Manages all off-site manifests and certificates of disposals.

Performs other, related duties as assigned. These are duties which may not be specifically listed in the class specification or position description, but which are within the general occupational series and responsibility level typically associated with the employee's class of work.

Supervisory responsibilities: Supervises 1-3 employees per organization chart. Carries out supervisory responsibilities in accordance with the organizations policies and applicable laws. Responsibilities may include: interviewing, hiring and training employees; planning, assigning, and directing work; appraising performance, rewarding and disciplining employees; addressing complaints and resolving problems.

HEALTH AND SAFETY DUTIES AND RESPONSIBILITIES

While performing this job, the employee is responsible for continuous adherence to the Company's Health & Safety Program. This includes: the health and safety of themselves and their coworkers, completing tasks in a safe manner, attending safety meetings and mandatory H&S training, and reporting any unsafe conditions, acts or unanticipated hazards to their Supervisor, General Manager or Health and Safety Specialist. Duties and responsibilities are detailed in the H&S Program Master Document and will be provided by the H&S Specialist and/or the direct supervisor during new-hire orientation, training sessions or upon request.

ENVIRONMENTAL COMPLIANCE

Employees are required to report any concerns associated with environmental compliance to their supervisor, General Manager or Environmental Manager. Employees are also required to complete training in hazardous waste management procedures, emergency response and other topics as outlined in the facility's training program and/or an individual training matrix.

SKILLS/KNOWLEDGE/ABILITIES (SKA)

To perform this job successfully, an individual must possess strong technical services skills to provide a broad range of hazardous material management and disposal services including the collection, packaging, recycling, treatment and disposal of hazardous and non-hazardous waste. Must have extensive knowledge of regulations specific to the waste industry; must be knowledgeable of current waste treatment, storage, and disposal operations. Essential competencies to perform this job include analytical, organizational and problem solving skills; must be detail oriented and possess technical aptitude. Familiarization with Federal and State regulations, regulatory guidance documents and facility permit requirements; and manage off-site generated waste programs.

Education and Experience

Three-five years experience in the field or equivalent combination of education, training and experience, and computer experience.

Required Training

Initial training will consist of 24 hours of HAZWOPER training and 8 hours field experience, in accordance with 29 CFR 1910.120; additional departmental training as needed. Annual training will consist of 8 hours of HAZWOPER Refresher training, in accordance with 29 CFR 1910.120; review of initial training and additional departmental training as needed.

Certificates/Licenses/Registrations

None required.

Language Skills

Must have strong written and verbal communication skills. Ability to read and interpret documents such as safety rules, operating and maintenance instructions, procedure manuals, general business periodicals, professional journals, technical procedures, and governmental regulations required. Ability to write routine reports and correspondence required. Ability to speak effectively before groups of customers and/or employees of organization is required.

Mathematical Skills

Ability to add, subtract, multiply and divide in all units of measure, using whole numbers is required. Ability to calculate figures and amounts such as discounts, interest, commissions, percentages, area, circumference and volume is required.

Reasoning Skills
Ability to apply common sense understanding to carry out detailed written or oral instructions. Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

COMPLIANCE STATEMENT
The personal and physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

PERSONAL DEMANDS
While performing the duties of this job, the employee may work alone, work extended hours or special shifts, with frequent interruptions and repetitious operations. This work requires high concentration with a moderate level of stress.

PHYSICAL DEMANDS
While performing the duties of this job the employee is frequently required to walk. The employee is occasionally required to use hands to handle, feel, reach and grasp using hands and arms. The employee may be asked to climb and balance and needs to talk, hear and smell. The employee must occasionally lift and/or move up to 25 pounds. Specific vision abilities required by this job include close vision, depth perception and the ability to adjust focus.

WORK ENVIRONMENT
While performing the duties of this job, the employee is exposed to long periods to sitting in an upright position, ergonomic stresses and conditions and continuous shifting while in the office environment. The office environment noise level is normally moderate. Occasionally, while performing the duties of this job, the employee is exposed to moving mechanical parts; fumes or airborne particles; toxic or caustic chemicals; outside weather conditions; and risk of radiation. The noise level in the work environment is usually loud.

US Ecology is an Equal Opportunity/Affirmative Action Employer. We consider all qualified applicants without regard to race, religion, color, sex, national origin, age, sexual orientation, disability or veteran status, among other factors.

Approved by: _____

Date: _____

We consider all qualified applicants without regard to race, religion, color, sex, national origin, age, sexual orientation, disability or veteran status, among other factors.

JOB DESCRIPTION

Job Title: **Total Waste Solutions-Technician**
Department: **Operations**
Reports To: **Off-site Disposals Services Supervisor**
FLSA Status: **Hourly**

Job Group: 007 -Operative
AEC Job Group: 009 – Semi-Skilled Craft
Census Code: 859 – Miscellaneous Material Moving Equip Operator
Location: Beatty, NV

SUMMARY

Works with the Off-site Disposal Services Supervisor and operations team to facilitate off-site disposal services including the collection, packaging, recycling, treatment and disposal of hazardous and non-hazardous waste. Works with the Off-site Disposal Services Supervisor to determine the proper, safe and legal treatment of hazardous waste for off-site disposal services. Works with the Off-Site Services Manager to arrange transportation, logistics, packaging, and labeling for all off-site shipments of waste.

ESSENTIAL DUTIES AND RESPONSIBILITIES

- Coordinate with the Off-site Disposal Services Supervisor to arrange transportation with off-site vendors.
- Ensure all off-site loads meet all compliance standards and regulatory standards.
- Inspect incoming off-site shipments to ensure waste is properly packaged and meets vendor profile requirements in order to prevent surcharges.
- Coordinate with Off-site Disposal Services Supervisor for obtaining waste product approvals, scheduling off-site transportation and disposal, completing required paperwork, and coordinating off-site shipments.
- In coordination with operations and Off-site Disposal Services Supervisor, manages on-site generated waste disposal including, characterization, profiling, and off-site disposal facility scheduling.
- Ensure approved waste discrepancies are resolved through coordinated input by all departments and regular discussions/meetings are held to resolve outstanding issues.
- Confer with laboratory, environmental and safety managers on a regular basis.

Performs other, related duties as assigned. These are duties which may not be specifically listed in the class specification or position description, but which are within the general occupational series and responsibility level typically associated with the associate's class of work.

HEALTH AND SAFETY DUTIES AND RESPONSIBILITIES

While performing this job, the associate is responsible for continuous adherence to the Company's Health & Safety Program. This includes: the health and safety of themselves and their coworkers, completing tasks in a safe manner, attending safety meetings and mandatory H&S training, and reporting any unsafe conditions, acts or unanticipated hazards to their Supervisor, General Manager or Health and Safety Specialist. Duties and responsibilities are detailed in the H&S Program Master Document and will be provided by the H&S Specialist and/or the direct supervisor during new-hire orientation, training sessions or upon request.

ENVIRONMENTAL COMPLIANCE
Associates are required to report any concerns associated with environmental compliance to their supervisor, General Manager or Environmental Manager. Associates are also required to complete training in hazardous waste management procedures, emergency response and other topics as outlined in the facility's training program and/or an individual training matrix.

Supervisory Responsibilities: This position had no supervisory responsibilities

SKILLS/KNOWLEDGE/ABILITIES (SKA)
To perform this job successfully, an individual must possess strong technical services skills to provide a broad range of hazardous material management and disposal services including the collection, packaging, recycling, treatment and disposal of hazardous and non-hazardous waste. Must have extensive knowledge of regulations specific to the waste industry; must be knowledgeable of current waste treatment, storage, and disposal operations. Essential competencies to perform this job include analytical, organizational and problem solving skills; must be detail oriented and possess technical aptitude. Familiarization with Federal and State regulations, regulatory guidance documents and facility permit requirements; and manage off-site generated waste programs.

Education and/or Experience
Three to five years experience in the field or equivalent combination of education, training and experience, and computer experience.

Required Training
Initial training will consist of 24 hours of HAZWOPER training and 8 hours field experience, in accordance with 29 CFR 1910.120; additional departmental training as needed. Annual training will consist of 8 hours of HAZWOPER Refresher training, in accordance with 29 CFR 1910.120; review of initial training and additional departmental training as needed.

Certificates/Licenses/Registrations
None required.

Language Skills
Must have strong written and verbal communication skills. Ability to read and interpret documents such as safety rules, operating and maintenance instructions, procedure manuals, general business periodicals, professional journals, technical procedures, and governmental regulations required. Ability to write routine reports and correspondence required. Ability to speak effectively before groups of customers and/or associates of organization is required.

Mathematical Skills
Ability to add, subtract, multiply and divide in all units of measure, using whole numbers is required. Ability to calculate figures and amounts such as discounts, interest, commissions, percentages, area, circumference and volume is required.

Reasoning Skills
Ability to apply common sense understanding to carry out detailed written or oral instructions. Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

COMPLIANCE STATEMENT
The personal and physical demands described here are representative of those that must be met by an associate to successfully perform the essential functions of this job. The work environment characteristics described here are representative of those an associate encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

PERSONAL DEMANDS
While performing the duties of this job, the associate may work alone, work extended hours or special shifts, with frequent interruptions and repetitious operations. This work requires high concentration with a moderate level of stress.

PHYSICAL DEMANDS
While performing the duties of this job the associate is frequently required to walk. The associate is occasionally required to use hands to handle, feel, reach and grasp using hands and arms. The associate may be asked to climb and balance and needs to talk, hear and smell. The associate must occasionally lift and/or move up to 25 pounds. Specific vision abilities required by this job include close vision, depth perception and the ability to adjust focus.

WORK ENVIRONMENT
Generally a field environment. While performing field duties of this job, the associate is regularly exposed to fumes or airborne particles, toxic or caustic chemicals, and risk of radiation The noise level in this work environment is usually moderate

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Approved by: _____

Date: _____

Work Experience of
Robert L. Marchand

Qualifications Summary

Over thirty-five years experience in the processing and disposal of hazardous and low-level radioactive wastes. Mr. Marchand has held progressively responsible positions resulting in experience in virtually every aspect of the waste disposal business, including equipment operations, administration and implementation of hazardous and radioactive waste management and compliance programs, as well as having had direct profit and loss responsibility for multiple hazardous waste management facilities.

Professional Experience

General Manager, USEcology, Inc., - Beatty, Nevada
10/02 - Present
Responsible for the operations conducted at the USEcology hazardous waste treatment and landfill facility located near Beatty, Nevada. Responsibilities include conducting facility operations in compliance with corporate policies and procedures as well as applicable state and federal permits, rules and regulations. Responsible for the direct management of all facility personnel, customer satisfaction, permitting of facility operations, supervision of the receipt and safe handling, processing, storage and disposal of hazardous wastes, preparation of facility budgets, facility profitability, and supervision of facility environmental and safety programs.

Assistant Vice President of Operations, Hulcher Services, Inc., - Denton, Texas
5/97 – 10/02
Responsible for environmental, construction, and emergency response operations conducted by Hulcher Services, Inc. Responsible for business line profitability, management of division personnel, customer satisfaction, preparation of budgets, monitoring of safety programs, and increasing revenues and profits. Held direct management responsibility for the successful startup and operations of a new service line for the Company in the area of Railroad Construction. Responsible for startup and operation of an expansion of the Company's core business into Mexico. Acted as on-site Emergency Coordinator for the Company's response activities in the State of Florida during 1999, when the State experienced forest fires of historic proportions. Acted as on-site Emergency Coordinator for the Company's response activities in Del Rio, TX during 1999, when the city experienced flash flooding that destroyed over 500 homes and businesses. Acted as on-site Emergency Coordinator for the Company's response activities in Eunice, LA during 2000, associated with a catastrophic train derailment and subsequent fire and chemical release resulting in the evacuation of approximately 5,000 people.

Vice President and General Manager, American Ecology Environmental Services Corporation (AEESC) - Winona, Texas (American Ecology Corp.)
1995 - 1997
Responsible for operations conducted at AEESC's hazardous waste deepwell, waste derived fuels blending, and solvent recovery facility located near Winona, Texas. Responsibilities included ensuring operations were conducted in compliance with applicable state and federal permits, rules, and regulations. Responsible for facility profitability, management of facility personnel, supervision of the receipt, processing, storage, and disposal of hazardous wastes, preparation of budgets, monitoring and safety programs, and interfacing with the media, the public, and regulatory authorities regarding facility activities. Also responsible for the operation of two subsidiary locations in El Paso and Laredo, Texas.

Vice President and General Manager, Texas Ecologists, Inc., - Robstown, Texas (American Ecology Corp.)
1992 - 1994
Responsible for the operations conducted at the Texas Ecologists hazardous waste treatment and landfill facility located near Robstown, Texas. Responsibilities included conducting facility operations in compliance with corporate policies and procedures as well as applicable state and federal permits, rules and regulations. Responsible for the direct management of all facility personnel, supervision of the receipt and safe handling, processing, storage and disposal of hazardous wastes, preparation of facility budgets, facility profitability, and supervision of facility environmental monitoring and safety programs.

Robert L. Marchand
Professional Experience Continued

Facility Manager, USEcology, Inc., - Beatty, Nevada (American Ecology Corp.)
1989 - 1992
Responsible for the operations conducted at USEcology's hazardous and low-level radioactive waste disposal facilities located near Beatty, Nevada. Responsibilities included conducting facility operations in compliance with corporate policies and procedures as well as applicable state and federal permits, rules and regulations. Responsible for the direct management of all facility personnel, supervision of the receipt and safe handling, processing, storage and disposal of hazardous and low-level radioactive wastes, preparation of budgets, facility profitability, and the supervision of monitoring and safety programs.

Assistant Facility Manager, USEcology, Inc., - Beatty, Nevada (American Ecology Corp.)
1987 - 1989
Acted as the direct representative of the Facility Manager and assumed the Manager's duties in his absence. Responsibilities included direct supervision of all disposal site personnel, supervision of environmental monitoring programs, assisting in the preparation of facility budgets, maintaining regulatory compliance of the waste operations, implementation of the facility Part B RCRA and TSCA operating permits, construction of RCRA disposal cells and monitoring wells, and design and startup of the facility laboratory.

Chemical Safety Officer, USEcology, Inc., - Beatty, Nevada
1986 - 1987
Responsible for implementation of the facility Chemical Safety and Quality Assurance Programs, including responsibility for the inspection of all incoming hazardous and PCB waste shipments, surveillance of work involving hazardous waste operations, assuring that all chemical safety and emergency equipment was readily available and properly maintained, assuring that all facility personnel had the appropriate hazardous waste training and qualifications, assuring that an effective occupational safety program was implemented for hazardous operations, working daily with corporate personnel, the public, customers, and regulatory authorities regarding facility operations, and supervising the facility environmental monitoring programs.

Radiological Controls and Safety Technician, USEcology, Inc., - Beatty, Nevada
1985 - 1986
Responsible for quality assurance and control of all radiological areas, including receiving shipments, Department of Transportation and Nuclear Regulatory Commission shipping and handling regulations and procedures, environmental monitoring, instrumentation, personnel dosimetry issue and receipt, and decontamination operations.

Assistant Site Supervisor, USEcology, Inc., - Beatty, Nevada
1984 - 1985
Responsibilities included working closely with the Site Supervisor in all areas of heavy equipment operator training, equipment maintenance, hazardous and low-level radioactive waste handling procedures, disposal cell construction and utilization, orientation of new employees and working daily with the facility Chemical Safety Officer and Radiological Controls and Safety Officer to maintain a safe working environment.

Heavy Equipment Operator/Radiological - Chemical Worker, USEcology, Inc., - Beatty, Nevada
1980 - 1984
Involved in all aspects of hazardous and low-level radioactive waste handling procedures.

Education

Nevada Certified Environmental Manager
40-Hour OSHA Certification; Hazardous Materials Handling
8 - Hour OSHA Supervisor Training
Previously trained as an Emergency Medical Technician Instructor/Firefighter

Dan Church

Operations Manager

US Ecology, Inc. Beatty, NV

Work experience: In the Industry for a total 15 years (2001 – 2016).

- **2001 – 2006 US Ecology, Inc. Beatty, NV**
  - Hazmat Technician / Operator/ Department Supervisor
- **2006 – 2008 Perma - fix Environmental, Inc. Tulsa, OK**
  - Operations Manager / Hazardous Waste Treatment Manager
- **2008 – 2010 US Ecology, Inc. Beatty, NV**
  - Operations Supervisor
- **2010 – 2016 US Ecology, Inc. Beatty, NV**
  - Operations Manager

Training / Education

- 24 hour HAZWOPER training (8 hours of field experience)
- 40 hour McCoy's RCRA training
- TSCA trainer
- 24 hour DOT certificate
- 15 years Industry related work

Ronald E. Browning

P.O. Box 1136 ● Tonopah, NV. 89049 ● (775) 482-5100 or (775) 346-1083 ● mshatraining@yahoo.com

Instructor Certifications

- OSHA 510 Instructor
- MSHA Surface Instructor
- American Heart Association First Aid & CPR Instructor
- Nevada State EMS Instructor

Safety & Health Employment Summary

ROUND MOUNTAIN GOLD CORPORATION — **MSHA Trainer & ERT Coordinator, October 1985 –July 2007**

Surface mining operation located in Round Mountain, NV. This operation at the time processed 300,000 tons per day of material and employed 650 to 700 employees

- Development of the operations and now corporate equipment and task training program
- Safety Coordinator and MSHA trainer for all new employees and contractors
- Emergency Response Team coordinator overseeing the training and record keeping for the 40 person response personnel to include Emergency Medical Technicians and Technical Rope Rescue Team

FISHER INDUSTRIES — **Western District Safety Manager**, May 2009 – December 2010

Assigned to oversee numerous highway projects, crushing operations and hot plants through Nevada, Arizona and New Mexico as well assisting in corporate training programs through 4 states to comply with Federal OSHA construction and MSHA compliance training.

- Numerous highway construction projects through New Mexico (Interstate 40)
- Aggregate operations in New Mexico.
- Mining operation located in Tucson, AZ (Johnson Camp Mine)
- Interstate 15 Project Las Vegas, NV.
- 580 By-Pass Project Reno, NV.

PHOENIX INDUSTRIAL — **Construction Project Site Safety Manager**, December 2010 – February 2011

This project involved the remobilization of conveyance systems to include reclaim tunnel, as well as the construction of new conveyance system. This was a temporary assignment to assist in the MSHA compliance due to the project was located on an active surface mining operation and employed 50 plus employees.

- Development of the site safety MSHA compliance records
- Equipment task training and MSHA compliance training
- Site safety audits to assure safety compliance under MSHA and OSHA regulations

SOLAR RESERVE — **Construction Project Site Safety Consultant**, July 2011 – April 2014

Project still in the construction phase and is currently the largest single construction project in the State of Nevada. This job involves working with not only the primary contractor but numerous sub-contractors from not only the U.S. but in most cases from around the world. The most challenging would be ensuring the local, state, and federal rules and regulations were communicated to those from other countries coming in to perform work.

- Assisted Site 6 different Site Safety managers in the overall site safety performance of the job.
- Complete oversight of the entire safety over the job site on behalf of the owner – Solar Reserve.
- Development of the orientation training to 700 plus subcontractors over the 2.5 years I was involved with the project.
- Assist the primary contractor (CobraThermosolar) with OSHA compliance.

BROWNING & ASSOCIATES — **Owner**, April 1997 - Present

Safety and health consulting for heavy industry, primarily mining and construction. Conducting Federal mandated training for MSHA and OSHA compliance, as well as development of site safety plans and programs. Site safety compliance audits to include working conditions, safe work practices and recordkeeping. Established clientele from small mining operations to heavy machinery manufacturers.

List of some established clients:

- Komatsu America Corp - Rolling Meadows, Illinois
- Kinross Gold – Reno, Nevada
- Harris Fence and Concrete – Tonopah, Nevada
- Solar Reserve – San Diego, California (Tonopah Solar Project)
- Hytorc Bolting Systems
- Caterpillar Solar Turbines – Irvine, California

Project Highlights

Past and Current Projects

- Corporate MSHA training for Komatsu America Corps North America manufacturing facilities and management groups.
- Site safety manager for the I-580 ByPass (Galena Bridge) project in Reno, NV from May 2009 through December 2010.
- Site Safety Consultant Tonopah Solar Project July 2011 through April 2014
- Safety and health consulting to ensure compliance with OSHA and MSHA Federal guidelines for various companies

Emergency Services

Emergency Services Background

Serving as a volunteer with the Tonopah Volunteer Ambulance Service for the last 10 years. Prior to moving to the Tonopah area served as a volunteer Fire & Rescue member with the Round Mountain Volunteer Fire Department.

Currently a Nevada State EMS Instructor conducting training sessions from Basic First Aid / CPR to EMT Basic courses for the County of Nye.

State licensed EMT Basic since 2003.

Hazardous Materials Hazardous Waste Operation Technician from 2001 to 2009 with the Round Mountain Hazmat Team.

Site Hazmat Specialist while employed at Round Mountain Gold Corporation

Emergency Response Team Coordinator overseeing safety and training for a 40 plus Emergency Response group to include EMS and Rescue. Both surface and underground operations.

Skills

Management Skills

Excellent people skills as well as fluent in many computer software programs to include Microsoft office.
Am known for my ability to speak in front of small groups and large.
Attended many management training programs to include; DNV Modern Safety Management and Auditing.
A good general knowledge of OSHA and MSHA regulatory compliance and industry standard job procedures.
Mobile equipment operations to include small excavators, dozers, wheel loaders, etc.

I have spent a lot of time on several large projects and have a full understanding how to apply the regulations and standards to the workforce in a manner that work crews understand.

Working in safety and health compliance since 1990 in the state of Nevada, I have a good knowledge of the standards involved not only under MSHA, but OSHA as well.

References

Personal References

References can be made available upon request.

JOHN RUSKIN DYER

Reno, Nevada (775) 420-2197 www.linkedin.com/in/johnrdyer moondog@gbis.com

OBJECTIVE: Employment as an Environmental Geologist/Compliance Manager

SUMMARY OF SKILLS

Consulted as an Environmental regulatory compliance specialist in California and Nevada, serving developers, manufacturers, public agencies, military facilities, small businesses and mining. Prepared compliance documents and permits/revisions for the mining industry and hazardous waste industry. Frequently negotiated with regulators in making common-sense clarifications to regulatory requirements.

Skills include:

- Assessing environmental risk via due diligence review for property transactions
- conducting and managing field assessment programs for soil, surface water and groundwater, involving drilling and sampling, monitoring and potable well installation;
- designing laboratory analytical programs and data review;
- preparing summary, permit and closure documents;
- managing and reporting on solid and hazardous waste;
- preparing reports for RCRA, TSCA, TRI and bi-ennial hazardous waste;
- creating and tracking project budgets; and
- auditing waste management facilities.

EDUCATION, TRAINING AND CERTIFICATIONS

- BS, Geology, California State University, Fresno, 1985
- AS, Natural Resources, Reedley Community College, Reedley, California, 1978

- HAZWOPER renewal 2014; Project Manager Curriculum 2010; RCRA- McCoy, 2015; Radiation Training-Technician, 2011; DOT HazMat, renewal 2014.

- Professional Geologist, California and Idaho
- Certified Environmental Manager, Nevada

ACCOMPLISHMENTS

- Conducted the removal and disposal of hazardous contaminated fill for the restoration of the Snow Creek wetland, in Kings Beach, California. This effort included coordination with two states, and multiple state and county agencies.
- Developed a waste management alternative for miles of hazardous HDPE piping for the Round Mountain gold mine (RMG). The piping was recycled into pick-up bed liners.
- Provided environmental due diligence for NV Energy on many properties transferred to TMWA that were part of the water purveyor portfolio.
- Provided environmental due diligence review for Nevada Power on multiple farm properties acquired for a proposed power plant in Ely, Nevada.
- Prepared TRI reporting for RMG.
- Improved operation of and reporting for the on-site landfill at RMG.
- Negotiated closure of a leaking UST site for Tahoe City Public Utilities District with the California Regional Water Quality Control Board.
- Negotiated closure of a leaking UST site for NV Energy in Kings Beach, California, with the California Regional Water Quality Control Board.
- Conducted the ground water monitoring program to RCRA standards for a hazardous waste management facility in Fernley, Nevada.
- Created and implemented a Waste Management Plan for the second phase of the development of the Village at Squaw Valley. The Plan met the requirements and review of the Placer County Health Department and the California Regional Water Quality Control Board.
- Coordinated the emergency excavation and disposal of contaminated soil from the excavation for the Squaw Valley Lodge. This effort included coordination with two states, and multiple state and county agencies.
- Improved waste management and auditing of facilities that received solid and hazardous waste for RMG.
- Managed UST services for the Nevada Public Works Board at state parks throughout Nevada, including UST removals, assessment, remediation, documentation, regulatory interaction and documentation for reimbursement from the Nevada Petroleum Clean-Up Fund.
- Managed UST removal and remediation services for the NDOT across Nevada, including UST removals, assessment, remediation, documentation, regulatory interaction and documentation for reimbursement from the Nevada Petroleum Clean-Up Fund.
- Managed field services for the water well drilling program at Squaw Valley for the Resort at Squaw Creek expansion program, part of the CEQA process.
- Provided on-call environmental services for the Nevada Army Reserve National Guard, including CERCLA due diligence and invasive weed monitoring.
- Managed permit compliance at the US Ecology facility in Beatty, Nevada, including groundwater sampling, PCB waste monitoring, leachate management and permit modifications.

EXPERIENCE/PROFESSIONAL WORK HISTORY

Environmental Compliance Manager, US Ecology Nevada-Beatty, Nevada, 2015 (current)

Managed compliance with environmental permits – TSCA/EPA and RCRA/NDEP, prepared permit modifications and applications, managed the groundwater monitoring program, managed the leachate generation at two disposal cells, provided compliance and new hire training, provided metric reporting to upper management.

Senior Environmental Engineer, Round Mountain Gold Corp, Round Mountain, NV 2011-2014

Managed solid, hazardous and asbestos wastes programs; prepared TRI and TSCA reporting; managed a Water Pollution Control Permit; prepared corporate and regulatory environmental reporting; inspected mine site facilities for regulatory compliance; provided environmental compliance training; interacted with Nevada and federal regulators on permits and inspections.

Senior Project Manager, AMEC Earth & Environmental, Sparks, NV, 2006-2011

Managed the due diligence program; assisted in mine-site investors audits for environmental obligations; managed projects for the Nevada Brownfields Program; provided environmental services - City of Reno, City of Sparks, Washoe County, TMWA, Nevada Army Reserve National Guard, NV Energy, Nevada Power.

Project Manager, Kleinfelder, Inc., Reno, NV, 1990-2006, Technician/Geologist, Kleinfelder, Inc., Fresno, CA, 1985-1990

Provided ongoing on-call environmental response services -Tahoe City Public Utilities District, Nevada DOT, Nevada State Public Works Board, City of Ely, Intrawest (Village at Squaw Valley) ;Intrawest (Village at Mammoth Lakes), Red Development (Legends at Sparks Marina) and TravelCenters of America; prepared numerous Phase I Environmental Site Assessments; assessed soil and groundwater for releases and discharges; conducted drilling and sampling services ; contracted and coordinated removal of USTs; prepared many site closure documents; prepared data and closure reports; obtained reimbursement from the Nevada Petroleum Fund and California Petroleum Fund.

PROFESSIONAL AFFILIATIONS

- International Right of Way Association
- Association of Engineering and Environmental Geologists
- Society of Mining and Metallurgical Engineers
- Nevada Mining Association
- Reno Sparks Chamber of Commerce
- Associated General Contractors Reno-Sparks
- Western Industrial Nevada

Attachment 2

Facility Map

1. MAIN SITE ENTRANCE
2. ADMINISTRATION OFFICE
3. SECURITY AND DRIVERS TRAILER
4. INBOUND AND OUTBOUND SCALES
5. PROFILING STATION
6. WATER STORAGE
7. FUEL STORAGE
8. MAINTENANCE SHOP
9. WEATHER STATION AND TRENCH 11 LYSIMETER
10. DRY HAZARDOUS WASTE STORAGE AREA 3
11. OUTDOOR TREATMENT PANS
13. OPERATIONS OFFICE
14. PCB PROCESSING AREA AND STORAGE/PCB TANK FARM
15. REAGENT SOLIDS STORAGE
16. CONTAINER MANAGEMENT AND STORAGE BUILDING
17. INDOOR TREATMENT PANS
18. DRY HAZARDOUS WASTE STORAGE AREA 2
19. EVAPORATION TANK (TRUCK WASH PAD)

- USGS 40 ACRES
- PROPERTY LINE
- SECURITY FENCE
- TORTOISE FENCE
- INTERNAL ROADWAYS

US ecology

LOCATION: BEATTY, NV 89003

DATE: OCTOBER 2015

HAZARDOUS WASTE MANAGEMENT FACILITY

FACILITY MAP

500 0 500 1000

SCALE: 1"= 500'

Attachment 3

Waste Disposal Information Forms
(Sample Only)

US Ecology, Inc. Land Disposal Restriction Form

Generator: _____ **EPA ID Number:** _____

Waste Stream or Profile Number: _____ **Manifest Doc. No.** _____ **Line No.** _____

Waste is a: ☐ **Wastewater (<1% TSS and TOC)** ☐ **Non-wastewater** ☐ **Debris**

Notification Frequency: ☐ **One Time** ☐ **Required with Each Shipment**

Shipment EPA Waste Codes (from 40 CFR 268.40) _____ _____ _____ _____

_____ _____ _____ _____

UHC's (Underlying Hazardous Constituents 40 CFR 268.48)? ☐ Yes ☐ No

If yes, list: _____

Does a subcategory apply per 40 CFR 268.40? ☐ Yes ☐ No

If yes, list: _____

Constituents requiring treatment in F001-5, F039, debris, and alternate soils? ☐ Yes ☐ No

If yes, list: _____

☐ **See Profile for analysis (if any).**

A. ☐ **Restricted Waste Meets Treatment Standards (40 CFR 268.7(a) (3))**
The restricted waste identified above meets the treatment standards in 40 CFR 268.40 or Alternative LDR treatment standards for contaminated soil 40 CFR268.49 and can be landfill disposed without further treatment.

If applicable, under 268.49, this contaminated soil ☐ does or ☐ does not contain listed hazardous waste and ☐ does or ☐ does not exhibit a characteristic of hazardous waste and complies with the soil treatment standards as provided by 268.49 (c) or the universal treatment standards.

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

B. ☐ **Restricted Waste Treated To Treatment Standards (40 CFR 268.7(b) (I) & 268.7 (b) (2))**
The treatment residue, or extract of such residue, or the restricted waste identified above has been tested to assure that the treatment residues or extract meet all applicable treatment standards in 40 CFR 268.40 and/or performance standards in 40 CFR 268.45.

I certify under penalty of law that I personally have examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in 40 CFR 268.40 without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

C. ☐ **Restricted Waste Soil treated to alternative standards (40 CFR 268.7 (b) (4))**
I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and believe that it has been maintained and operated properly so as to comply with treatment standards specified in 40 CFR 268.49 without impermissible dilution of the prohibited wastes. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

D. ☐ **Restricted Waste Decharacterized But Requires Treatment For UHC (40 CFR 268.7 (b) (4) (iv))**
I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49 to remove the hazardous characteristic. This decharacterized waste contains Underlying Hazardous Constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

E. ☐ **Restricted Waste Subject To Treatment (40 CFR 268.7(a) (2))**
The restricted waste identified above must be treated to the applicable treatment standards in 40 CFR 268.40, or treated to comply with applicable prohibitions set forth in Part 268.32 or RCRA Section 3004(d) and 268.49 (c).

If applicable, under 268.49, this contaminated soil ☐ does or ☐ does not contain listed hazardous waste and ☐ does or ☐ does not exhibit a characteristic of hazardous waste and is subject to the soil treatment standards as provided by 268.49 (c) or the universal treatment standards.

F. ☐ **Hazardous Debris Subject To Treatment (40 CFR 268.45)**
This hazardous debris identified above must be treated to the alternative treatment standards in 40 CFR 268.45.

I certify and warrant that the information that appears on this form, and appended documents, is true and correct. I have correctly indicated how my waste is to be managed in accordance with 40 CFR 268. My certification is based on personal examination of the information submitted, or is based on my inquiries of those individuals responsible for obtaining the information.

Authorized Signature: _____ **Title:** _____ **Date:** _____

UHC and Subcategory list from 40 CFR Part 268.48 and 268.40 available upon request.

US ecology

WASTE PROFILE FORM

US Ecology Nevada (Beatty) 800-239-3943
US Ecology Idaho (Grand View) 800-274-1516
US Ecology Texas (Robstown) 800-242-3209
US Ecology Michigan (Detroit) 800-396-3265

PROFILE #_____

A. GENERATOR INFORMATION

1. Generator:	☐ Billing information is same ☐ P.O. required for payment
2. Facility Address:	12. Billing Company:
	13. Billing Address:
3. Mailing Address:	14. City/State/Zip:
4. City/State/Zip:	15. Billing Contact:
5. Technical Contact:	16. Phone: 17. Fax:
6. Phone: 7. Fax:	18. Email:

8. Generator Status: ☐ CESQG ☐ SQG ☐ LQG

9. EPA ID #: 10. State ID #:

11. SIC Codes:

B. SHIPPING INFORMATION

1. US DOT Shipping name:

2. Hazard Class: 3. UN/NA #: 4. Packaging Group: 5. RQ:

6. Container Type: ☐ Bulk ☐ Totes ☐ Pallet ☐ Boxes ☐ Drums ☐ Other, Describe:

7. Frequency: ☐ Year ☐ Quarterly ☐ Monthly ☐ 1 time ☐ Other, Describe:

8. Shipment: Size: _____ Quantity: _____

9. Waste Import: ☐ Yes ☐ No
(If yes, complete Waste Import Supplement)

C. GENERAL MATERIAL & REGULATORY INFORMATION

1. Common name for this waste:

2. Process generating the material:

3. Describe physical appearance and odor of the waste:

4. Odor of the waste: ☐ None ☐ Slight ☐ Strong

5. Physical State: ☐ Liquid ☐ Sludge/Slurry ☐ Solid

6. Describe Color:

7. Liquid phases: ☐ Single ☐ Double Layer ☐ Multi-layer

8. Knowledge is from: ☐ Lab analysis ☐ MSDS ☐ Process/generator knowledge

9. Waste Type (US Ecology Texas customers only): ☐ N/A ☐ Industrial ☐ Non-Industrial

10. Is the waste restricted under EPA Land Disposal Restrictions (§268)? ☐ Yes ☐ No

11. If LDR "Yes", is waste: ☐ Wastewater ☐ Non-wastewater ☐ Debris (§268.2)

12. Alt. Standards for soil? ☐ Yes ☐ No

13. Is the waste RCRA hazardous waste containing benzene and originating at a Petroleum Refinery (SIC 2911), Chemical Manufacturing Plant (SIC 2800 thru 2899) or Coke by-Product Recovery Plant (SIC 3312)? *(If yes, complete Benzene Waste Operations Supplement Form and Thermal Supplement Form)*: ☐ Yes ☐ No

14. VO Conc.(§264.1083): ☐ <500 ppmw ☐ ≥500ppmw

15. Has waste been treated after point of generation? ☐ Yes ☐ No

16. CERCLA Regulated (Superfund) Waste: ☐ Yes ☐ No

17. Butadiene waste regulated by §63 Subpart XX: ☐ Yes ☐ No

18. Waste contains UHC constituent(s) (§268.48), above a treatment standard, other than those for which the waste exhibits a characteristic. *(If yes, list all UHC's in Section D):* ☐ Yes ☐ No

19. Waste exempt from definition of "solid waste" or "hazardous waste" *(If yes, list reference 40CFR_____):* ☐ Yes ☐ No

20. State Waste Codes:

21. RCRA Waste Codes:

22. Source Code: G75 H

23. Form Code: N/A

24. Management Code: H _____ (USE only)

D. MATERIAL COMPOSITION *(use additional form if necessary)*

Constituent	Units	TCLP	Totals	Range total ≥ 100% Typical	Min	Max
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			

E. WASTE CHARACTERISTICS

1.	Oxidizer	☐ Yes	☐ No	9.	Reactive sulfides _____ppm	☐ Yes	☐ No
2.	Explosive	☐ Yes	☐ No	10.	Reactive cyanides_____ppm	☐ Yes	☐ No
3.	Organic peroxide	☐ Yes	☐ No	11.	Water/air reactive	☐ Yes	☐ No
4.	Shock sensitive	☐ Yes	☐ No	12.	Thermally unstable	☐ Yes	☐ No
5.	Tires	☐ Yes	☐ No	13.	TSCA regulated PCB waste *(control sheet required with shipment)*	☐ Yes	☐ No
6.	Pyrophoric	☐ Yes	☐ No	14.	Medical/infectious waste	☐ Yes	☐ No
7.	Compressed gas	☐ Yes	☐ No	15.	Radioactive *(If yes, complete Profile Supplement for Radioactive Waste)*	☐ Yes	☐ No
8.	Halogenated organics	☐ Yes	☐ No				

16. Possibility of incidental liquids from transportation? ☐ Yes ☐ No

17. Is waste a solid using the paint filter test? ☐ Yes (solid) ☐ No (not solid)

18. pH: *(If solid, what is pH if mixed with water?)* Range _____ to _____ Typical _____ ☐ ≤ 2 ☐ 2 < 12.5 ☐ ≥ 12.5

19. Flash Point: _____º F ☐ < 140 º F

20. Is the waste oil bearing waste from Petroleum Refining, Production or Transportation practices? ☐ Yes ☐ No

F. GENERATOR'S CERTIFICATION

☐ Yes ☐ No **I certify this material may be disposed without further treatment.**

I authorize US Ecology to correct inconsistencies on the waste profile form that impact waste management decisions with my oral or written authorization. US Ecology will require re-submittal of the waste profile information if substantial changes are determined necessary. I understand material that does not conform to specifications described in this profile may be rejected by US Ecology unless other contractual arrangements have been agreed to by both parties. I certify, under penalty of law, that I am familiar with this waste stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, that all known or suspected hazards have been disclosed, and that this form was completed in accordance with the instructions provided.

Print Name	Signature	Title	Date

US ecology

WASTE PROFILE FORM
THERMAL SUPPLEMENT

PROFILE #_____

This form must be completed for all waste processed by US Ecology's Oil Reclamation Facility. Acceptance of hazardous waste at the reclamation facility is limited to oil bearing waste from petroleum refining, production or transportation practices.

Petroleum refining wastes are those generated by processes engaged in producing hydrocarbon products such as gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, etc., through fractionation or straight distillation of crude oil, redistillation of unfinished petroleum derivatives, including cracking, gasification or other processes. This industry also produces aliphatic and aromatic chemicals as by-products. Waste generated through petroleum and natural gas production and transportation practices supporting this industry, such as crude petroleum extraction; transportation and bulk storage of petroleum products; natural gas extraction, transmission, distribution and storage may also be accepted by US Ecology's Oil Reclamation Facility.

A. GENERATOR INFORMATION

Name of Facility where Waste Originated:	
Name of Generator:	
Waste Stream Name:	

B. WASTE CHARACTERISTICS

Is the waste oil bearing waste from Petroleum Refining, Production or Transportation practices (see description above)? ☐ YES ☐ NO

The Petroleum Refining listed waste code associated with waste is:

☐ F037 ☐ F038 ☐ K048 ☐ K049 ☐ K050 ☐ K051

☐ K052 ☐ K169 ☐ K170 ☐ K171 ☐ K172 ☐ No Petroleum Refining Listed Waste Code Applies

If no Petroleum Refining Listed Waste Code applies, please provide a detailed description of the process generating the waste consistent with the definition provided above:

C. WASTE COMPOSITION

Primary Waste Components	Typical % (should total 100%)
Water	
Solids *(excluding Organics/Oil/TPH)*	
Organics /Oil/TPH	

WASTE PROPERTIES (wet weight basis)

PHYSICAL STATE

☐ Solid ☐ Liquid ☐ Single Phased ☐ Multi Phased

Heating Value Btu/Lb	
% of ASH	

Specific Waste Constituents (ppm)	
Halogens*	
Mercury	
Sulfides (total)	
Sulfur	
Chlorinated aliphatic hyrocarbons	

Reclamation Facility Coordination Questions

☐ YES ☐ NO Contains Non-Friable Debris Material > 2-inch size? If yes, _____ % vol

☐ YES ☐ NO If Catalyst, does material posses self heating properties?

☐ YES ☐ NO Contains Bitumen / Asphalt / Tar > 1% (wt.)? If yes, _____ % vol

☐ YES ☐ NO Has the material been processed by a centrifuge prior to shipment?

☐ YES ☐ NO Contains fuel oxygenates? MTBE Ethanol Other _____ ppm

☐ YES ☐ NO Does the waste contain any surfactants?

D. CERTIFICATION

I certify under penalty of law that I am familiar with the waste stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, and that this form was completed in accordance with the instructions provided.

Print Name	Signature	Title	Date

*Halogens: Total Halogens Includes Fluorine, Chlorine, Bromine and Iodine. Report weight (ppm) as Halogens

(effective date 10/10/12)

US Ecology, Inc. Land Disposal Restriction Form

GENERATOR:_____ EPA I.D. NUMBER: _____

WASTE STREAM or PROFILE NUMBER:_____ MANIFEST DOC. NO. _____ LINE NO. _____

WASTE IS A: ☐ WASTEWATER ☐ NON-WASTEWATER ☐ DEBRIS

NOTIFICATION FREQUENCY: ☐ ONE TIME ☐ REQUIRED WITH EACH SHIPMENT

EPA WASTE CODES (from 40 CFR 268.40) _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____

UHC's (Underlying Hazardous Constituents 40 CFR 268.48)? ☐No ☐Yes - List:_____

A. ☐ **Restricted Waste Meets Treatment Standards (40 CFR 268.7(a) (3))**

The restricted waste identified above meets the treatment standards in 40 CFR 268.40 or **Alternative LDR treatment standards for contaminated soil 40CFR268.49** and can be landfill disposed without further treatment. I have attached all supporting analytical data, where available.

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

B. ☐ **Restricted Waste Treated To Treatment Standards (40 CFR 268.7(b) (I) & 268.7 (b) (2))**

The treatment residue, or extract of such residue, or the restricted waste identified above has been tested to assure that the treatment residues or extract meet all applicable treatment standards in 40 CFR 268.40 and/or performance standards in 40 CFR 268.45. I have attached all supporting analytical data, where available.

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

C. ☐ **Restricted Waste With Technology Based Treatment Standards (40 CFR 268.7(b) (4))**

I certify under penalty of law that I personally have examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that based on my inquiry of those individuals immediately responsible for obtaining this information. I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in 40 CFR 268.40, without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

D. ☐ **Restricted Waste Decharacterized But Requires Treatment For UHC (40 CFR 268.9)**

I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains Underlying Hazardous Constituents (UHC) that require further treatment to meet the universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

E. ☐ **Restricted Waste Subject To Treatment (40 CFR 268.7(a) (2))**

The restricted waste identified above must be treated to the applicable treatment standards in 40 CFR 268.40, or treated to comply with applicable prohibitions set forth in Part 268.32 or RCRA Section 3004(d). I have attached all supporting analytical data, where available.

F. ☐ **Hazardous Debris Subject To Treatment (40 CFR 268.45)**

This hazardous debris identified above must be treated to the alternative treatment standards in 40 CFR 268.45.

G. ☐ **Restricted Waste Subject To A Variance or Extension (40 CFR 268.7(a) (4))**

This restricted waste identified above is subject to a case by case exemption under 40 CFR 268.5, an exemption under 40 CFR 268.6 or a nationwide capacity variance under Subpart C of 40 CFR 268, and is not prohibited from land disposal. LDR prohibitions become effective on _____ (date) for this restricted waste. The corresponding treatment standard(s) are promulgated in 40 CFR 268.40. I have attached all supporting analytical data, where available.

H. ☐ **Restricted Waste Managed In A "Lab Pack" (40 CFR 268.7(a) (9))**

I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only waste that have been excluded under appendix IV to 40 CFR Part 268 and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at 40 CFR 268.42(c). I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

I certify and warrant that the information that appears on this form, and appended documents, is true and correct. I have correctly indicated how my waste is to be managed in accordance with 40 CFR 268. My certification is based on personal examination of the information submitted, or is based on my inquiries of those individuals responsible for obtaining the information.

Authorized Signature _____ **Title** _____ **Date** _____

UHC list from 40 CFR Part 268.48 available upon request

US ecology

Facility Use Only	
Date Added	Initial
_____	_____

WASTE PROFILE MODIFICATION FORM

PROFILE # _____

A. GENERATOR INFORMATION

Generator: _____

Requestor Name *(Print)*: _____

Facility Address *(No PO Boxes)*: _____

Title: _____

Mailing Address: _____

Phone: _____

City/State/Zip: _____

Common Name of Waste: _____

B. AMENDMENTS

1. Section _____ ☐ Addition ☐ Deletion ☐ Change

   Describe:

2. Section _____ ☐ Addition ☐ Deletion ☐ Change

   Describe:

3. Section _____ ☐ Addition ☐ Deletion ☐ Change

   Describe:

4. Section _____ ☐ Addition ☐ Deletion ☐ Change

   Describe:

C. GENERATORS CERTIFICATION

I hereby certify that the amendments noted above to the above referenced profile are complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition or properties exist and that all known or suspected hazards have been disclosed.

Generator's Authorized Signatory: _____

US ecology

WASTE PROFILE FORM **PROFILE #**_____

BENZENE WASTE OPERATIONS SUPPLEMENT (BWON 40 CFR Part 61 Subpart FF)
(Former Attachment 4)

This form must be completed for all hazardous waste containing benzene originating at a Petroleum Refinery (SIC 2911), Chemical Manufacturing Plant (SIC 2800 thru 2899) or Coke by-Product Recovery Plant (SIC 3312).

A. GENERATOR INFORMATION

Name of Facility where Waste Originated:	EPA Generator #:		
Common Name for this Waste:			
Process generating the material:			
Type of Facility:	☐ Refinery (SIC 2911)	☐ Coke by-products recovery (SIC 3312)	☐ Chemical manufacturing (SIC 2800 thru 2899)
Facility Total Annual Benzene Status (TAB):	☐ < 1 Megagram (2,204 lbs)	☐ ≥1 but <10 Megagram	☐ ≥10 Megagram

Is the waste being transferred to US Ecology for offsite treatment compliance with 40 CFR Part 61.342(f)? ☐ Yes ☐ No*

By indicating "Yes", notice is provided that the waste referenced in this profile is subject to 40 CFR Part 61 Subpart FF (National Emission Standards for Benzene Waste Operations). All shipments of waste under this profile are being transferred to US Ecology for the destruction or removal of benzene in accordance with 40 CFR Part 61.342 (C)(1)(i).

B. WASTE CHARACTERISTICS

The flow-weighted annual average benzene content by weight or process turnaround total concentration of this waste is: _____ppmw

(Benzene concentration data must be total concentration by weight. DO NOT USE TCLP CONCENTRATIONS.)

The weighted average water content is?	☐ ≤10%	☐ >10%
Is the waste Process Unit Turnaround waste?	☐ Yes	☐ No

*Only if you answered "No" for offsite treatment compliance above, please supply the following:

Range of benzene total concentration: _____ to _____ppmw

This waste is classified as: ☐ Process wastewater stream ☐ Product tank drawdown ☐ Landfill leachate ☐ None of the three

C. CERTIFICATION

I certify under penalty of law that I am familiar with the waste stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, and that this form was completed in accordance with the instructions provided.

Print Name	Signature	Title	Date

Revised 11/2014

US ecology

Waste Profile Form Instructions

Introduction

This guidance document was prepared to assist customers in completing the US Ecology (USE) Waste Profile Form. The Waste Profile Form and its supplements provide US Ecology the necessary information to safely and compliantly manage our customers waste. Complete and thorough information on the forms expedites the approval process. A current copy of the form is available from a US Ecology's Customer Service Representative or in electronic form from US Ecology's website at (www.usecology.com). For specific waste acceptance questions, please contact US Ecology's Customer Service team at one of the locations below:

US Ecology Idaho	Grand View, Idaho	(800) 274-1516
US Ecology Nevada	Beatty, Nevada	(800) 239-3943
US Ecology Michigan	Detroit, Michigan	(800) 396-3265
US Ecology Texas	Robstown, Texas	(800) 242-3209

The profile Form instructions are specific for US Ecology's TSDF facilities located in the United States. For waste acceptance at facilities outside the United States, please contact a customer service representative.

Section A- Customer Information:

1	Provide the generator's name
2	Provide the address where the waste is generated
3	Provide the mailing address. If the mailing address is the same you can leave Item A.3 blank. This address will be used for the return of manifests.
4 – 7	Provide a technical contact name and telephone number for technical inquiries regarding the information on the profile form(s) and resolution of off-spec (non-conforming waste) loads
8	Provide the generator status. Refer to 40 CFR § 261.5 and § 262.44 to determine EPA generator status.
9	Provide the Generator's EPA ID number
10	If the waste is state regulated (for example, Cal-Haz), provide the state EPA ID number. This may be blank for Generators operating in states that do not issue state specific ID numbers. Texas Class 1 industrial non-hazardous wastes must have both EPA and Texas State ID numbers. An EPA ID number is not required for Conditionally Exempt Small Quantity Generators (CESQG) or for non-RCRA and/or non-hazardous wastes. Please use "N/A" for EPA ID numbers for Non Regulated/Non RCRA material and "CESQG" for Conditionally Exempt Small Quantity Generators
11	Include the applicable Standard Industrial Classification (SIC) Code for the generator represented in Section A of the Profile Form. You may use National Industry Classification Code (NAICS) as an alternative. The generator facility may have multiple SIC/NAICS codes. Please include the Code associated with the generation of the waste being profiled. The following link provides the most current code list. http://www.osha.gov/pls/imis/sic_manual.html .
12-14	If the name of the company being billed and the billing address information is the same as the information provided in Questions A.1-4, please check the box indicating that the billing information is the same. Also, check the box indicating if a P.O. is required for payment.
15	Provide the name of the billing contact
16 - 18	Provide the phone number, fax and email of the billing contact

Section B- Shipping Description

1-5	Provide the Proper Shipping Name, hazard class, UN/NA #, Packaging Group and RQ that will appear on the manifest in accordance with DOT regulations. If the waste is not a hazardous material enter "non-DOT Regulated Waste Material" in response to B 1. If additional DOT descriptions apply include a supplement list.
6	Indicate the container type that material will be shipped to US Ecology. Select all that will apply.
7 - 8	Estimate the frequency for which the generator will ship the waste to the facility and an estimate of the volume or quantity of each shipment.
9	Indicate if waste is being imported into the USA. If yes, please complete the Import Supplement available through a customer service representative or at US Ecology's website.

Section C- General Material & Regulatory Information:

1	Provide the common name for this waste (e.g. lead contaminated soil, bag house dust, etc.).
2	Describe the process that generated the waste, include additional sheets as necessary. Please provide as much information as possible to enable US Ecology to identify safety hazards and determine if this process is specifically "listed" under RCRA, or if the waste may contain characteristic wastes. Refer to 40 CFR §261- Identification and Listing of Hazardous Waste, and §262 for Standards Applicable to Generators of Hazardous Waste
3 - 7	Complete these questions related to the physical appearance and odor of the waste (e.g., soil with scrap metal) to enable US Ecology to perform a visual confirmation that the waste received matches the waste profile when the shipment arrives at the facility. Any material that does not reasonably match the physical description will be placed on hold and off-loading delayed while US Ecology contacts the broker/generator to resolve the discrepancy.
8	Enter the source of knowledge used to determine the material composition and waste characteristics provided on the profile form. Check all boxes that apply. Please attach the appropriate information, such as lab results and/or Material Safety Data Sheets (MSDS) that you relied on to support your responses.
9	For US Ecology Texas customers only indicate whether the waste is considered "Industrial" or Non-Industrial" as defined in the State of Texas Regulations (Title 30, Part 01, §335.1). If the waste is not being profiled for acceptance at the Texas facility, leave this section blank.
10	Is the waste restricted under the EPA Land Disposal Restrictions (LDR) at 40 CFR 268.7. If "yes", a LDR certification must be submitted with the profile package. A copy of the LDR certification page can be obtained from the US Ecology website or from a customer service representative.
11	If yes to 10, indicate whether the waste is considered wastewater, non-wastewater or debris. Title 40 CFR §268.2(f) specifies a "wastewater " < 1% total organic carbon (TOC) and < 1% total suspended solids (TSS). Title 40 CFR §268.2(d) specifies "nonwastewater" as a waste that exceeds 1% TOC or TSS. Debris is defined in 40 CFR §268.2(g) and in general, must be solid with greater than 50% of the waste greater than 2.5 inches in size. *For example, Large rocks, manufactured objects, or tree stumps are considered debris. Soil, sludges, smelter slag, lead acid batteries, cadmium batteries and intact containers are not debris.*
12	Indicate if alternative LDR treatment standards under 40 CFR §268.49 for soils can be used. The alternative treatment standards are only applicable to soil as defined in §268.2. Please give a US Ecology customer service representative a call if you have RCRA hazardous soils and have questions as to the advantage of using the alternative soils treatment standards.

13	If the waste is RCRA Hazardous, indicate if the waste originated from any of the industries listed. The waste may have originated at a facility other than the generators facility listed in response to Section A of the Waste Profile Form. If the answer is "Yes" please complete the Benzene Waste Operations Supplement Form available at US Ecology's website or from a customer service representative.
14	Indicate whether the concentration of Volatile Organics (VO) in the waste is greater than or less than 500ppm. Please ensure that this determination is consistent with the maximum expected concentrations of specific VO compounds listed in Section D of the Waste Profile Form. The regulations allow a determination of VO Concentration of the waste by either direct measurement at the point of generation [§265.1084(a)(3)] or by process knowledge [§265.1084(a)(4)]. Supporting information may be requested by US Ecology if the determination of VO Concentration is inconsistent with the sum of analytes presented in Section D of the Waste Profile form. *For example, If the response to Question 14 indicated a VO Concentration less than 500ppm, however the sum of the individual constituents presented in Section D of the Waste Profile form or supporting analytical indicate 300 ppm benzene and 350 ppm toluene, supporting information would be necessary to support the VO Concentration determination.*
15	Indicate whether the waste has been treated after generation? This question is important for determining the applicable LDR treatment standards. For example, if a D002 only waste has been neutralized to remove the characteristic of corrosivity and TCLP for cadmium is >0.11 but less than 1.0 mg/L, the waste will be nonhazardous but still restricted and needs treatment for the UHC of cadmium.
16	Please indicate if CERCLA (Superfund) waste. If yes, special provisions apply and disposal taxes may be reduced.
17	Indicate if the waste is butadiene waste from ethylene manufacturing process unit regulated by 40 CFR 63 subpart XX (40 CFR 63.1083).
18	If the RCRA waste codes do not include any D0*XX* Codes and the answer to C.12 is "No", then the answer to this question is "No". For D0*XX* code waste or if the answer to C.12 is "Yes", indicate whether the waste contains any Underlying Hazardous Constituents (UHCs) other than the chemical compound indicated by the D0*XX* waste code that is provided in response to Question C.21. *For example a waste with a D018 waste code (toxicity characteristic for benzene) containing toluene at 11 mg/kg would have toluene listed as a UHC but not benzene as UHC, as benzene is the primary constituent covered by the D018.*
19	Indicate if the waste is excluded from being considered a solid waste under 40 CFR §261.4(a), solid waste not considered a hazardous waste listed in §261.4(b), or a hazardous waste exempt from certain RCRA regulations under §261.4(c).
20	Enter applicable state codes. State waste codes are required when shipping to US Ecology's Texas facility.
21	Enter all applicable RCRA waste codes. If more space is required attach a separate sheet to the profile approval form.
22-24	For form codes, source codes and management codes, see EPA's Hazardous Waste Report Instructions and Forms at: http://www.epa.gov/epaoswer/hazwaste/data/br05/forms.htm. The list of codes is available on US Ecology's website.

Section D- Material Composition (Physical/Chemical)

Describe the physical nature of the material ***and*** identify important chemical constituents. For example, if a waste is primarily soil and debris and is contaminated with gasoline, then describe the percentage and range of soil and debris and quantify the concentrations of gasoline compounds measured in the mixture.

The description should be as informative as possible, for example "brown, clay soil – 80%" and "debris such as PPE, rocks, wood, metal, and pipes – 20%." The sum of the percentages must equal or exceed 100%.

Chemical concentrations must include appropriate units of measure and differentiate TCLP results from Total results. List the typical value or range of concentrations. For example: Benzene "typical value"- 50 mg/l Total and range 30-100. If additional space is needed, please attach a list. Please list all TRI reportable components.

Sections E- Does the waste exhibit or contain the following:

1	Indicate whether the waste has oxidizer qualities. The waste may behave like an oxidizer and not necessarily exhibit a characteristic of Ignitability (D001) or be considered an oxidizer by DOT.
2	Indicate whether the waste is explosive as defined in 40 CFR §261.23(a)(6),(7) or (8). Please assess whether a D003 RCRA waste codes should be included in response to C.21.
3	Does the waste contain organic peroxide? Please assess whether a D003 RCRA waste codes should be included in response to C.21.
4	Indicate whether the waste is shock sensitive? Generally, shock sensitive materials should have a D003 waste code in response to C.21.
5	Indicate whether the waste contains tires?
6	Indicate whether the waste is pyrophoric. If yes, please assess whether a D001 or D003 RCRA waste code should be included in response to C.21.
7	Indicate whether the waste a compressed gas according to §261.21(a)(3)(i). An ignitable compressed gas should include a D001 waste code. Generally cylinders containing compressed gasses are not acceptable at US Ecology facilities. However empty cylinders that no longer have an intact valve may be acceptable. Different states regulate "aerosol cans" differently.
8	Indicate whether the waste contains any halogenated organic compounds listed in Appendix III to §268.
9	Indicate whether the waste contains reactive sulfides and provide the estimated concentration. If yes, please assess whether a D003 RCRA waste code should be included in response to C.21 [refer to §261.23(a)(5)].
10	Indicate whether the waste contains reactive cyanides and provide the estimated concentration. If the waste contains reactive cyanides that cause the material to be classified as waste code D003, then the amenable portion of the cyanides will need to be determined. Amenable cyanides are amenable to treatment by chlorination. Prior to land disposal, both the total and the amenable cyanides must meet the LDR treatment standards (i.e. 590 ppm and 30 ppm, respectively).
11	Indicate whether the waste reacts with air or water. If yes, please assess whether the waste should include a D003 waste code in response to C.21.
12	Indicate whether the waste is thermally unstable. Thermally unstable waste would be expected to undergo violent change if heated.

13	Indicate whether the waste is TSCA regulated PCB waste. If "yes" then a control sheet will be required with each shipment to the facility. US Ecology will accept customer control sheets that contain the minimum required information. A copy of US Ecology's PCB control sheet is available on the website or from a customer service representative.
14	Indicate whether the waste is medical waste or infectious waste. If yes, US Ecology customer service will follow-up to determine if the waste is acceptable under the facility's site specific permit.
15	Indicate whether the waste is radioactive. If "yes" then a profile addendum for radioactive waste must be completed. The addendum is available on the website or from a customer service representative.
16	Indicate if there is any possibility of incidental liquids to be generated or to separate from the waste during transportation. This may include exposure to precipitation or liquid phase separation
17	Indicate "yes" if the waste is a solid and "no" if the waste would pass through a paint filter.
18	Provide the expected pH range of the waste and a typical pH that is expected. Alternatively, check the appropriate box indicating the pH range. If the waste is aqueous and the pH is ≤ 2 or ≥ 12.5 the waste should include a D002 waste code.
19	Indicate the expected flash point of the waste and check the box if the flash point is below 140°F (60°C) according to the methods specified in §261.21(a)(1). A liquid waste with a flash point below 140°F should have a D001 waste code.

Section F- Certification:

Indicate whether the waste can be disposed by US Ecology without further treatment

- If E.17 is "Yes", the waste is non-RCRA, and does not require treatment such as solidification mark the box "Yes".
- If the answer to C.10 and E.17 are "Yes", and the waste will meet LDR treatment standards when delivered to US Ecology, mark the box "Yes".
- If the answer to C.10 is "Yes", and the waste will require treatment to meet LDR treatment standards, mark the box "No".

The generator's certification authorizes US Ecology to correct inconsistencies in the information provided through oral or written authorization. This communication will be retained with the permanent record of the approval information. If substantial changes are necessary the generator may be required to complete and sign a new profile approval form.

Disclaimer

This information was prepared by US Ecology Corporation. It is not legal advice, and may not be current. USE is not a law firm, nor does it provide legal advice on specific State and Federal regulatory interpretations. Therefore, this information does not create, expressly or impliedly, an attorney-client relationship. This information is not a substitute for legal advice from an attorney licensed in the reader's state or country. US Ecology is not responsible for actions taken or not taken as a result of this information, nor for any errors or omissions it may contain. Hazardous waste regulations are lengthy and complex, and this guidance is not intended to define all hazardous waste generator and disposal scenarios. For further guidance, please use the following link to access the Code of Federal Regulations: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=%2Findex.tpl

Attachment 4

Spill Prevention Control and Countermeasures Plan

PCB PROCESSING FACILITY
SPILL PREVENTION, CONTROL
AND COUNTERMEASURES PLAN

June 2015

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APPENDIX 3 PCB PROCESSING BUILDING AND TANK FARM AREA DRAWING

APPENDIX 4 INSPECTION CHECKLIST FORMS

1. OIL SPILL OR RELEASE NOTIFICATION

The following notification must be made in the event of a PCB-containing waste spill or release:

1. Notify a supervisor, manager, or emergency coordinator **immediately** unless notification within that time frame is impractical because of the emergency situation.

EMERGENCY COORDINATOR	NAME	STREET ADDRESS	HOME PHONE
Primary Coordinator	Robert Marchand	1225 A Avenue North Beatty, Nevada 89003	775-553-2367 702-280-2596-cell
First Alternate	Daniel Church	3100 Prairie Ave. Pahrump, NV 89048	775-990-9826-cell
Second Alternate	Josue Partida	901 2nd St. Beatty, Nevada 89003	775-537-5095-cell
Third Alternate	John Dyer	1100 N. 1st Avenue, Apt B-21 Beatty, NV 89003	775-420-2197-cell
Health & Safety Manager	Ingeborg Thomas	1100 A Avenue Unit B 5 Beatty, NV 89003 Alt (Fri – Sun) 6548 West Diablo Dr. Las Vegas, NV 89118	702-485-0787-cell 702-367-3538-alt

2. If possible, use spill kit and absorbent material to contain spill.

3. If it is determined that a spill cannot be cleaned up using plant personnel and equipment, call 911. Any manager can make the decision to call 911. Be prepared with the following information:

   i. Name of substance;
   ii. Initial estimate of quantity released;
   iii. Date, time, and duration of the release;
   iv. Type of release (air, water, land);
   v. Names and telephone numbers of contacts;
   vi. Correct site address; and
   vii. Any additional information necessary.

4. Additional information on emergency response is provided in Section 6 of this Spill Prevention Control and Countermeasures Plan (SPCC Plan) and in the Site RCRA Contingency Plan.

EMERGENCY TELEPHONE NUMBERS

FACILITY	
Daniel Church, Operations Manager	(775) 553-2203 ext. 4118
John Dyer, Environmental Manager	(775) 553-2203 ext. 4113
Ingeborg Thomas, Health & Safety Manager	(775) 553-2203 ext. 4132
Robert Marchand, General Manager	(775) 553-2203 ext. 4104
LOCAL EMERGENCY RESPONSE/CLEANUP	
Fire Department	911
NOTIFICATION	
Nevada Division of Environmental Protection Spill Reporting Line	(888) 331-6337 (In State) (775) 687-9485 (Out of State)
RCRA Permitting Branch Supervisor (Regional Director)	(775) 687-9465
US EPA, Region 9 Duty Officer US EPA, Region 9 Facilities Manager	(800) 300-2193 (415) 972-3336
National Response Center	(800) 424-8802

PCB PROCESSING FACILITY
SPILL PREVENTION, CONTROL
AND COUNTERMEASURES PLAN

June 2015

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2. FACILITY INFORMATION

2.1 Objective

This is the SPCC Plan for the PCB Processing Facility (Facility) at the US Ecology site (Site), located in Beatty, Nevada. The SPCC Plan sets forth good engineering and management practices for the prevention, control, and containment of releases/spills of PCBs, including the proper disposal of spill and cleanup material. Sound procedures are established to minimize adverse impact on the environment, plant operations, plant personnel, or the public health. Where there are health and safety, emergency response, and hazardous materials/hazardous waste procedures already in effect, they are incorporated into this document by reference.

2.2 Applicability [40 CFR 112.1]

This SPCC Plan has been prepared in accordance with 40 CFR 112 as required by 40 CFR 761.65(c)(7)(ii) and establishes the facility procedure methods and equipment necessary to prevent the discharge of PCBs from the Facility. This SPCC Plan has been prepared because the site meets the following applicability:

- The site is a non-transportation related facility engaged in oil use;
- Due to the location, it can be reasonably expected that the facility can discharge oil in quantities that may reach and be harmful to navigable waters or shoreline;
- Oil is stored in above ground containers equal to or greater than 55 gallons; and
- The total above ground capacity for oil storage in containers is greater than 1,320 gallons.

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- Oil is stored in above ground containers equal to or greater than 55 gallons; and
- The total above ground capacity for oil storage in containers is greater than 1,320 gallons.

3. CERTIFICATION OF THE PLAN [40 CFR 112.3]

Except as provided in 40 CFR 112.6 for Qualified Facilities, a licensed Professional Engineer (PE) must review and certify the SPCC Plan for it to be effective and satisfy the requirements of this regulation. According to the regulation, such certification shall in no way relieve the owner or operator of a facility of his duty to prepare and fully implement such SPCC Plan in accordance with the requirements of the regulation.

The following table presents the criteria used to determine if a plant is a Qualified Facility (Tier I or Tier II) or not (40 CFR 112.3(g))

Criteria	Tier I	Tier II	Comments
No above-ground storage containers >5,000 gallons	X		False – two storage tanks that hold 7,500 gallons each and two storage tanks that hold 5,000 gallons each
No single discharge >1,000 gallons in past 3 Years	X	X	True
No two discharges >42 gallons in 12-month period in past 3 years	X	X	True
Aggregate above ground PCB storage capacity of 10,000 gallons or less	X	X	False—Aggregate storage capacity is greater than 10,000 gallons

As shown in the table, this facility does not meet the criteria to be defined as a Qualified Facility. Therefore, certification of the SPCC Plan by a PE is required.

3.1 Corporate Policy Statement

US Ecology management is committed to the complete implementation of this SPCC Plan for the Facility. This includes a commitment to the proper management of all PCB-containing oils, and the expeditious control, cleanup, and proper disposal of any and all spills or leaks. The persons signing below make the following certifications.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate,

and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

By _____ _____
Corporate Environmental Officer Date

_____ _____
General Manager Date
Primary Facility Emergency Coordinator

3.2 Professional Engineer Certification [40 CFR 112.3(d)]

I certify that the information contained within this SPCC Plan was prepared under my direction, in accordance with good engineering practices and, to the best of my knowledge and belief, the information contained is true, complete, and accurate.

I hereby certify that:

- I am familiar with the requirements of 40 CFR 112;
- I have (or my agent has) visited and examined the facility;
- The SPCC Plan has been prepared in accordance with good engineering practice, including the consideration of applicable industry standards, and with the requirements of 40 CFR 112;
- The SPCC Plan establishes procedures for required inspections and testing; and
- The SPCC Plan is adequate for the facility.

Chris A. Bolin
Professional Engineer #49507
Expires 31 October 2015
30 JUNE 2015
Date

4. LOCATION OF THE PLAN [40 CFR 112.3(E)]

The SPCC Plan will be maintained at the following locations:

Copy Number	Location
1	Environmental Compliance Manager's Office
2	Copies maintained in each Manager's Office in the Permits binder

The SPCC Plan will be available for on-site review during normal working hours. A copy of the SPCC Plan also will be maintained in the company's electronic filing system.

5. AMENDMENTS TO THE SPCC PLAN

This Section describes procedures for amending this SPCC Plan. Portions of 40 CFR 761.65(c)(7)(ii) are more stringent and supercede the CWA requirements of 40 CFR 112.4(a), (b) and (c).

5.1 Determination of Needed Amendments by USEPA/State Agencies Following Spills [40 CFR 112.4 (a), (b), (c)]

If a facility discharges more than 1,000 gallons of oil in a single event, or discharges more than 42 gallons in each of two events within any 12-month period, the following information must be submitted to the Regional Administrator and the local state environmental regulatory agency within 60 days from the discharge event(s) at the facility:

- Name of the facility;
- Your name;
- Location of the facility;
- Maximum storage of oil at the facility and the normal daily usage;
- Corrective action and countermeasures taken;
- An adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary;
- The cause of the discharge including failure analysis of the system;
- Additional prevention measures taken or contemplated to minimize the possibility of recurrence; and
- Other information pertinent to the plan or discharge as required by USEPA.

Section IV.F.16 of the TSCA permit requires that the SPCC Plan be reviewed and amended immediately if:

- the SPCC Plan fails in an emergency;
- specified changes occur in the Facility's design, construction, operation, maintenance or other circumstances
- the list of emergency coordinators changes

- the list of emergency equipment changes
- relevant information available to US Ecology indicates a revision is warranted; or
- US EPA determines a revision is needed.

5.2 Amendments as Required by USEPA/State Agencies [40 CFR 112.4(d), (e), (f)]

Any amendments made to the Plan required by the USEPA Regional Administrator must occur within 30 days of such notification, or an appeal can be filed in accordance with 40 CFR 112.4(f).

5.3 Amendments Due to Facility Changes or 5 Year Review [40 CFR 112.5 (a) and (b)]

5.3.1 Facility Changes [40 CFR 112.5 (a)]

The Plan will be amended in accordance with 40 CFR 112.7 and any other applicable sections of 40 CFR 112.5 when there is a change in the facility design, construction, operation, or maintenance that materially affects its potential for discharge as described in 40 CFR 112.1(d).

The amendment must be prepared within six months of the change and implemented as soon as possible, but not later than six months following the preparation of the amendment.

Any amendments to the plan require recertification per Section 4.1 and must be listed in **Appendix 1**. Note that, as presented in Section 3.5, a PE must certify any technical amendments.

5.3.2 Five-Year Review [40 CFR 112.5 (b)]

The completion of the review and evaluation will be documented and a statement must be signed when the SPCC Plan is amended. A person at a management level with sufficient authority to commit the necessary resources must document completion of the review. The following words will suffice:

> "I have completed review and evaluation of the SPCC Plan for the PCB Processing Facility, US Ecology Nevada in Beatty, NV on (date) and (will/will not) amend the plan as a result."

A review form and signed review statement will be completed and maintained as part of this SPCC Plan. A copy of the form is available as **Appendix 1**.

5.3.3 Technical Amendments Certified by Professional Engineer [40 CFR 112.5 (c)]

According to 40 CFR 112.5(c), a PE must certify any technical amendment to the SPCC Plan in accordance with 112.3(d). A new certification page should be included, and the revision record should be amended to reflect this change.

Non-technical amendments not requiring the application of good engineering practice do not require PE certification.

5.3.4 Qualified Facilities SPCC Plan Requirements [40 CFR 112.6]

This Facility does not meet the criteria to be classified as a Qualified Facility, as discussed in Section 3 of this SPCC Plan. The Facility may store greater than 10,000 gallons of PCB-containing oil on-site at any time, and the Facility has one or more PCB-containing oil storage tanks that are larger than 5,000 gallons. Therefore, this portion of the rule is not applicable to this Facility.

6. GENERAL REQUIREMENTS FOR SPCC PLAN

6.1 Written Commitment of Manpower, Equipment and Materials [40 CFR 112.7]

6.1.1 Written Commitment

US Ecology management is committed to the complete implementation and execution of this SPCC Plan. This includes a commitment to the proper management of PCBs and the expeditious control, cleanup, and disposal of any PCB spills or leaks.

6.1.2 Responsibilities

The implementation of the SPCC Plan will be the responsibility of the following Facility Personnel.

Title	Personnel	Position	Phone Number
Primary Coordinator	Robert Marchand	General Manager	775-553-2203 x-104
First Alternate	Daniel Church	Operations Manager	775-553-2203 x-118
Environmental Manager	John Dyer	Environmental Compliance Manager	775-553-2203 x-113
Health & Safety Manager	Ingeborg Thomas	Health & Safety Manager	775-553-2203 x-132

6.2 Proposed facilities, methods or equipment not yet fully operational [40 CFR 112.7]

All facilities, methods and equipment related to PCB containing oil handling are fully operational at this time.

6.3 Discussion of Facility Conformance [40 CFR 112.7(a) (1)]

This SPCC Plan is intended to satisfy the requirement of 40 CFR 112 and 40 CFR 761.65(c)(7)(ii).

6.4 Deviations from Requirements [40 CFR 112.7(a) (2)]

There are no deviations from SPCC Plan requirements at this site.

6.5 Physical Layout and Facility Diagram [40 CFR 112.7(a) (3)]

US Ecology Nevada, Inc. operates a PCB Processing Facility located on US Highway 95, eleven (11) miles south of Beatty, Nevada. A Site vicinity map is included in **Appendix 2**. Portions of the site operate under a current TSCA permit issued by the USEPA. The Facility consists of the PCB Storage and Processing Building (PCB Building) and the associated outside PCB Tank

Farm Area and PCB Truck Staging Pad. All operational areas are contained within the site chain-link security fence. All PCBs are handled and stored within this controlled area. The PCB Building, Tank Farm, and Truck Staging Pad areas are shown on the figures in **Appendix 3**.

Facility operations consist of draining transformers and other electrical equipment of PCBs and, if required, flushing the equipment with approved solvents. The PCB-contaminated liquids are stored in steel tanks at the adjacent PCB Tank Farm Area (PCB Tank Area) until they can be shipped to an off-site incineration facility. Prior to the initiation of the draining and flushing operation, the liquid levels of the storage tanks are manually checked for sufficient available volume.

6.5.1 Container Contents and Capacity [40 CFR 112.7(a) (3) (i),(ii),(iii)]

Containerized PCB materials are stored inside the fully enclosed PCB Building. All PCB Articles and Equipment, upon being drained and/or flushed are disposed on-site or sent to an approved off-site disposal or destruction facility. All PCB Articles and Containers placed in storage for disposal are marked with the date the items were first placed into storage. No PCB Article or container is stored for more than one year.

6.5.1.1 PCB Tank Farm Area

Description of Storage Tanks and Containment

The PCB Tank Area consists of 4 tanks, all horizontally mounted on raised concrete cradles or footings. The tanks are located in a 45-foot by 45-foot containment area with a 1.5-foot high containment wall. The containment area floor and walls are constructed of reinforced concrete. The concrete floor and walls are not penetrated by pipes, conduits, or drains. The concrete floor of the PCB Tank Area is sloped to a sump pit with dimensions 48-inch wide by 48-inch long by 18-inch deep. There is no drain or other penetration of the sump pit floor or walls. Liquids that collect in the sump pit are removed by pumping for proper management.

Tank #4: 7,500-gallon PCB-contaminated liquid tank

Tank #5: 7,500-gallon PCB-contaminated liquid tank

Tank #6: 5,000-gallon PCB-contaminated liquid tank

Tank #7: 5,000-gallon PCB-contaminated liquid tank

All of the containment system components (e.g., tanks, pipes, and concrete and joint sealants) in contact with PCB-containing oils are compatible with the waste that is stored within the PCB Tank Area and are not degraded by contact with those materials.

All PCB storage tanks are equipped with liquid level gauges, and audible maximum gallonage alarms. The alarms are tested on a daily basis. All storage tanks are equipped with manual cut-off valves at the tank intakes.

The precipitation event considered in the design of the PCB Tank Area is the 25-year, 24-hour storm. At the facility location, the 25-year, 24-hour storm event is a 2.26-inch rainfall (based on NOAA Atlas 14, Volume 1, Version 5, Amargosa Farms Garey Station ID: 26-0150). This rainfall amount was considered in the design of the PCB Tank Farm containment structure should the design storm occur during a tank failure.

Containment Capacity

Capacities of tanks within the PCB Tank Area: 2 tanks (5,000 gal. each)
2 tanks (7,500 gal. each)

Total volume = 25,000 gallons

Containment capacity required is the larger of:

25% of total liquid storage capacity = 25% of 25,000 gallons = 6,250 gallons

200% of liquid storage capacity of largest tank = 2 x 7,500 gallons = 15,000 gallons

Containment capacity required by 40 CFR 761.65(b)(1)(ii) = 15,000 gallons

USEN conservative determination of PCB Tank Farm containment holding capacity

= 15,000 gallons + design storm precipitation

Design Storm precipitation volume = [2.26 in / 12 in/ft] x 45 ft x 45 ft x 7.48 gal/cu ft = 2,853 gals

Minimum containment capacity required = 17,853 gallons

Containment capacity available = 45 ft wide by 45 ft long by 1.5 ft deep

= 3,038 cu ft x 7.48 gal/cu ft

= 22,721 gallons*

* Actual total capacity is somewhat greater since containment depth at low point (sump pit) is actually 23 inches.

22,721 gallons > 17,853 gallons, liquid holding capacity satisfies 40 CFR 761.65(b)(1)(ii)

Excess capacity is 22,721 – 17,853 gallons = 4,868 gallons

4,868 gallons is equivalent to 3.9 inches of freeboard above the design liquid height

6.5.1.2 PCB Building Storage Area

Description of PCB Building

The process and storage area inside the PCB Building is positioned over a liner system that, from bottom to top, consists of a minimum of 6-inches of clean sand cushion, two 30-mil HDPE liners separated by 6 inches of clean sand, a protective 125-mil polyester filter fabric layer, and a final 1.0-foot thick sand layer.

The floor of the PCB Building contains no drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to escape. The epoxy-coated, non-porous concrete floor contains continuous 9-inch high curbing to prevent PCB-laden liquids from escaping. The PCB Building has a USEPA permitted capacity of 59,400 gallons or 1,080 55-gallon drums (or equivalent).

The PCB Building contains 5 drain and flush stations, each equipped with separate segregated piping (see **Appendix 3**). There is one (1) drain line for draining and one (1) feed line for the addition of flushing liquid. Using a diaphragm pump, the PCB-containing oils are pumped to one of the four temporary storage tanks. Diesel flows directly from a 250 gallon tote to the station. There is no possibility of cross-over contamination between PCB-containing oils and clean flushate.

Each PCB drain and flush station is equipped with high pressure, oil resistant vacuum hose with cam lock quick disconnects for draining. Valves/lines are closed/capped when not in use for extended periods of time. The stingers are made of PVC to allow quick length modifications. The lines that contain PCB oils are located out of the way of traffic patterns to prevent possible damage by vehicles.

Manual cut-off valves are located at the stinger/hose connection, hose/mainline connection, and at all inlets to the 4 storage tanks.

All of the containment system components (e.g., tanks, pipes, concrete sealant, and HDPE liners) are compatible with the waste that is stored within the PCB Building.

PCB Building Containment Capacity

In accordance with SPCC requirements, the containment area must be capable of containing the larger of: **1)** 25% of total liquid holding capacity of PCB Articles and Containers housed or temporarily stored inside the PCB Building, or **2)** 200% of the liquid holding capacity of the largest PCB tank or container housed or stored inside the PCB Building. The following calculation documents the maximum volume of liquids meeting the above criteria.

- 25% of the total capacity: 59,400 gallons x 0.25 = 14,850 gallons
- Twice the volume of largest container: 2 x 330 gallons = 660 gallons

The design criteria is 25% of the total liquid holding capacity of PCB Articles and Containers or **14,850 gallons**

The PCB Building containment capacity must account for drums in place at the time of a potential spill or release. A maximum of 540 drums can be placed on the floor at any one time (50% of the 1,080 permitted drum capacity, since drums will be stacked 2 high). Each drum is assumed to be 24 inches in diameter. The following calculation documents the liquid holding capacity of the PCB Building floor and curbing.

Total containment capacity: 48 ft wide x 100 ft long x 0.75 ft high containment curb

= 3,600 cu. ft. x 7.48 gal/cu. ft.

= 26,928 gallons

Capacity reserved for drums: π x (2 ft/2)^2 x 0.75 ft = 2.36 ft^3 or 17.6 gallons/drum

540 drums x 17.6 gallons/drum = 9,504 gallons

Total volume available for secondary containment: 26,928 gallons – 9,504 gallons = **17,424 gallons**. The volume required is 14,850 gallons; therefore, sufficient containment is provided, including an **excess capacity of 2,574 gallons**.

USEN will operate the PCB Building such that the total liquid holding capacity of PCB Articles and Containers permanently or temporarily housed inside the PCB Building never exceeds a maximum volume of 59,400 gallons.

6.5.1.3 PCB Truck Staging Pad

All loading of PCB-containing oils for off-site disposal or destruction is done on the PCB Truck Staging Pad (PCB Truck Pad). The PCB Truck Pad is a 12-feet wide by 56-feet long reinforced concrete pad. All portions of the Truck Pad slope and drain to a 48-inch by 48-inch by 18-inch deep sump pit. There is no drain or other penetration of the sump pit floor or walls. Liquids collecting in the sump pit as a result of drips or spills occurring during tank truck loading operations are transferred by pump to the appropriate PCB oil holding tank for appropriate management. Liquids collecting in the sump from precipitation are pumped into totes, tested for PCBs and managed appropriately depending on the outcome of sampling.

The PCB Truck Pad is designed for loading tanker trucks up to 10,000 gallons in capacity. The Truck Pad and sump pit provide a liquid holding capacity of about 1,175 gallons. For the purposes of spill prevention, the loading of tanker trucks are under the direction of the PCB Building supervisor or designee. Since truck unloading operations are always conducted and monitored by trained US Ecology operations personnel, the PCB Truck Pad is expected to contain only incidental drips and spills. In the event of larger spillage, tanker loading operations will be terminated immediately by the operator(s) present. Also, loading operations are conducted during daylight hours and not during significant rainfall events. Since the PCB Truck

Pad is intended to contain only minor drips and spills, the 1,175 gallon holding capacity is judged to be sufficient.

The PCB Truck Pad and sump pit are designed to contain the water volume that would be collected during the design storm (25-year, 24-hour storm). The 2.26-inch design storm would generate approximately 947 gallons of water.

All tanker trucks receiving PCB-containing oils at the facility meet applicable DOT requirements.

When tank trucks are positioned for loading they are barricaded to prevent departure before complete disconnect of transfer lines. Facility personnel are present during transfer operations. Transfer lines are capped, and appropriate valves secured after the transfer has been completed.

All incidental spills which may occur during tank truck loading are immediately cleaned-up and placed in appropriate DOT approved containers.

All large spills of oils with PCBs <500 ppm and all spills of PCB oils with PCBs ≥ 500 ppm will be addressed according to Section 3.2 of the Site RCRA Contingency Plan and remediated per the requirements of 40 CFR 761 Subpart G.

6.5.2 Drainage Controls [40 CFR 112.7(a) (3) (iii)]

The land on which the facility is constructed is located in the Amargosa Desert with a very limited chance of drainage to flowing surface-water bodies, navigable or otherwise, except under extreme precipitation conditions greatly exceeding the design storm (i.e., 25-year, 24-hour storm).

PCB-containing oils are processed within a fully enclosed and contained area and all outside PCB storage tanks are located within a contained area. PCB related operations normally are conducted during daylight hours.

PCB Articles and Containers are processed within a controlled containment area inside a metal building. PCB Articles and Containers housed within the PCB Tank Farm Area are within a contained area that prevents contact between PCB-containing oils and area surface water. PCB-

containing oils are kept separate from the facility surface-water drainage system. The run-off of precipitation from the PCB Building roof and facility grounds drains to areas outside of the PCB containment areas. This run-off water does not come in contact with PCB Articles or Containers.

Containers, piping, and containment system components (tanks, liners, sealants, concrete, etc.) are compatible with the PCB-containing oils and are not degraded by contact with those materials.

6.5.3 Discharge Countermeasures [40 CFR 112.7(a) (3) (iv)]

Discharges from tanks or piping should be identified by site personnel conducting daily visual inspections. If a discharge is identified, the countermeasures will include appropriate notifications to the General Manager or his designee, cleanup team identification, and then appropriate cleanup in accordance with Section 6.6.2.2. Containment, diversionary structures, and equipment are provided throughout the Facility to contain PCB-containing oils and/or stormwater on-site. One of the following preventive systems or equivalent is used as a minimum:

- Booms and oil absorbent materials staged inside the PCB Building.

In the event of a spill, the material will be retained in the facility by these respective countermeasures.

6.5.4 Methods of Disposal [40 CFR 112.7(a) (3) (v)]

Waste materials resulting from small incidental spills and leaks of PCBs that are cleaned up with absorbent material will be disposed of in accordance with the Facility TSCA permit, and applicable State and/or local regulations.

6.5.5 Contact List [40 CFR 112.7(a) (3) (vi)]

Needed Emergency Phone Numbers are listed below.

FACILITY	
Daniel Church, Operations Manager	(775) 553-2203 ext. 4118
John Dyer, Environmental Manager	(775) 553-2203 ext. 4113
Ingeborg Thomas, Health & Safety Manager	(775) 553-2203 ext. 4132
Robert Marchand, General Manager	(775) 553-2203 ext. 4104
LOCAL EMERGENCY RESPONSE/CLEANUP	
Fire Department	911
NOTIFICATION	
Nevada Division of Environmental Protection Spill Reporting Line	(888) 331-6337 (In State) (775) 687-9485 (Out of State)
RCRA Permitting Branch Supervisor (Regional Director)	(775) 687-9465
US EPA, Region 9 Duty Officer US EPA, Region 9 Facilities Manager	(800) 300-2193 (415) 972-3336
National Response Center	(800) 424-8802

6.6 Discharge Reporting Information [40 CFR 112.7(a) (4)&(5)]

40 CFR 112.7(a)(4) and 40 CFR 761.125(1) require reporting of a spill or discharge. The Facility is required by its TSCA permit to respond and report on spills following the protocols of its Site RCRA Contingency Plan and in conformance with 40 CFR 761.65.

6.6.1 Definitions

Spill: Both intentional and unintentional spills. Leaks and other uncontrolled discharges where the release results in any quantity of PCBs running off or about to run off the external surfaces of the equipment or other PCB source as well as the contamination resulting from those releases. This definition applies to spills of 50 ppm of PCBs and greater. [40CFR761.123].

Reportable Spill: Oral notification shall be made to the RCRA Facilities Management Office of any incident that requires implementation of the RCRA Contingency Plan and/or the PCB Processing Facility SPCC Plan. A release of 1 pound or more of PCBs into the environment requires oral and written notification to the National Response Center (1-800-424-8802). A release of 10 pounds or less of PCBs into the environment does not require notification of the US EPA, if proper clean-up is conducted in accordance with 40 CFR 761.125(a)(iv). A release of more than 10 pounds of PCBs into the environment requires oral and written notification of the US EPA Regional Office, the NDEP and the National Response Center.

A spill of any amount of PCB material with ≥500 ppm PCBs must be reported.

Contained Spill: Any PCB spill occurring inside a containment area.

Uncontained Spill: Any PCB spill occurring outside a containment area.

6.6.2 Emergency Procedures [40 CFR 112.7(a)(4) & (5)]

6.6.2.1 Emergency Procedures

If a spill or leak occurs, despite the spill prevention measures in place, immediate steps should be taken to eliminate the source and to control, contain, and cleanup the released material. All measures necessary to prevent oil contamination of any water system, and potential discharge from the plant outfall or off-site, must be expeditiously taken. The Site RCRA Contingency Plan will be followed. In general, the following steps will be followed:

1. Evacuate personnel from the immediate area of the spill who are not required for the response.
2. Identify the spilled material(s).
3. Notify a supervisor or manager.
4. Manager will call 911 immediately if spill is uncontrolled and moving off-site. When calling, be prepared with the following information:
    a. Names and telephone numbers of contacts;
    b. Correct facility address
    c. Name of substance;
    d. Initial estimate of quantity released;
    e. Date, time, and duration of the release;
    f. Source of the discharge;
    g. Description of all affected media (i.e., air, water, land);
    h. Cause of the discharge;
    i. Any damages or injuries caused by the discharge;
    j. Actions being used to stop, remove, and mitigate the effects of the discharge;

k. Whether evacuation may be needed;

l. The names of individuals who have been contacted; and

m. Any additional information necessary.

5. Notify the Compliance Department.

6. Take measures to stop the spill. Only do so if it's possible to do safely.

7. Take measures to contain the spill and prevent it from exiting the secondary containment, to the extent it can be done safely.

8. If it is determined that a spill cannot be cleaned up using plant personnel and equipment, call 911. Any manager can make the decision to call 911. Be prepared with the information listed in #4 above.

9. If it is determined the spill can be cleaned up using plant personnel and equipment.

   a. Put on the appropriate PPE based on the MSDS.

   b. Always use dry methods to clean up petroleum spills. Never hose down spills or leaks.

   c. Spread absorbents on the oil and/or pump the oil into appropriate containers.

   d. Dispose of cleanup wastes properly.

   e. Complete the Oil Spill Cleanup Record and forward a copy to the Environmental Compliance Department.

10. Notify required government agencies.

6.6.2.2 General Response and Clean-Up Requirements

General Response to Spills

Spills of PCB-containing oils will be evaluated to determine proper method of clean-up and what reporting, if any, is required. All spills of oil containing ≥ 500 ppm PCB must be cleaned up in accordance with 40 CFR 761, Subpart G, regardless of the size of the spill. All other small incidental spills of PCB-containing oils of < 500 ppm PCBs that occur during draining and flushing operations will be cleaned up by the end of each operating day. All small incidental spills will be cleaned up with "Floor-Dri" material and placed in a drum for subsequent disposal. Collection of incidental spill material will be performed with shovels, brooms, and spill pillows

or other absorbent material. Spill kits are maintained within the PCB Building and available for use by PCB building operations personnel.

In the event that a larger spill occurs within the PCB Building, all feed lines to the storage tanks will be closed, if required, and all processing operations will cease. Immediate clean-up measures will be conducted under the supervision of the General Manager (GM) or his designee. The GM or his designee will ensure that all personnel involved in any spill clean-up procedures are properly outfitted with the necessary personal protective equipment.

The spilled oils will be bermed and confined to as small an area as possible prior to clean-up. As much of the oil as practical will be removed in liquid form and placed in the appropriate PCB storage tanks. Solidification will be performed on only the liquid volume that cannot be practically transferred into the tanks.

If the spill or leak involves a PCB bulk storage tank, or associated piping, the feedline cut-off will be isolated, and the tank or line will be immediately patched and emptied until permanent corrective action can be completed. If the volume of standing oil is too great for drumming, a contractor will be summoned to remove the oil for approved off-site processing.

The GM or his designee will continually monitor the incident by observation for signs of further release.

When the spill has been stabilized, the GM or his designee will immediately notify all other site management who will ensure that the appropriate state and federal authorities are contacted.

When remedial clean-up operations are completed, all contaminated materials and equipment that are not suitable for decontamination will be placed in DOT-approved containers for disposal.

Equipment that is suitable for decontamination will be decontaminated in accordance with standard facility procedures before being released for reuse.Specific Clean-Up Requirements

a. Low Concentration Spills, Less Than 1 lb of PCBs
   - Low concentration spills involve <1 lb. of PCBs by weight (<270 gallons of untested mineral oil, containing <500 ppm PCBs). Solid surfaces must be double washed/rinsed. Post cleanup confirmation wipe samples, to show adequate cleanup, must have a concentration of <10µg/100 cm^2.

- Must be completed within 48 hours after the responsible party is notified or becomes aware of the spill- action can be delayed in case of adverse conditions
- At completion of cleanup, the responsible party must document the cleanup with records and certification of decontamination.

b. High-Concentration Spills, and Low Concentration Spills of 1 lb or More PCBs

- Actions must be taken as quickly as possible, and within no more than 24 hours (or within 48 hours for PCB transformers) after the responsible party is notified or becomes aware of the spill
- Action can be delayed in case of adverse conditions.
- Effectively cordon off or otherwise delineate and restrict an area encompassing any visible traces plus a 3-foot buffer and place clearly visible signs advising persons to avoid the area to minimize the spread of contamination as well as the potential for human exposure.
- Record and document the area of visible contamination
- Note the extent of visible traces and the center of the visible trace area.
- If no visible traces are present, note it.
  - Contact the EPA regional office for guidance in completing statistical sampling of the spill area to establish spill boundaries.
- Initiate cleanup of all visible traces of the fluid on hard surfaces.
- Initiate removal of all visible traces of the spill on soil and other media (gravel, sand, etc.)
- If there is a delay in reaching the site and there are insufficient visible traces of PCBs remaining at the spill site, estimate area of the spill and immediately cordon off the area of suspected contamination.
  - Estimate is based on the amount of material missing from the equipment or container.
  - As soon as practicable, a statistically based sampling scheme will be used to identify the boundaries of the spill area

c. Decontamination Requirements

- Cleanup will be verified by post-cleanup sampling
  - Non-impervious solid surfaces: $\leq 10 \mu g/100\ cm^2$
  - Contaminated soil: ≤ 1 mg/kg PCBs by weight

d. Post-Cleanup Sampling Requirements

- Sampling area must be the greater of:
  - Area cleaned plus an additional 1-foot boundary, or
  - An area 20% larger than the original area of contamination
- The sampling scheme must ensure 95% confidence against false positives
- The number of samples must be sufficient to ensure areas of contamination will be detected
  - Minimum number of samples is 3
  - Maximum number of samples is 40
- Sampling scheme must include calculation for expected variability due to analytical error
- EPA recommends the use of a sampling scheme developed by the Midwest Research Institute

- EPA may, at its discretion, take samples from any spill site
  - If EPA's sampling indicates levels exceed the required level, further cleanup will be required

6.7 Reporting [40CFR761.65(d)(44)(iv); 40CFR761.75(c)(3)(ii)]

The Site RCRA Contingency Plan, applicable by reference under the Site TSCA permit, requires the following reporting to the NDEP when an incident occurs that requires implementation of the Site RCRA Contingency Plan. Implementation of the Contingency Plan occurs when the Emergency Coordinator identifies fire, explosion or a release of hazardous waste or constituents which could threaten human health or the environment.

Oral notification will be made as soon as possible after becoming aware of the release, but no later than 24 hours following the incident. The oral report will be followed by a written report within 15 days. The information will include (Contingency Plan Section 7.7.0):

- Name, address and telephone number of the owner/operator of the Facility;
- Name, address and telephone number of the Facility;
- Date, time and type of the incident;
- Name and quantity of material(s) involved;
- The extent of injuries, if any;
- Response action taken;
- An assessment of actual or potential hazards to human health or the environment, where applicable;
- Estimated quantity and disposition of recovered material that resulted from the incident.

In accordance with the Site TSCA permit, oral and written notification shall be made to the Region IX Manager of the RCRA Facilities Management Office of any incident that requires implementation of the Site RCRA Contingency Plan and/or the PCB Processing Facility SPCC Plan, as follows:

For a release of 1 pound or more of PCBs (material with 50 ppm to <500 ppm) into the environment:

- Oral notification to the NDEP Spill Reporting Hotline, National Response Center, EPA Region IX, and NDEP-BWM RCRA Facilities Branch Supervisor within 24 hours after discovery or by noon of the next business day, whichever is later, after the incident.

- A full investigation into the cause of the incident; a detailed report shall be entered into the daily operating records.
- A written incident report shall be submitted to the NDEP and USEPA within 15 days after the incident.

For a release of any quantity of material containing ≥ 500 ppm of PCBs:

- Oral notification of the NDEP, National Response Center, NDEP-BWM RCRA Facilities Branch Supervisor, and EPA Region IX within 24 hours after discovery or by noon of the next business day, whichever is later, after the incident.
- A full investigation into the cause of the incident; a detailed report shall be entered into the daily operating records.
- A written incident report shall be submitted to the USEPA within 15 days after the incident.

The report must contain at least the following information:

(a) Date, time and type of incident

(b) Name and quantity of material(s) involved;

(c) The extent of injuries, if any;

(d) Response actions taken;

(e) An assessment of actual or potential hazards to human health or the environment, where applicable; and

(f) Estimated quantity and disposition of recovered materials that resulted from the incident.

7. SPILL SCENARIOS FROM EQUIPMENT FAILURES [40 CFR 112.7 (B)]

7.1 Historical Spills [40 CFR 112.7 (b)]

Releases have occurred in the past, from loading and off-loading PCB containing liquids from transport trucks, and non-bulk container management practices. Spills of PCB containing materials are controlled and captured by the containment structures, which include the PCB building, the containment for the four stationary tanks and the truck off-loading ramp.

7.2 Potential Spills [40 CFR 112.7 (b)]

The following table lists potential sources and describes their potential spill directions. Spill direction is determined as if containment was not present.

Source	Type of Failure	Volume (gal)	Rate	Direction of Flow	Containment
Tank No. 4	Tank failure	7,500	Slow leak or instantaneous spill	eastward	Within secondary containment
Tank No. 5	Tank failure	7,500	Slow leak or instantaneous spill	eastward	Within secondary containment
Tank No. 6	Tank failure	5,000	Slow leak or instantaneous spill	eastward	Within secondary containment
Tank No. 7	Tank failure	5,000	Slow leak or instantaneous spill	eastward	Within secondary containment
Non-bulk portable containers	Container failure	5 to 250	Slow leak or instantaneous spill	eastward	Within secondary containment
Transport trucks	Hose failure	200	40 gpm	eastward	Within secondary containment

7.2.1 Surface-Water Drainage

Surface-water runoff from the Facility flows to the east and ponds along the access road. Storm water that falls onto and in the PCB Tank Farm and Truck Staging Pad stays within the containment until pumped out and properly disposed.

Surface water run-on is controlled by a diversion ditch on the Site's north side.

8. FACILITY CONTAINMENT FOR SPILL SCENARIOS [40 CFR 112.7 (C)]

8.1 Spill Prevention Systems – Onshore [40 CFR 112.7(c) (1)]

General

Spill prevention is accomplished by secondary containment design, operation and inspections procedures, and stormwater run-on controls. Containment design for the PCB Building, PCB Tank Farm Area and PCB Truck Pad includes concrete materials, sealed surfaces and bermed edges. There are several spill kits located at the Facility for initial response.

Source	Type of Failure	Volume (gal)	Secondary Containment	Containment Secondary Containment Capacity (gallons)
Tank No. 4	Tank failure	7,500	Concrete, bermed, sealed common enclosure	22,721
Tank No. 5	Tank failure	7,500	Concrete, bermed, sealed common enclosure	22,721
Tank No. 6	Tank failure	5,000	Concrete, bermed, sealed common enclosure	22,721
Tank No. 7	Tank failure	5,000	Concrete, bermed, sealed common enclosure	22,721
Non-bulk portable containers	Tank failure	5 to 330	PCB building, concrete, bermed, sealed	17,424
Transport trucks	Hose failure	200	Concrete, bermed, sealed, with sump	1,175

8.2 Spill Prevention Systems – Offshore [40 CFR 112.7(c) (2)]

Not Applicable - No offshore facilities are present at this Site.

9. IMPRACTICABILITY OF SPECIFIC REQUIREMENTS [40 CFR 112.7 (D)]

9.1 Oil Spill Contingency Plan [40 CFR 112.7(d) (1)]

This requirement is not applicable because the required containment, equipment, and procedures are in place.

9.2 Written Commitment of Manpower, Equipment and Materials for Spill Control [40 CFR 112.7(d) (2)]

This requirement is not applicable because the required containment, equipment, and procedures are in place.

10. INSPECTIONS, TESTS AND RECORDS [40CFR 112.7 (E)]

10.1 Inspections

Personnel perform regular inspections of the permanent above-ground storage tanks on a daily and weekly basis and routinely observe the containers and containment storage, use and handling areas during normal business hours and activities. Inspections of containers and containment storage are documented on the inspection forms and checklists included in **Appendix 4**. If spills or leaks are observed, small ones are cleaned up by Facility personnel. Larger ones are also reported to the Operations manager and Environmental Compliance Manager.

Bulk Storage Container Inspection Schedule

CONTAINERS	INSPECTION PROCEDURES
Storage Containers	Routinely observed during normal daily activities for signs of deterioration, discharges or accumulation of oil on the floor. Observations are included as part of the daily inspection, and documented on the inspection form.
Tanks	Each tank is inspected daily. The inspections include: 1) visually checking the tank and piping condition, 2) ensuring that there is no fluid in the secondary containment.

10.2 Recordkeeping

Records required by this SPCC Plan will be maintained on file for a period of three years. The records will be of sufficient quality and quantity to support and document adherence to this SPCC Plan.

The following is a list of records that will be kept on file at the Site.

- Container and containment area inspection forms.
- Descriptions of spills or leaks that occur after the effective date of this SPCC Plan. The records will include the date, volume of the release, and summary of response actions implemented.
- Employee training records documenting training required under this SPCC Plan.

11. PERSONNEL, TRAINING, AND DISCHARGE PREVENTION PROCEDURES [40 CFR 112.7 (F)]

11.1 Personnel Training [40 CFR 112.7(f) (1)]

The GM or his designee is responsible for oil spill prevention, including employee training, and reporting to line management. The GM will provide written reports to company and government officials, as required, under this SPCC Plan, and is responsible for review and amendment of this document. Implementation of this SPCC Plan and compliance in their area of operations is the responsibility of the PCB processing facility supervisor.

All Facility personnel are trained to prevent accidental releases from oil storage facilities and to recognize and report visible releases from such facilities. Persons involved in use of the PCB processing facility will be instructed in the operation and maintenance of equipment to prevent discharges of PCBs; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and the contents of the facility SPCC Plan. Persons who would be involved in spill control and countermeasures will attend regular Spill Prevention training. Such training will be given within 30-days of personnel assignment to duties relating to use of the PCB processing facility, and will be repeated for all involved personnel at least once each year.

Records on personnel training, subjects discussed, and a list of attendees will be recorded and maintained by the Environmental Compliance Manager for a period of three years.

11.2 Designated Person Accountable for Discharge Prevention [40 CFR 112.7(f) (2)]

The designated person accountable for discharge prevention is the General Manager or his designee.

11.3 Discharge Prevention Briefings [40 CFR 112.7(f) (3)]

At a minimum discharge prevention training will be conducted with employees who handle PCB wastes on an annual basis to assure adequate understanding of the SPCC Plan for the Facility.

Training records will be maintained for a period of three years and will include a short description of the topics covered, and employee sign-in sheets. The training records will be kept on file in the Environmental Department.

12. SECURITY [40 CFR 112.7 (G)]

12.1 Facility Fencing

The active portion of the Site property is enclosed by fencing and is monitored. The entrance gate is monitored during the day by site personnel and by security personnel at night and on non-working days. Unmanned gates are locked. All visitors must report to the Facility office before entering and exiting the active portions of the Site.

12.2 Securing of Container Drain Valves

The master flow and drain valves and any other valves that allow direct outward flow of the contents of a tank to the surface have been provided adequate security measures so that they remain in the closed position when in non-operating or non-standby status.

12.3 Locking of Oil Pump Starter Controls

The facility has no oil pump starter controls. Therefore, this requirement is not applicable.

12.4 Securing of Loading/Unloading Connections

Connections are securely capped when they are not in use and blank-flanged when they are in standby service for an extended time.

There are no out-of-service pipelines at the Facility, therefore the out-of-service pipeline regulations do not apply. Connections have cam-locks with locking pins to prevent unwanted discharges/releases during loading/unloading.

12.5 Facility Lighting

Facility lighting is sufficient to allow Facility personnel to discover spills during hours of darkness and detect acts of vandalism.

13. FACILITY LOADING/UNLOADING RACKS [40 CFR 112.7 (H)]

This section is not applicable because there are no loading/unloading racks at this Facility.

14. BRITTLE FRACTURE EVALUATION OF FIELD-CONSTRUCTED CONTAINERS [40 CFR 112.7 (I)]

No tanks covered by this SPCC Plan are field-constructed above-ground containers; thus, this requirement is not applicable.

15. CONFORMANCE WITH STATE REQUIREMENTS [40 CFR 112.7 (J)]

Where the Facility's TSCA permit has more stringent amendment procedures, reporting protocols and spill response procedures than 40 CFR 112, they were included, specifically, Sections 5.1, 5.2, 6.6, and 6.7.

16. QUALIFIED OIL-FILLED OPERATIONAL EQUIPMENT [40 CFR 112.7 (K)]

The general secondary containment requirements required by 40 CFR 112.7 (c) are met at this Facility; thus, this requirement is not applicable.

17. SPCC PLAN REQUIREMENTS FOR ONSHORE FACILITIES [40 CFR 112.8]

17.1 Diked Storage Area Drainage [40 CFR 112.8(b) (1)]

Diked storage areas (including the PCB Tank Farm Area, the PCB Building Storage Area, and the PCB Truck Staging Pad) are drained using manually controlled pumps to ensure no oil will be discharged.

17.2 Valve Design for Diked Area Drainage [40 CFR 112.8(b) (2)]

This Facility has no valves for the drainage of diked storage areas.

17.3 Drainage from Undiked Areas [40 CFR 112.8(b) (3)]

This Facility has no undiked storage areas; therefore, this requirement is not applicable.

17.4 Diversion Systems [40 CFR 112.8(b) (4)]

Alternate diversion systems are not necessary at this Facility.

17.5 Safeguards for Human Error and Equipment Failure [40 CFR 112.8(b) (5)]

There is no drainage water treatment unit at this Facility; therefore, this section is not applicable.

18. BULK STORAGE CONTAINERS [40 CFR 112.8 (C)]

18.1 Container Materials and Construction Compatibility [40 CFR 112.8(c) (1)]

All bulk storage containers (Tanks 4 through 7), associated piping and DOT approved steel drums, are compatible with the contents stored in them and the conditions of storage (such as pressure and temperature). The tanks used to store PCB liquids are listed below.

Container No.	Location	Volume (gal)	Contents	Construction Materials
Tank 4	PCB Tank Farm Area	7,500	PCB-containing oil	Steel tank
Tank 5	PCB Tank Farm Area	7,500	PCB-containing oil	Steel tank
Tank 6	PCB Tank Farm Area	5,000	PCB-containing oil	Steel tank
Tank 7	PCB Tank Farm Area	5,000	PCB-containing oil	Steel tank

18.2 Containment [40 CFR 112.8(c) (2)]

The following is a summary of the containment provided for bulk storage containers.

AREA	CONTAINMENT VOLUME
Tank No. 4, 5, 6, 7	22,721 gallons
PCB Building	17,424 gallons

As discussed in Section 6.5.1, the PCB Tank Farm Area is sealed concrete floor and walls, and has sufficient capacity for 200% of the contents of the largest tank (7,500 gallons) plus the precipitation of a 25-year 24-hour storm event.

As discussed in Section 6.5.1, the PCB Building Storage Area is sealed a sealed liner system with no openings that would permit liquids to escape. The PCB Building Storage Area has sufficient capacity for greater than 25% of the total liquid holding capacity of PCB Articles and Containers.

18.3 Drainage Procedures from Diked Areas [40 CFR 112.8(c) (3)]

Rainwater from diked storage areas (including the PCB Tank Farm Area and the PCB Truck Staging Pad) is drained using manually controlled pumps to ensure no oil will be discharged. No bypass valves are present. The retained rainwater is inspected prior to draining. Adequate records of draining the rainwater is kept in accordance with 40 CFR 112.8(c)(3)(iv).

18.4 Corrosion Protection of USTs [40 CFR 112.8(c) (4)]

There are no USTs at this Facility.

18.5 Corrosion Protection of Partially-buried Tanks [40 CFR 112.8(c) (5)]

There are no partially buried tanks at this Facility.

18.6 Integrity Testing of Above-ground Containers [40 CFR 112.8(c) (6)]

Tank integrity testing is to performed on an annual basis in accordance with ASTM E797: Standard Practice for Measuring Thickness by Manual Ultrasonic Pulse-Echo Contact Method. Testing is to be done by a certified inspector.

18.7 Tank Internal Heating Coils [40 CFR 112.8(c) (7)]

There are no tank internal heating coils at this Facility.

18.8 Fail-Safe Overfill and Liquid Level Devices [40 CFR 112.8(c) (8)]

All tanks are manually filled and require personnel to be actively present for both filling and overfill protection observation. Tanks are equipped with audible high level alarms.

18.9 Effluent Treatment System Inspections [40 CFR 112.8(c) (9)]

Effluent treatment systems are not present at this Facility.

18.10 Correction of Visible Discharges and Removal of Oil Accumulation from Diked Areas [40 CFR 112.8(c) (10)]

Visible discharges that result in loss of oil from a container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts, are promptly corrected. Any accumulations of oil in a diked area is promptly removed.

18.11 Mobile/Portable Containers Siting and Containment [40 CFR 112.8(c) (11)]

Mobile or portable containers of oil/solvent will be stored within the PCB Building containment area.

19. FACILITY TRANSFER OPERATIONS, PUMPING AND FACILITY PROCESS [40 CFR 112.8 (D) (1)]

19.1 Corrosion Provisions for Buried Piping [40 CFR 112.8(d) (1)]

There is no buried piping at this Facility.

19.2 Security of Transfer Connections [40 CFR 112.8(d) (2)]

Pipe connections are equipped with a cap or blank flange when not in use or in standby service for an extended period of time. Cam locks with locking pin are used to prevent premature disconnection during processing, loading and unloading.

19.3 Pipe Support Design [40 CFR 112.8(d) (3)]

There are no pipe supports at this Facility; therefore, this section does not apply.

19.4 Inspections of Above-ground Valves, Piping and Appurtenances [40 CFR 112.8(d) (4)]

The aboveground valves, piping and appurtenances are inspected each working day. Written documentation is included on inspection forms. Aboveground piping, valves, etc. are inspected for leaks on a quarterly basis during the Method 21 inspection.

19.5 Warning Practices for Vehicles [40 CFR 112.8(d) (5)]

Vehicles arriving for loading/unloading are directed to the proper location by PCB Building personnel.

APPENDIX 1

SPCC PLAN REVIEW FORM

SPCC PLAN REVIEW FORM

I have completed the review and evaluation of the SPCC Plan for the PCB Processing Facility at the US Ecology Site in Beatty, Nevada, on the date listed below, and the SPCC Plan will (or will not) require amendment (40 CFR 112.5).

Reason for review: _____

Name: _____

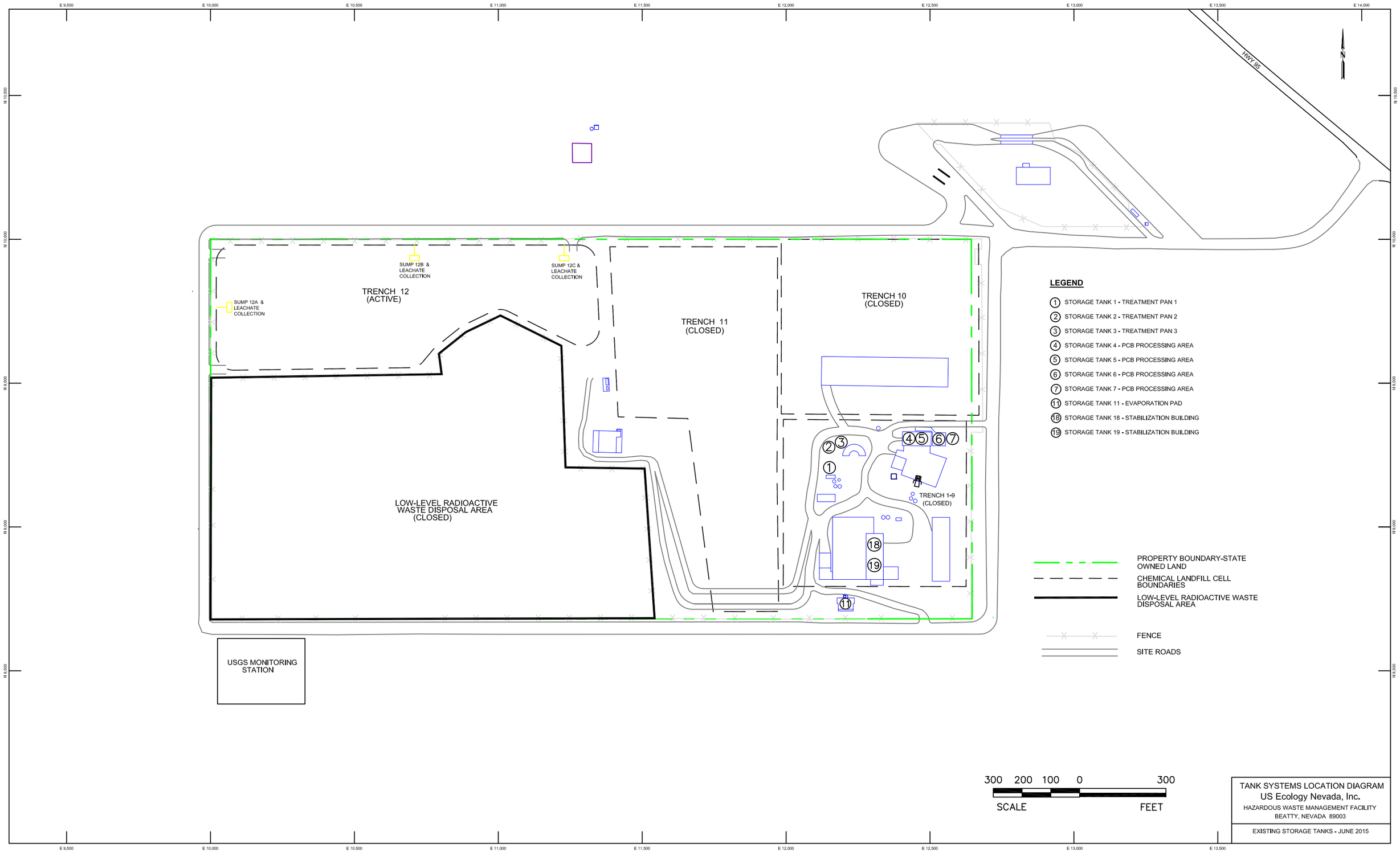
Title: _____

Signature: _____

Date: _____

APPENDIX 2

FACILITY DIAGRAM

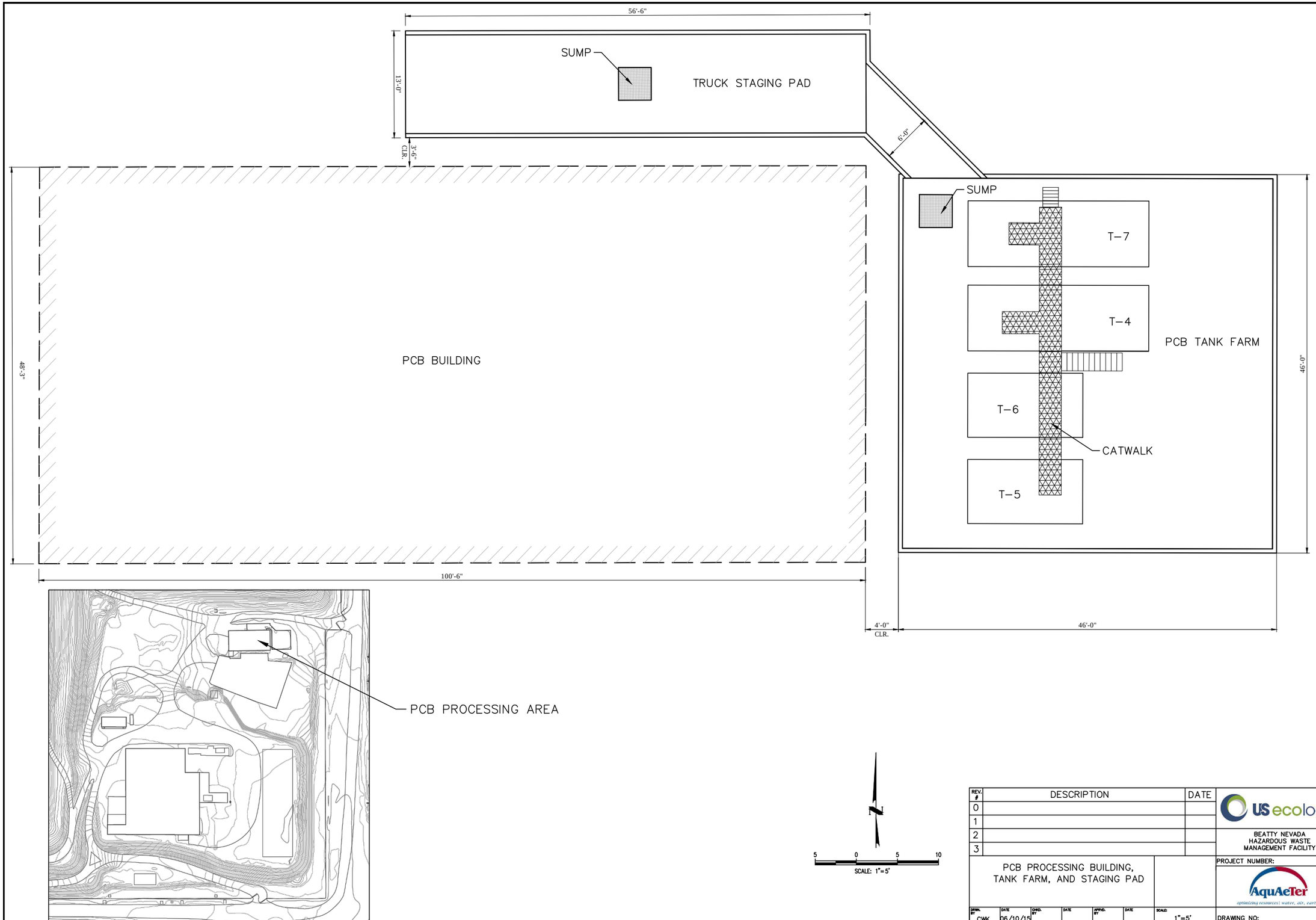


TANK SYSTEMS LOCATION DIAGRAM
US Ecology Nevada, Inc.
HAZARDOUS WASTE MANAGEMENT FACILITY
BEATTY, NEVADA 89003

EXISTING STORAGE TANKS - JUNE 2015

APPENDIX 3

PCB PROCESSING BUILDING AND TANK FARM AREA DRAWING



REV. #	DESCRIPTION	DATE
0		
1		
2		
3		

US ecology

BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PCB PROCESSING BUILDING,
TANK FARM, AND STAGING PAD

PROJECT NUMBER:

AquAeTer
optimizing resources | water, air, earth

DRWN. BY	DATE	CHKD. BY	DATE	APRVD. BY	DATE	SCALE:
CWK	06/10/15					1"=5'

DRAWING NO:

APPENDIX 4

DAILY AND WEEKLY INSPECTION CHECKLIST FORMS

BEATTY

CMU #1, Tanks T-4, T-5, T-6 and T-7 Daily Inspection

PCB Building

DATE (m/d/y): _____ TIME: _____

INSPECTOR (Full Name): _____

Please include inspectors' full name and full date of inspection.

INSPECTED ITEMS	SATISFACTORY	
PCB PROCESSING AND STORAGE	YES	NO
PCB PROCESSING AND STORAGE: Audible Alarms (ensure working order)		
Storage Tanks (corrosion, erosion or leaks)		
Valves, lines, and fittings (corrosion, erosion or leaks)		
PCB Tank Farm Secondary Containment Sumps for presence of liquids		
PCB processing: Storage Area (signs of spills, leaks, deteriorated/damaged containers)		
PCB Items, articles, and containers in storage are properly labeled and identified.		
PCB containers in storage are within nine months of their accumulation start date		
Inspect collection sumps in tank farm and truck loading areas for presence of liquids		
RCRA STORAGE : RCRA container storage (signs of leaks, spills, damaged/deteriorated containers, open containers in storage)		
RCRA waste in storage is compatible with stored PCB waste		
RCRA containers in storage are properly labeled, marked, and identified (Note any "Waste Pending" labels below, including Profile #)		
RCRA containers in storage are within seven months of their accumulation start date		
GENERAL : General Housekeeping (trash, debris, etc.)		
Concrete flooring and containment for expansion cracks, corrosion and other signs of deterioration		
Safety equipment present in proper working condition and properly stored. Chains on walkways on PCB storage tanks in 'closed' position.		
RCRA/PCB containers palletized and stored with a minimum three foot aisle space		
If >500 VOC – are containers managed per Subpart CC requirements: Meet Level 1 Standards (**)		
AFTER STORMS INSPECTIONS (complete only after storm event of 0.25" or greater (Facility Inspection Plan Section 5.1.2)		
Inspect tank containment for standing liquid or erosion		
FLOOR CONDITION (40 CFR Part 761)		
The epoxy coating is in tact and in good condition		
The colored undercoat is not exposed		
There is no evidence of spills and/or contamination		
The floor/building is maintained in a clean and orderly manner		

*Any items which have determined to be "Unsatisfactory" shall be noted below. Corrective Action will be tracked on this form or the "Inspection Deficiency Corrective Action Report".
*Remarks/Corrective Action:

_____

_____

*If corrective action is taken: include action taken, date completed and name of individual taking the action.

** 40 CFR Part 264.1086 (c)
- (1) i DOT approved container.
  - ii Adequate cover with no holes, gaps, or open spaces
  - iii Hazardous waste is not exposed to the atmosphere
- (2) Adequate closure device
- (3) Maintained in closed position

Revised 3/19/2015 RH

BEATTY
WEEKLY FACILITY INSPECTION REPORT

DATE: _____ TIME: _____

EMPLOYEE PERFORMING INSPECTION: _____

A Weekly Facility Inspection Report shall be completed and shall include any deficiencies noted and corrective action taken. The following items shall be addressed in the inspection. Please check satisfactory or unsatisfactory for each item inspected.

EMERGENCY RESPONSE EQUIPMENT	*Sat.*	*Unsat.*	**SECURITY FENCE AND WARNING SIGNS**	*Sat.*	*Unsat.*
Ensure emergency response radios are operational and readily available.			Inspect fence and barriers surrounding the facility for damage/vandalism.		
Test Emergency Alert System.			Inspect the outside perimeter for indication of unauthorized entry.		
MAIN LAB WASTE ACCUMULATION CONTAINERS	*Sat.*	*Unsat.*	**SATELLITE LAB WASTE ACCUMULATION CONTAINERS**	*Sat.*	*Unsat.*
Inspect all piping for evidence of damage or leakage.			Inspect all piping for evidence of damage or leakage.		
Inspect accumulation container for signs of leakage / check accumulation start date.			Inspect accumulation container for signs of leakage / check accumulation start date.		
Inspect containment structure for presence of spills, standing liquid and signs of cracks or other damage.			Inspect containment structure for presence of spills, standing liquid and signs of cracks or other damage.		
Inspect satellite accumulation containers for spills, standing liquid, signs of cracks or other damage, proper labeling and proper storage of drums.			Inspect satellite accumulation containers for spills, standing liquid, signs of cracks or other damage, proper labeling and proper storage of drums.		
Perform a lab eyewash test.			Perform a lab eyewash test.		
LANDFILL- CELL 11	*Sat.*	*Unsat.*	**LANDFILL- CELL 12**	*Sat.*	*Unsat.*
Inspect leak detection/collection system for presence of leachate. (Monthly)			Inspect run-on control ditches for signs of erosion or sand, silt, or other deposits which might impede storm water flow.		
Inspect for signs of erosion, cracks, and integrity.			Inspect run-off control mechanisms to ensure proper performance, ie: Inspect above-grade dikes for signs of instability erosion, or other problems and ensure waste placement elevations are maintained at a minimum of one foot below crest elevation.		
SAFETY SHED/TRENCH 12			Inspect leak detection/collection system for presence of Leachate.		
Ensure that safety and fire control equipment is readily available			Inspect wind dispersal control systems for proper functioning.		
DHWSA 2	Sat	Unsat	**DHWSA 3**	*Sat.*	*Unsat.*
Inspect for signs of damage, leakage or fugitive odors from roll-offs.			Inspect for signs of damage, leakage or fugitive odors from roll-offs.		
Inspect all containers for proper labels and identification.			Inspect all containers for proper labels and identification.		
Inspect for signs of spillage on pad.			Inspect for signs of spillage on pad.		

RMH 7/15/14

PCB BUILDING	Sat.	Unsat.	PCB TANK FARM/TRUCK PAD	Sat.	Unsat.
Inspect containers for leakage, severe rusting or structural defects.			Inspect containment for cracks, erosion, and other signs of deterioration.		
Ensure proper container labeling and identification.			Ensure epoxy coating is intact and in good condition.		
Inspect flooring for cracks, erosion, and other signs of deterioration.			Inspect storage tanks for corrosion, erosion or leaks.		
Ensure epoxy coating is intact and in good condition.			Inspect for liquids in secondary containment and sumps.		
TRUCK PARKING PAD	Sat.	Unsat.	**CONTAINER MANAGEMENT BUILDING**	Sat.	Unsat.
Inspect for signs of damaged or leaking drums.			Inspect for liquids in secondary containment.		
Inspect all containers for proper labeling.			Inspect containment structure for cracks, damage or structural defects that could cause failure.		
Remove any accumulated liquid.			Ensure stored containers are closed.		
Inspect for sign of spillage on pad.			Ensure proper container labeling and adequate aisle space.		
MAINTENANCE AREA	Sat	Unsat.	Inspect containers for leakage, severe rusting or structural defects.		
Inspect Empty roll-off bins (waiting for repairs) for residual waste.					
CLOSED CELLS	*Sat.*	*Unsat.*	**PORTABLE WATER TANK**	Sat.	Unsat.
Inspect for signs of erosion, cracks, and integrity.			Ensure the water truck if full and available for fire control.		

Any item which had been determined as “Unsatisfactory” shall be noted in remarks with an explanation and “Corrective Action” to be taken.

_____

_____

_____

_____

_____

_____

_____

_____

Attachment 5

Recordkeeping and Reporting Plan

US ECOLOGY NEVADA

RECORDKEEPING AND REPORTING PLAN

Revision 3
February 2011

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Appendix 1 – US Ecology Reporting Summary Table

RECORDKEEPING AND REPORTING PLAN

This plan describes the procedures and mechanisms that US Ecology Nevada (USEN) has established to comply with the recordkeeping and reporting requirements of 40 CFR 761 Subparts J and K. Unless otherwise specified, US Ecology will maintain copies of the records or reports described in this section for at least 20 years after the chemical waste landfill is no longer used for the disposal of PCBs

1.0 MANIFEST SYSTEM

All incoming hazardous waste receipts are to be accompanied by a hazardous waste manifest, signed and dated by the generator or broker. The shipment and manifest will be inspected in accordance with the verification inspection procedures described in the Waste Analysis Plan to ensure that the waste received matches the manifest description, and to identify significant discrepancies, if any. All weight variations greater than ten (10) percent (for bulk waste) or in a piece count (for containerized shipments) are considered a significant discrepancy, and will be noted on each copy of the manifest. Obvious differences in waste type (color, presence of liquids in shipments expected to be solid, etc.) are also considered discrepancies, and will be noted.

Upon discovery of a significant discrepancy, the facility will complete the Unusual Occurrence Report. The facility will attempt to reconcile the discrepancy by contacting the waste generator by telephone. If the discrepancy cannot be resolved, the waste will be returned to the generator.

If no discrepancy is noted during the waste verification process, each copy of the manifest will be signed and dated, acknowledging waste receipt. A copy of the signed manifest will be given to the waste transporter prior to departure from the facility, and a copy will be mailed to the generator within thirty (30) days after the delivery. The facility will retain a copy of each manifest for at least three (3) years from waste shipment delivery.

Outgoing shipments of hazardous waste (i.e., on-site generated wastes, or wastes brokered to off-site hazardous waste management facilities) will also be accompanied by a manifest. Completion of the manifest will be conducted following the instructions specified in the Appendix to 40 CFR 262, or 40 CFR §761.207 - §761.208 of the TSCA Regulations. US Ecology will designate on the manifest the facility which is permitted to handle the waste described on the manifest and an alternate facility in the event that an emergency prevents delivery to the primary designated facility. If the transporter is unable to deliver the waste

to the designated or alternate facility, the transporter will be instructed to deliver the waste to another designated facility or to return the waste.

The manifest will be signed at the time of shipment, and a handwritten signature of the initial transporter (with date of acceptance) obtained. A copy of the signed manifest will be retained for three years, or until the signed copy from the designated off-site facility is received. This signed copy will be retained as a record for at least three years from the date the waste was accepted by the initial transporter. USEN will contact the initial transporter and/or the designated facility inquiring about the status of the shipment if a copy of the manifest signed by the off-site facility is not received within 35 days of the date the waste was accepted by the initial transporter. An Exception Report will be submitted to the NDEP Administrator if the copy of the signed manifest is not received within 45 days.

2.0 WORK ORDER SYSTEM

Prior to acceptance of any hazardous waste shipment received at the facility, a hazardous Waste Work Order, or equivalent, will be initiated. The following is a discussion of the Work Order system and a description of all the items that constitute the Work Order package.

2.1 Work Order Log Book

The Work Order Log Book will be used to track each hazardous shipment arriving at the facility, and to ensure that all required attachments of the Work Order Paperwork Package are included. Each approved waste shipment is assigned a Work Order Number upon their arrival at the facility. The Work Order Log Book will contain a column for the Work Order Number, customer/generator name, date of verification analysis receipt, dates of PCB destruction certificates receipt, date the Work Order was completed, and initials of the Work Order data entry person.

2.2 Work Order

The Work Order is the central document of the paperwork package and will be utilized for each shipment that arrives at the facility, or in the case of multiple daily shipments of the same waste stream, a single Work Order Number can be assigned on a daily basis. The Work Order is a one (1) page document which may be used for a variety of functions, including:

- Scheduling receipt of a waste shipment;
- Exchange, placement or removal of waste containers;
- Inspecting a waste shipment manifest for completeness and errors
- Recording the disposal location of the waste;
- Noting that the waste data was entered on the computer and the individual responsible for entering the data;
- Noting that the customer was billed for disposal and/or other services, and the amounts invoiced;
- Noting the initial inspection of the waste and containers prior to unloading, and the individual performing the inspection;
- Verifying that sampling and analysis of the waste was performed, and the individual who conducted it;
- Noting any unusual occurrences, and recording actions taken;
- Identifying any special safety or disposal requirements;

2.3 Work Order Supplement

The Work Order Supplement is a one (1) page document used to record or verify functions such as:

- Weighing in and out of waste transport vehicles;
- Inspection of vehicle and waste during unloading;

- Sampling of waste and type of samples to be obtained;
- Cell or storage area in which the waste is to be placed;
- Cell coordinates for waste location (for disposal operations);
- Disposal of waste
- Decontamination of waste transport vehicle.

2.4 Waste Stream Approval

Prior to scheduling a waste shipment, the facility will verify by accessing the information system that the waste stream has been approved for acceptance. A copy of the approval page and waste characteristics will be printed and attached to the Work Order. This will assist in preventing the accidental scheduling of expired or unapproved waste streams, and allows the Compliance Manager and/or Receiving Technician review of the waste properties prior to arrival.

2.5 Uniform Hazardous Waste Manifest

The Uniform Hazardous Waste Manifest is required by federal and state regulations to accompany waste shipments arriving or leaving the facility. The Receiving Technician (or designee) will thoroughly review the manifest for proper completion. Information on incoming manifests will be compared with the waste characteristics printout prior to accepting the waste.

2.6 PCB Log Book

The PCB log book provides a method of tracking the off-site destruction of PCB material. The PCB Log Book will include the Work Order, quantity of solids generated on each Work Order, the date the material is shipped off-site for destruction, outgoing manifest number, and name of the off-site destruction facility. The Work Order Number will be recorded in the space provided for each shipment.

2.7 Waste Produce Questionnaire Form

The customer/generator will provide the technical review staff with a completed Waste Product Questionnaire form (commonly referred to as a profile) for review and approval prior to shipment to the facility. A copy of the profile completed by the customer/generator must be attached to the manifest received with the waste shipment. Upon receipt of the shipment, the profile approved by the technical review staff will be compared to the copy attached to the manifest to ensure that no unapproved waste is received

2.8 Unusual Occurrences Report

The Unusual Occurrences Report form is used to describe any unusual occurrence or problems which may occur at the facility and to document any follow-up actions. The completed report will be attached to the Work Order package.

2.9 Chain-of Custody Record/Laboratory Request

All waste stream samples shipped to an off-site laboratory for further verification analysis will be accompanied by the Chain of Custody. This triplicate form provides proper documentation concerning the sampling and shipment of waste samples to the laboratory. The original copy will be returned to the facility laboratory, for inclusion into the Work Order package and a copy will be retained at the facility laboratory.

2.10 Record of PCB Building Operations

This form will be used to record the information necessary for accurate recordkeeping, as required by state and federal regulations. The form is

designed to record the required information by Work Order Number, and can be used when more than one waste stream number arrives with the shipment. Upon completion, the form will be incorporated to the Work Order package.

2.11 Work Order PCB Destruction Certification Form

This form provides documentation to the Work Order Log coordinator that the PCB waste shipped off-site has been destroyed. This form will be completed by the individual responsible for the draining and flushing operation. Upon receipt of the Certificate of Destruction from the PCB destruction facility, one form will be completed for all applicable Work Orders. A copy of the Certificate of Destruction will be attached to the Work Order package.

3.0 OPERATING RECORD

The facility will maintain or have available the following information as part of the operating record:

- Description of each hazardous waste received at the facility, quantity, method(s) and date(s) of treatment, storage, or disposal. The waste description will include all applicable EPA hazardous waste numbers.

- Work Order System paperwork - The Work Order System is the mechanism employed by USEN to document the movement of each hazardous waste shipment received at the facility and its final disposition.

- Map of the facility identifying the location and size of each disposal cell included. The location of waste within the disposal unit will be described with respect to permanently surveyed benchmarks

- Records and results of waste characterization and analysis required, as described in the Waste Analysis Plan.

- Summary reports and details of incidents that require implementation of the Contingency Plan. Implementation of the Contingency Plan is documented using the Unusual Occurrence Report.

- Generator notification/certification forms, as required by 40 CFR 268, on every Land Disposal Restricted (LDR) waste stream accepted at the facility for treatment, storage, or disposal. These notification forms will be maintained at the facility for a minimum of five (5) years after waste receipt.

- Copies of 40 CFR 268 notification/certification forms for every on-site generated waste subject to the Land Disposal Restrictions. Copies of these notifications will be maintained as part of the operating record for at least five (5) years.

- All signed manifests generated or received at the facility during the calendar year.

- All Certificates of Disposal that have been generated or received by the facility during the calendar year. For each shipment of manifested RCRA or PCB waste that is received at USEN a Certificate of Disposal (CD) will be prepared. The information included on the CD will include the identify of the disposal facility, the identity of the waste affected by the CD including reference to the manifest it was shipped on, dates of disposal and disposal process used and lastly a certification statement.

- Records and results of facility inspections, as described in the Facility Inspection Plan.

- Training records on current and former employees, as described in the Training Plan. Records on current employees will be maintained until closure of the facility.

- For all hazardous debris treated by any extraction technology that does not exhibit any hazardous waste characteristic and is therefore excluded from further regulation under the RCRA program, the facility will maintain documentation of all inspections, evaluations, and analysis employed in determining compliance with the treatment standards, along with any data or information obtained during treatment that identifies key operating parameters of the treatment unit. A signed certification of compliance with the treatment standards will also be prepared

and placed in the operating record for each shipment of treated debris.

- Records of the precautions observed to prevent violent reactions and/or extreme heat generation, toxic mists, fumes or gases while managing ignitable, reactive or potentially incompatible waste streams.

- Monitoring, testing and analytical data obtained in compliance with 40 CFR 264, Subpart F requirements, as described in the Groundwater Monitoring Plan.

- Notices to generators that the facility has appropriate permits required to accept their waste for treatment, storage and/or disposal.

- Current closure and post closure cost estimates as required by 40 CFR 264.144.

- Annual certification that the proposed method of treatment, storage, and disposal is the practicable method currently available that minimizes present and future threat to human health or safety, and to the environment.

- Annual certification that the facility has a program in place to reduce the volume and toxicity of on-site generated hazardous wastes to an economically practicable degree.

- A copy of the procedure used to determine that containers with a capacity of 119 gallons or greater which do not meet applicable DOT regulations as specified in 264.1086(f), are not managing hazardous waste in light service. This procedure shall be written prior to any waste being handled in a container as described above.

- For waste streams, managed in a container subject to 40 CFR 264 Subpart CC regulations, which do not require the use of air emission control equipment, documentation shall be recorded and maintained in the operating record that includes the information that was used by the Permittee for each waste determination (e.g. test or certification by the generator). If analysis results for waste samples are used for the waste determination, then the Permittee shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements in 40 CFR 264.1083.

- For containers used at the facility to manage hazardous wastes subject to 40 CFR 264 Subpart CC regulations, sufficient information shall be provided to describe:

  (1) A facility identification number for the container or group of containers;
  (2) The purpose and placement of this container, or group of containers, in the management train of the hazardous waste;
  (3) The procedures used to ultimately dispose of the hazardous waste handled in the containers.

4.0 REPORTING MECHANISMS

Attachment 1 includes a summary table of reports submitted to either NDEP or EPA.

4.1 Monthly Reports

A chemical and PCB waste disposal activity report will be prepared and submitted to the Nevada Division of Environmental Protection on the last working day of each month covering activities during the previous month. The report will include the following information:

- total quantity and type of chemical and PCB waste disposed during the month (in tons and cubic feet)

- waste classification and corresponding fee category

- remaining capacity left in the active cell

- name and address of each generator

- a description of any unusual events related to chemical waste disposal which occurred during the month

4.2 Annual Reports and Logs

Annual RCRA Report

By March 1st of every year, the facility will submit an annual report describing facility activities during the previous calendar year. This report will include the following information:

- EPA identification number of each hazardous waste generator from which the facility received hazardous waste,
- a description and quantity of all waste received (in tons and cubic feet),
- the method of treatment, storage or disposal,
- unusual occurrence reports and summaries of their quarterly reviews,
- the most recent closure and post-closure cost estimate (including complete cost itemization), and
- signed certification.

Annual PCB Document Log

By July 1st of every year, the facility will submit an annual PCB

document log for the previous calendar year. This report will include the following information from 40 CFR § 761.180(b):

- Name, address and EPA ID number of the facility
- For each manifest generated or received by the facility, the unique manifest number and the name/address of the facility that generated the manifest
- For bulk PCB waste, its weight in kilograms, date it was placed into container or removed from service, received date, date it was placed in transport for off-site disposal (if applicable), and the date of disposal (if known).
- For non-bulk PCB material, the serial number or other unique identifier of each PCB article or container, the weight in kilograms, out of service date, received date, date it was placed in transport for off-site disposal (if applicable) and the date of disposal (if known).

Annual PCB Report

By July 15th of every year, the facility will submit an annual PCB report for the previous calendar year. This report will include the following information from 40 CFR § 761.180(b)(3):

- The name, address, and EPA ID number of the facility covered by the annual report.
- A list of the numbers of all signed manifests of PCB waste initiated or received by the facility.
- The total weight in kilograms of bulk PCB waste, PCB waste in transformers, PCB waste in capacitors, PCB waste in PCB articles and PCB waste in PCB containers, in storage at the facility at the beginning of the year, received, transferred and disposed of at the facility during the calendar year.
- The total number of PCB transformers, PCB capacitors, PCB articles, and PCB containers, in storage at the facility at the beginning of the year, received, transferred and disposed of at the facility during the calendar year.

- The total weight in kilograms of bulk PCB waste, PCB waste in transformers, PCB waste in capacitors, PCB waste in PCB articles and PCB waste in PCB containers, in storage at the facility at the end of the year.
- The total number of PCB transformers, PCB capacitors, PCB articles, and PCB containers, in storage at the facility at the end of the year.

4.3 Manifest Discrepancy Reports

A manifest discrepancy report will be submitted to the NDEP Administrator (EPA Region IX if PCBs) in the event that a manifest discrepancy is not resolved within fifteen (15) days. The report will describe the discrepancy and attempts to reconcile it, and will include a copy of the manifest or shipping paper at issue.

4.4 Un-manifested Waste Report

In the event that a hazardous waste shipment be accepted without an accompanying manifest or shipping papers, an un-manifested waste report will be submitted to the NDEP Administrator within fifteen (15) days after receiving the waste. The report will include the facility and transporter information (EPA identification number, address), a description and quantity of un-manifested waste received, the method of treatment, storage or disposal, a brief explanation of why the waste was un-manifested, and required certification.

4.5 Exception Reports

Manifest Exception Reports

USEN will submit an Exception Report to the NDEP Administrator (and EPA Region IX if PCBs) if a copy of the manifest from the designated off-site facility (confirming acceptance of an outgoing shipment of hazardous

waste) is not received within forty-five (45) days from the date the waste was accepted by the initial transporter. The report will include:

- a legible copy of the manifest for which no confirmation of delivery has been provided, with

- a cover letter signed by an authorized company representative explaining the efforts taken to locate the waste, and the results of such efforts.

PCB One Year Exception Report

USEN will submit a 'One-Year Exception Report' to EPA Region IX no later than 45 days from the end of the 1-year storage for disposal date when the following occurs:

- USEN receives PCBs or PCB Items on a date more than 9 months from the date the PCBs or PCB items were removed from service, as indicated on the manifest or continuation sheet.
- Because of contractual or commitments or other factors affecting the facilities disposal capacity, the disposer of PCB waste could not dispose of the affected PCBs or PCB Items within 1 year of the date of removal from service for disposal.

Per 40 CFR §761.215 (e) the exception reports will include:

- A legible copy of any manifest or other relevant written communication.
- A cover letter signed by the submitter or authorized representative
- The date(s) when the PCBs or PCB items were removed from service.
- The date(s) when the PCBs or PCB items were received.
- The date(s) when the affected PCBs or PCB items were transferred to the disposal facility,

- The identity of the transporters, commercial storers or disposers known to be involved with the transaction.
- The reason, if known, for the delay in bringing about the disposal of the affected PCBs or PCB items within one year from the out of service date.

4.6 Emergency Occurrences Reports

A report will be submitted to the NDEP within fifteen (15) days of any release, fire or explosion which required implementation of the Contingency Plan, providing a detailed description of the incident, including:

- name, address and telephone number of the facility operator
- date, time and type of incident
- name and quantity of materials involved
- the extent of injuries, if any
- an assessment of the actual or potential hazards to human health or the environment
- estimated quantity and disposition of recovered materials that resulted from the incident.

USEN will orally report to the NDEP Administrator any incident requiring implementation of the Contingency Plan. The Nevada Division of Emergency Management and the National Response Center will be notified of any incident involving a release to the environment of hazardous waste, pollutant or contaminant in a quantity equal to, or greater than the reportable quantity specified by 40 CFR 302.

The oral reports described above will be provided as soon as possible after becoming aware of the release, but no later than the end of the first working day.

If the release originated from a tank system or secondary containment, USEN will follow-up with a written report to the NDEP Administrator within thirty (30) days of detection of the release, describing:

- likely route of migration of the waste
- characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate, etc.)
- results of any monitoring or sampling conducted in connection with the release (if available)
- proximity to downgradient drinking water, surface water, and populated areas
- descriptions of response actions taken or planned.

If the release originates from the Containment Building, the Administrator will be notified within seven (7) days after the discovery. A follow-up written plan will be submitted within 14 days describing the steps taken to repair the unit and the schedule for accomplishing the work.

5.0 RECORDS RETENTION

In addition to the records outlined in Section 3 the following records will be maintained at the facility:

- All documents, correspondence and data that have been provided to the operator of the facility by any State or local government agency that pertain to the storage of disposal of PCBs and PCB items at the facility.
- All documents, correspondence and data that have been provided by the operator of the facility to any State or local government agency that pertain to the storage of disposal of PCBs and PCB items at the facility.
- Any applications and related correspondence sent by the operator of the facility to any local, State or Federal authorities in regard to waste water discharge permits, solid waste permits, building permits, or other permits or authorizations such as those required by 40 CFR §761.70(d) and §761.75(c).

ATTACHMENT 1

US Ecology Reporting Summary Table

Date of Report	Report Name	Description	Agency
Monthly	PCB Disposal Operations Report	Monthly summary of PCB activities	EPA
March 1	Tier II Chemical Reporting Report	On-site chemical inventory. Used for emergency planning purposes.	NDEP / Local Emergency Planning Commitee / State Emergency Planning Committee / State Fire Marshal
March 1	Annual Report	Per 40 CFR 264.71. RCRA Permit Requirement	NDEP / EPA
March 1	Actual Production / Emission Report	Includes the actual emission emitted from the facility	NDEP
March 31 & September 30	Environmental Monitor Report	Includes summary of groundwater monitoring, leachate collection and SVE well activities	NDEP / EPA
May 1	Annual Closure/Post Closure Inflation Cost Adjustment	Annual update of the Closure/Post Closure estimate	NDEP
July 1	Toxic Release Inventory Report (TRI)	Per 313 of the Emergency Planning and Community Right to Know Act. Inventory of TRI chemicals disposed at the facility	EPA / TRI Data Response Center / Nevada Emergency Response Center
July 15	Annual PCB Report	Per 40 CFR 761.180 (b)	EPA
As Needed	Manifest Discrepancy Reports	Per 40 CFR 761.210. If a manifest discrpency can not be resloved in 15 days this report must be filed.	NDEP or EPA (if PCBs)
As Needed	PCB One Year Exception Report	Per 40 CFR 761.215. If PCB waste was recieved at the facility after 1 year of being taken out of service this report	EPA

Attachment 6

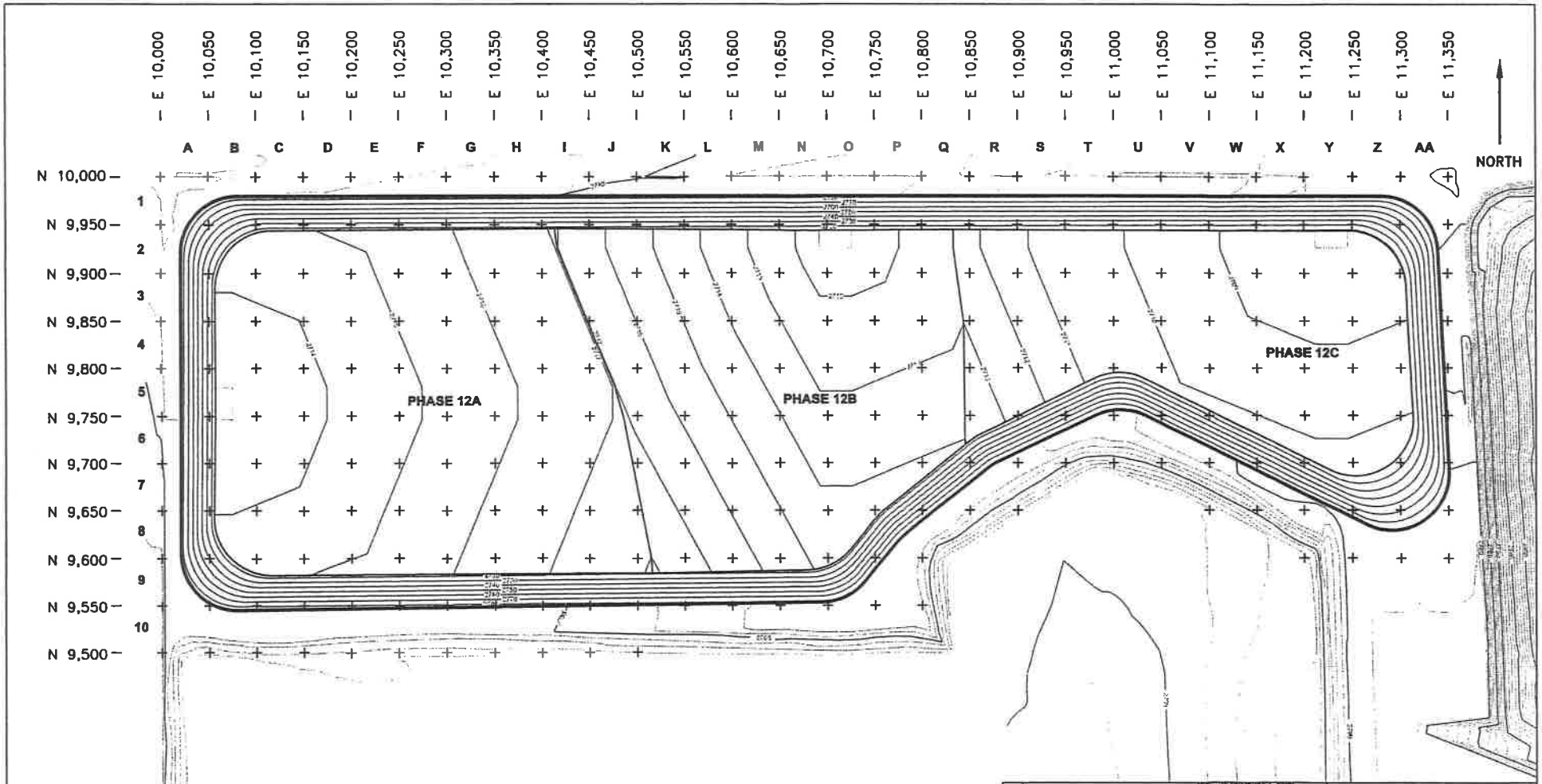
Active Trench Disposal Grid

LANDFILLS DISPOSAL COORDINATES

DATE: 12-14-2010

Type of Waste	Trench	Cell	Grid North	Grid East	Distance N Grid	Distance E Grid	Top Elevation	Load Ext N	Load Ext E	Depth of Load
Soil / Filtercake	12	D	5	F	0	15	2784	50	50	4
Debris	12	D	5	F	0	15	2784	50	50	4
Macro	12	D	5	F	0	15	2784	50	50	4
Cell A	12	A								
Cell B	12	B								
PCB's Trench 11	11	D	8	F	30	0	2857	10	10	3
Projects: El Monte			5	F	0	15	2784	50	50	4
Western Area.			5	F	0	15	2784	50	50	4

Signature:



	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APP'D BY	DATE
0	ISSUED FOR USEN REVIEW	LAM	CAB		SLW	8/26/08

USEcology Nevada

an American Ecology company

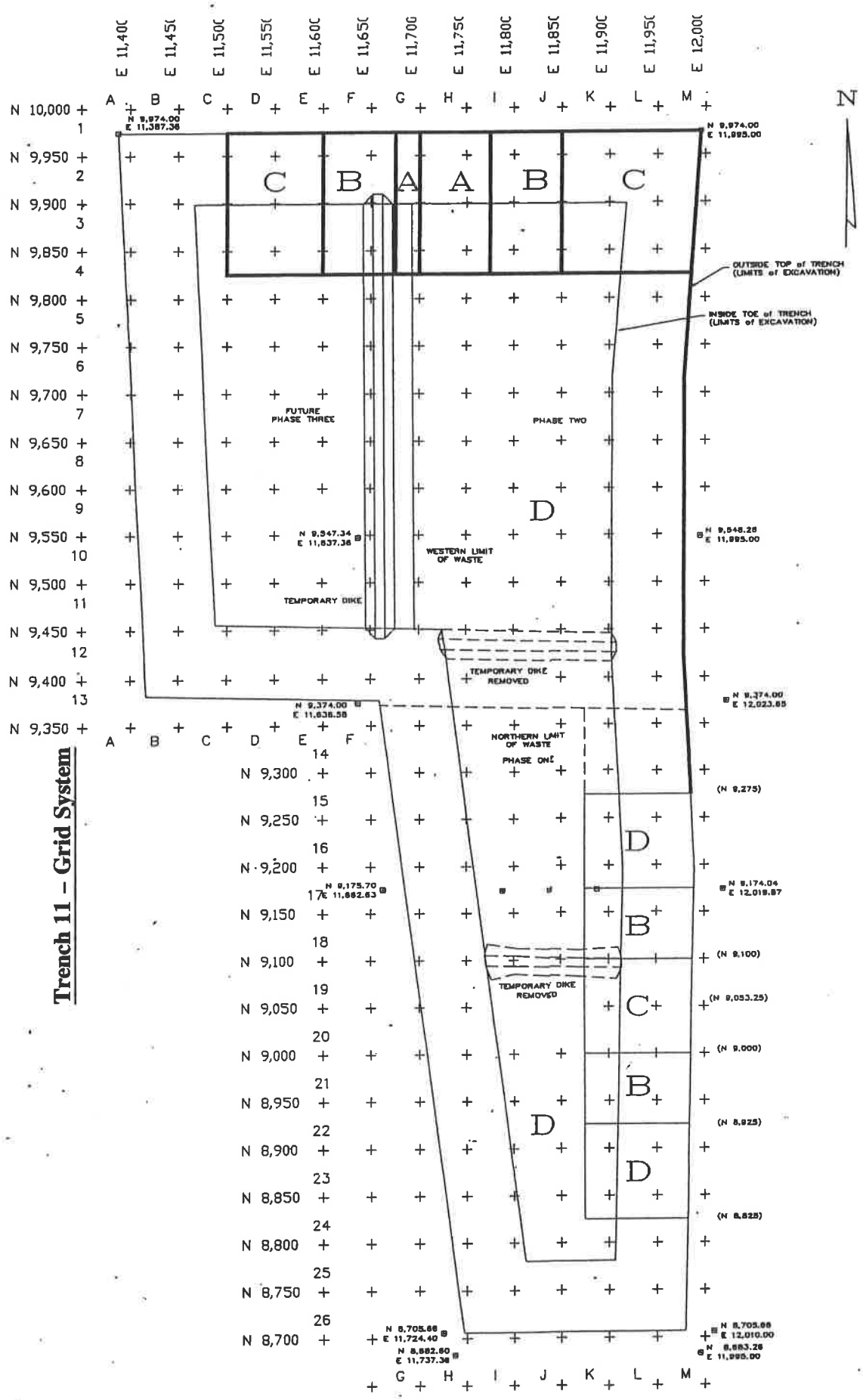
PROJECT NUMBER: 073113 DATE: 8/26/08

BEATTY NEVADA
HAZARDOUS WASTE MANAGEMENT FACILITY

TRENCH 12
COORDINATE GRID

DRAWN BY	DATE	DESIGNED BY	DATE	CHECKED BY	DATE	APP'D BY	SCALE	JOB NO.	DRAWING NO.	REV.
LAM	8/26/08	CAB	8/26/08	SLW	8/26/08	SLW	1"=100'	073113	NV12-07-020	1

F:\Data\073113 T12 Design\coordinate grid\NV12-08-020.dwg PLOT DATE: 8/26/08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N 9,100
N 9,050
N 9,000
N 8,950
N 8,900
N 8,850
N 8,800
N 8,750
N 8,700
N 9,974.00 E 11,387.36
N 9,974.00 E 11,995.00
C B A A B C
OUTSIDE TOP of TRENCH (LIMITS of EXCAVATION)
INSIDE TOE of TRENCH (LIMITS of EXCAVATION)
FUTURE PHASE THREE
PHASE TWO
D
N 9,547.34 E 11,637.36
WESTERN LIMIT OF WASTE
N 9,546.26 E 11,995.00
TEMPORARY DIKE
TEMPORARY DIKE REMOVED
N 9,374.00 E 11,636.58
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NORTHERN LIMIT OF WASTE
PHASE ONE
(N 9,275)
D
N 9,175.70 E 11,682.63
N 9,174.04 E 12,019.87
B
(N 9,100)
TEMPORARY DIKE REMOVED
C
(N 9,053.25)
(N 9,000)
B
D
(N 8,925)
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(N 8,825)
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N 8,683.26 E 11,995.00

Attachment 7

Facility Inspection Forms (Sample Only)

FACILITY INSPECTION PLAN

US ECOLOGY NEVADA

March 2010

Revised June 2015

Revised March 2015

SECTION 5
FACILITY INSPECTION PLAN
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Appendix 5 A Inspection Reports

INSPECTION PLAN

This Inspection Plan outlines the schedule for inspection of monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that prevent, detect, or respond to environmental or human health hazards in accordance with 40 CFR §§270.14(b)(5), and 264.15, and 264.33. The chapter also addresses specific inspection areas in detail and contains examples of the inspection forms used at the facility. Table 1 outlines inspection frequencies for each area of the facility.

5.1.0 General Inspection Requirements

The following paragraphs identify facility equipment and operating areas, identify potential problems, and outline measures to prevent the occurrence of these problems. A copy of the completed inspection forms and the inspection schedule are kept at the facility at least three (3) years from the date of inspection.

The format of the inspection forms may be modified from time to time to address ongoing inspection assignments. Changes to the inspection format do not require NDEP notification or a permit modification since the content of the inspection forms/procedures or the minimum inspection frequency will not be altered. Content of inspection forms may be changed through a Class 1 permit modification. Additionally, non-RCRA required inspections might be added and removed from time to time for convenience.

5.1.1 Types of Problems

Regular inspections are conducted to identify equipment malfunctions, structural deterioration, operator errors, uncontrolled run-off, leachate generation, or other discharges that could cause or lead to the release of hazardous waste constituents or that would threaten human health or the environment. Inspections are intended to detect potential problems in time to correct them before they result in a release of hazardous waste constituents and/or cause harm to human health or the environment.

Appendix A presents the schedule of routine inspections for the various components/units critical to the proper operation of the facility. Specific inspection items and potential problems associated with each inspection area are referenced in the following paragraphs as well as on each individual inspection form.

5.1.2 Frequency of Inspections

The facility's inspection schedule was developed based on applicable regulatory requirements, estimated rate of potential equipment deterioration, and the probability of an environmental or human health incident if any equipment deterioration, malfunction or operator error were to go undetected between inspections. Table 1 identifies the inspection frequency for each of the various facility components/units. The frequency of the scheduled inspections is based on a probability of an occurrence of an incident or malfunctions and is designed to minimize the need to implement the facility's Contingency Plan. In addition to the daily inspections all permitted units are inspected weekly by facility management or their designee and documented on a weekly inspection form. Daily and weekly inspection forms are included in Appendix A.

All facility units in which waste is actively being handled are under surveillance for spills, malfunctions, and operator error during active operations. The activities discussed in the following paragraphs are more formal, documented procedures to support and verify these operational inspections.

In all active waste handling areas, a daily inspection is performed when the area is in use (i.e.; each operating day). Other areas are subject to weekly or monthly inspections.

For specified areas, identified in Table 1, inspections are also performed after storm events of 0.25" of precipitation in 24 hours.

In accordance with 40 CFR §264.15, any deterioration or malfunction of equipment or structures that could cause or lead to the release of hazardous waste constituents or threaten the environment or human health will be corrected utilizing interim and final corrective measures. Where a hazard is imminent or has already occurred, action is taken expeditiously. Response actions for contingency procedures are provided in detail in the Contingency Plan.

5.2.0 Unit Specific Inspection Requirements

5.2.1 Container Management Unit Inspections [40 CFR §264.174]

At least weekly, areas where containers are stored are inspected for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors. If any of these conditions exist, corrective activities are instituted to clean up and limit the spread of material, and/or restore the integrity of the container or containment system. The CMUs and their associated containment systems are also visually inspected for the presence of cracks and gaps that could result in loss of containment effectiveness, where appropriate. Should structural problems occur that would allow leakage out of the unit or between compatibility segregation areas, or that may develop into a major failure, repair activity will be initiated. CMU #1 and #7 are inspected for proper drainage controls. During scheduled inspections, the CMUs and their associated waste staging loading and unloading areas are visually inspected to determine that adequate aisle space is maintained. Individual containers are also randomly inspected to ensure proper segregation is being maintained. Individual containers in the CMUs, subject to Subpart CC requirements, are inspected for Level 1 compliance.

The CMUs (including containment systems) are inspected for the presence of liquids/solids. Spilled solids are removed in accordance with the requirements of the Contingency Plan, if necessary, and the residues managed in accordance with the Waste Analysis Plan. Liquids discovered in the collection trenches on the truck unloading areas are removed within 48 hours of discovery or within 48 hours of cessation of the rain event. If necessary, absorbent materials are utilized to absorb standing liquid for proper disposal.

5.2.2 Tank System Inspections [40 CFR §264.195]

The following items must be inspected at least once each operating day:

(1) Any aboveground portions of the tank system to detect corrosion or releases of waste;

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

In addition, cathodic protection systems, if present, must be inspected according to the following schedule to ensure they are functioning properly:

(1) the proper operation of the cathodic protection system must be confirmed within six (6) months after initial installation and annually thereafter; and

(2) all sources of impressed current must be inspected and/or tested, as appropriate, at least bimonthly (i.e.; every other month).

Tank systems must also be inspected for the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment. Additionally, aboveground piping (exclusive of flanges, joints, valves, and other connections); welded flanges, welded joints, and welded connections; seal-less or magnetic coupling pumps and seal-less valves; and pressurized aboveground piping systems which do not have secondary containment must be visually inspected daily when in operation.

5.2.2.1 Tank System External Corrosion and Releases

All permitted hazardous waste tanks, piping, valves, and connections are visually inspected for signs of leakage, corrosion, or structural deterioration.

5.2.2.2 Tank System Construction Materials and Surrounding Area

The area immediately surrounding the externally accessible portion of the tanks, including the secondary containment, is visually inspected to detect any erosion or releases.

5.2.2.3 Tank System Overfill Control Equipment

With the exception of the PCB Storage Tanks (T4-T7) all tanks rely on visual inspections to make certain the tanks are not overfilled. All 5 stabilization tanks rely on the equipment operators to monitor the tanks through out the day to ensure the tanks do not overfill. In these tanks waste is treated in batches as to minimize the risk of overflow. The evaporation tank (T-11) is visually inspected daily to prevent overflow. If the tanks are near capacity no additional liquids will be added. The PCB storage tanks are equipped with high level alarms to indicate when the tanks are nearing capacity. The alarms are tested daily using the control panel located inside the office

of the PCB building. When testing the alarms if the red indicator light comes on the alarm is working correctly.

5.2.2.4 Tank System Monitoring and Leak Detection Equipment

All tanks and piping are aboveground and are visually inspected each operating day for spills, leaks and accumulated precipitation.

5.2.2.5 Tank System Cathodic Protection

Cathodic protection systems are installed on Stabilization Tanks #1, #2, and #3 and are visually inspected for excessive deterioration bimonthly. USEN welds sacrificial cathodes to the outside of the stabilizations tanks (T1-T3) to prevent steel deterioration. A sacrificial anode is used in cathodic protection where it is intended to be dissolved to protect other metallic components. The more active metal is more easily oxidized than the protected metal and corrodes first. The anode must oxidize nearly completely before the less active metal will corrode, thus acting as a barrier against corrosion for the protected metal. On a bimonthly basis the inspector visually inspects the anodes for deterioration. Once the anode deteriorates to approximately 50% of its original size it is replaced.

5.2.2.6 Additional Tank System Inspection

The structural condition of the tanks and their associated piping are visually inspected monthly.

5.2.3 Surface Impoundment Inspection [40 CFR §264.226]

Not Applicable. The facility does not have any hazardous waste surface impoundments.

5.2.4 Waste Pile Inspection [40 CFR §264.254]

Not Applicable. The facility does not have any hazardous waste piles.

5.2.5 Land Treatment Inspection [40 CFR §264.278]

Not Applicable. The facility does not have any hazardous waste land treatment units.

5.2.6 Landfill Inspection [40 CFR §264.303]

While landfills are in operation, they must be inspected weekly and after storms to detect evidence of any of the following:

(1) deterioration, malfunctions, or improper operation of run-on and run-off control systems;

(2) proper functioning of wind dispersal control systems, where present; and

(3) the presence of leachate in and proper functioning of leachate collection and removal systems, where present

Where leak detection systems are present, the amount of liquids removed from each leak detection system sump must be recorded during the active life and closure period. After the final cover is installed, the amount of liquids removed must be recorded at least monthly. If the liquid level stays below the pump

operating level[1] for two (2) consecutive months, the amount of liquids must be recorded at least quarterly. If the liquid level stays below the pump operating level for two (2) consecutive quarters, the amount of liquids must be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded on a quarterly or semi-annual recording schedule, recording must return to monthly recording until the liquid level again stays below the pump operating level for two (2) consecutive months.

5.2.6.1 Run-On and Run-Off Control System

During landfill inspections, the landfill run-on/run-off control systems are inspected for evidence of deterioration, malfunction, or improper operation. Particular attention is given to the integrity of containment dikes (where present) and to any blockage of the drainage channels, swales, culverts, and other drainage structures.

5.2.6.2 Wind Dispersal Control System

Wind dispersal/dust control measures at the facility are inspected for adequacy and effectiveness. This activity includes both a visual inspection and determination of whether the condition of any exposed hazardous waste is a wind dispersal issue.

5.2.6.3 Leachate Collection and Removal System

Leachate collection and removal systems (LCRS) and secondary leak detection, collection, and removal systems (LDCRS) of Landfill Cells are inspected for the presence of liquids. In the event the quantity of liquid detected in the LDCRS exceeds the Allowable Leakage Rate, then the procedures defined in the Response Action Plan (RAP) will be implemented. The RAPs for Trench 11, Trench 12 and Trench 13 can be found in Appendix 11-B, Appendix 11-C and Appendix 11-D, respectively.

5.2.7 Incinerator Inspection [40 CFR §264.347]

Not Applicable. The facility does not have any hazardous waste incinerators.

5.2.8 Security, Safety & Emergency Response Equipment

Security fences and gates and safety and emergency response equipment listed in the Contingency Plan are inspected monthly to ensure the equipment is operable and available, as appropriate.

5.2.9 Monitoring Well Inspections

Wells are inspected to verify they are locked, undamaged, and free from apparent tampering on a quarterly basis.

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1 "Pump operating level" is a liquid level based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump.

Table 1

FACILITY INSPECTION SCHEDULE

US Ecology Nevada
TABLE 1 – INSPECTION SCHEDULE

Unit	Location/Description	Frequency	Requirement	Form
CMU #1	PCB/RCRA Building	Daily		PCB Building
CMU #6	Dry Hazardous Waste Storage Area #2 (DHWSA #2)	Daily		DHWSA #2
CMU #7	Bin Storage Area (Secondary containment)	Daily		Truck Parking Area
CMU #18	Lab Waste Storage Areas	Weekly		Weekly Laboratory Housekeeping
CMU #16	Container Management and Stabilization Building	Daily		Container Management and Stabilization Building
CMU #17	Dry Hazardous Waste Storage Area #3 (DHWSA #3)	Daily		DHWSA #3
Tank #1	Stabilization Tank (Pan 1)	Daily		Batch Stabilization Tank
Tank #2	Stabilization Tank (Pan 2)	Daily		Batch Stabilization Tank
Tank #3	Stabilization Tank (Pan 3)	Daily		Batch Stabilization Tank
Tank #4	PCB Storage	Daily		PCB Building
Tank #5	PCB Storage	Daily		PCB Building
Tank #6	PCB Storage	Daily		PCB Building
Tank #7	PCB Storage	Daily		PCB Building
Tank T-11	Evaporation Tank	Daily		Daily Facility
Tank #18	Stabilization Tank (Pan 4)	Daily	RCRA Permit Condition 5.4	Batch Stabilization Tank
Tank #19	Stabilization Tank (Pan 5)	Daily	RCRA Permit Condition 5.4	Batch Stabilization Tank
NA	Landfill	Daily		Daily Active Disposal Cell 12 and Unburied Waste Inspection Report
NA	Closed Cells	Weekly		Weekly Inspection
NA	Two-way Radios and Emergency Alert System	Weekly		Weekly Inspection
NA	Portable Water Tank	Weekly		Weekly Inspection
NA	Truck Parking Area	Daily		Truck Parking Pad Area
NA	Safety Shed	Weekly		Weekly Inspection
NA	Security Fence and Warning Signs	Weekly		Weekly Inspection
NA	Dry Hazardous Waste Storage Areas	Weekly		Weekly Inspection
NA	Various Safety Shower /Eyewash equipment	Weekly		Weekly Inspection
NA	First-Aid Kits	Monthly		Monthly Safety & Equipment Inspection

NA	Full Face Respirator	Monthly		Monthly Full Face Respirator Inspection
NA	Emergency Respiratory Equipment	Monthly		Emergency Respiratory Equipment
NA	Spill Control Equipment	Monthly		Monthly Spill Control Equipment Inspection
NA	General Safety and Tool/Equipment	Monthly		Monthly Safety & Equipment Inspection
NA	Fire Extinguishers	Monthly		Monthly Fire Extinguisher Inspection
NA	Cathodic Protection System	Bi-monthly	RCRA Permit Condition 5.5.4	Stabilization Impressed Current Inspection & Test on Cathodic Protection System
NA	SWPPP Inspection (Storm Water Pollution Prevention Plan)	Quarterly		SWPPP Quarterly Inspection
NA	Annual Pollution Plan Inspection	Annual		Beatty Annual Pollution Plan Inspection Report

APPENDIX A

FACILITY INSPECTION REPORTS

FACILITY INSPECTION PLAN

US ECOLOGY NEVADA

March 2010

Revised June 2015

Revised March 2015

BEATTY

DAILY ACTIVE DISPOSAL TRENCH 12 and UNBURIED WASTE INSPECTION REPORT

DATE (m/d/y):_____ TIME: _____

INSPECTOR (Full Name): _____

Please include inspectors' full name and full date of inspection.

A Daily Facility Inspection Report shall be completed and shall include any deficiencies noted and corrective action taken. The following items shall be addressed in the inspection and subsequent report. Please check satisfactory or unsatisfactory for each item inspected and submit completed form to the Compliance department.

ACTIVE DISPOSAL TRENCH 12: Inspect active disposal trench for the following:	Satisfactory	Unsatisfactory
Daily cover for erosion, wind dispersal		
Standing water present		
All drums and bulk materials covered properly		
Dust emissions		
Safety and fire control equipment readily available		
Equipment utilized during unloading is stored inside the disposal area during non-working hours		
Signs of tears/damage to synthetic liners		
Compatibility cells (A & B) are clearly marked		
Emergency shower/eyewash station functional		
UNBURIED WASTE:		
Signs of materials leakage		
INTERIM PROCESS LOADS:		
Are interim loads properly stored on plastic liner		
All interim loads are properly labeled		
All interim loads are stored for less than 10 business days		
AFTER STORM EVENT INSPECTION: (complete only after storm event of 0.25" or greater (Facility Inspection Plan Section 5.1.2)		
Inspect landfill above grade dikes for signs of instability or erosion		
Inspect the daily cover applied for wind dispersal control for erosion and areas with exposed waste		

Any items which have been determined to be "Unsatisfactory" shall be noted below. Corrective Action will be tracked on this form or the "Inspection Deficiency and Corrective Action Report".

*Remarks/Corrective Action:

_____

_____

_____

*If corrective action is performed, include type of action taken, date completed, and individual performing corrective action.

Revised 2/24/2016 JD

BEATTY

DAILY ACTIVE DISPOSAL TRENCH 13 and UNBURIED WASTE INSPECTION REPORT

DATE (m/d/y):_____ TIME: _____

INSPECTOR (Full Name): _____

Please include inspectors' full name and full date of inspection.

A Daily Facility Inspection Report shall be completed and shall include any deficiencies noted and corrective action taken. The following items shall be addressed in the inspection and subsequent report. Please check satisfactory or unsatisfactory for each item inspected and submit completed form to the Compliance department.

ACTIVE DISPOSAL TRENCH 13: Inspect active disposal trench for the following:	Satisfactory	Unsatisfactory
Daily cover for erosion, wind dispersal		
Standing water present		
All drums and bulk materials covered properly		
Dust emissions		
Safety and fire control equipment readily available		
Equipment utilized during unloading is stored inside the disposal area during non-working hours		
Signs of tears/damage to synthetic liners		
Compatibility cells (A & B) are clearly marked		
Emergency shower/eyewash station functional		
UNBURIED WASTE:		
Signs of materials leakage		
INTERIM PROCESS LOADS:		
Are interim loads properly stored on plastic liner		
All interim loads are properly labeled		
All interim loads are stored for less than 10 business days		
AFTER STORM EVENT INSPECTION: (complete only after storm event of 0.25" or greater (Facility Inspection Plan Section 5.1.2)		
Inspect landfill above grade dikes for signs of instability or erosion		
Inspect the daily cover applied for wind dispersal control for erosion and areas with exposed waste		

Any items which have been determined to be "Unsatisfactory" shall be noted below. Corrective Action will be tracked on this form or the "Inspection Deficiency and Corrective Action Report".

*Remarks/Corrective Action:

_____

_____

_____

*If corrective action is performed, include type of action taken, date completed, and individual performing corrective action.

Revised 2/24/2016 JD

BEATTY

CMU #7 DAILY INSPECTION

Truck Parking Pad Area

DATE (m/d/y): _____ TIME: _____

INSPECTOR (Full Name): _____

Please include inspectors' full name and full date of inspection.

A Daily Facility Inspection Report shall be completed and shall include any deficiencies noted and corrective action taken. The following items shall be addressed in the inspection and subsequent report. Please check satisfactory or unsatisfactory for each item inspected and submit completed form to the Compliance department.

TRUCK PARKING AREA	Satisfactory	Unsatisfactory
Inspect for signs of damage, leakage or fugitive odors from trailers/containers		
Inspect for liquids in TPP Area		
Inspect loading / unloading areas for presence of spillage		
Stored containers are closed		
Containers properly labeled		
Adequate aisle space maintained		
TPP total volume of waste stored does not exceed 20 roll-offs or a cumulative volume of 400 cu yd		
Containers are stored within indicated boundaries		
If >500 VOC - are containers managed per Subpart CC requirements: Meet Level 1 Standards (**)		
Drainage controls in place (Slide gates in place), pad is in good working condition, etc.		
Unloading dock structurally sound		
Signs of spillage/litter at unloading dock		

Any items which have been determined to be "Unsatisfactory" shall be noted below. Corrective Action will be tracked on this form or the "Inspection Deficiency and Corrective Action Report".

*Remarks/Corrective Action:

_____

_____

*If corrective action is performed, include type of action taken, date completed, and individual performing corrective action.

** 40 CFR Part 264.1086 (c)
- (1) i DOT approved container.
  - ii Adequate cover with no holes, gaps, or open spaces
  - iii Hazardous waste is not exposed to the atmosphere
- (2) Adequate closure device
- (3) Maintained in closed position

BEATTY

TANKS T-1, T-2 & T-3 DAILY INSPECTION

Treatment Pans 1, 2 & 3

DATE (m/d/y): _____ TIME: _____

INSPECTOR (Full Name): _____

Please include inspectors' full name and full date of inspection.

A Daily Facility Inspection Report shall be completed and shall include any deficiencies noted and corrective action taken. The following items shall be addressed in the inspection and subsequent report. Please check satisfactory or unsatisfactory for each item inspected and submit completed form to the Compliance department.

BATCH STABILIZATION TANK	Satisfactory	Unsatisfactory
Inspect treatment pans for excessive damage that might cause unit failure		
Inspect unit's secondary containment for the presence of liquids		
Inspect surrounding area for presence of spillage/odor		
Ensure good general housekeeping is maintained		

Any items which have been determined to be "Unsatisfactory" shall be noted below. Corrective Action will be tracked on this form or the" Inspection Deficiency Corrective Action Report".

*Remarks/Corrective Action:

_____

_____

*If corrective action is performed, include type of action taken, date completed, and individual performing corrective action.

BEATTY

CMU #6 DAILY INSPECTION

Dry Hazardous Waste Storage Area #2

DATE (m/d/y): _____ TIME: _____

INSPECTOR (Full Name): _____

Please include inspectors' full name and full date of inspection.

A Daily Facility Inspection Report shall be completed and shall include any deficiencies noted and corrective action taken. The following items shall be addressed in the inspection and subsequent report. Please check satisfactory or unsatisfactory for each item inspected. And submit completed form to the Compliance department.

DRY HAZARDOUS WASTE STORAGE AREA II	Satisfactory	Unsatisfactory
Inspect for liquids and / or standing water in DHWSA II		
Inspect loading / unloading areas for presence of spillage		
Adequate aisle space maintained and area properly marked and roped		
Stored containers are DOT approved, closed and / or tarped		
Wastes excluded by Permit condition 3.4.4 (Liquids, PCBs, F020, F021, F022, F026) are not present		
Containers properly labeled		
If >500 VOC – are containers managed per Subpart CC requirements: Meet Level 1 Standards (**)		
Total Volume of Waste stored does not exceed 840 cu yd (approximately 42 20-yd roll-offs)		
Inspect empty roll-off bins / containers to verify that they do not contain any residue waste and meet the definition of "RCRA empty" (40 CFR 261.7) and labels are removed.		

Any items which have been determined to be "Unsatisfactory" shall be noted below. Corrective Action will be tracked on this form or the "Inspection Deficiency Corrective Action Report form".

*Remarks/Corrective Action:

_____

_____

*If corrective action is performed, include type of action taken, date completed, and individual performing corrective action.

** 40 CFR Part 264.1086 (c)
- (1) i DOT approved container.
  - ii Adequate cover with no holes, gaps, or open spaces
  - iii Hazardous waste is not exposed to the atmosphere
- (2) Adequate closure device
- (3) Maintained in closed position

CMU #17 DAILY INSPECTION

Dry Hazardous Waste Storage Area #3

DATE (m/d/y): _____ TIME: _____

INSPECTOR (Full Name): _____

Please include inspectors' full name and full date of inspection.

A Daily Facility Inspection Report shall be completed and shall include any deficiencies noted and corrective action taken. The following items shall be addressed in the inspection and subsequent report. Please check satisfactory or unsatisfactory for each item inspected and submit completed form to the Compliance department.

DRY HAZARDOUS WASTE STORAGE AREA 3	Satisfactory	Unsatisfactory
Inspect for liquids and / or Standing Water in DHWSA 3. If recent rain event check tarps for standing liquids.		
Inspect all areas for presence of spillage / waste on the ground		
Adequate aisle space maintained (3 feet)		
Stored containers are DOT approved, closed and / or tarped		
Wastes excluded by Permit condition 3.4.4 (Liquids, PCBs, F020, F021, F022, F026) are not present		
Containers properly labeled		
If >500 VOC – are containers managed per Subpart CC requirements: Meet Level 1 Standards (**)		
Total volume of waste stored does not exceed 3,438 cu yd (Approx. 172 20-yd roll-offs)		
Inspect empty roll-off bins / containers to verify that they do not contain any residue waste and meet the definition of "RCRA empty" (40 CFR 261.7).		

Any items which have been determined to be "Unsatisfactory" shall be noted below. Corrective Action will be tracked on this form or the "Inspection Deficiency Corrective Action Report".

*Remarks/Corrective Action:

_____

_____

_____

*If corrective action is performed, include type of action taken, date completed, and individual performing corrective action.

** 40 CFR Part 264.1086 I
- (1) i DOT approved container.
  - Ii Adequate cover with no holes, gaps, or open spaces
  - iii Hazardous waste is not exposed to the atmosphere
- (2) Adequate closure device
- (3) Maintained in closed position

DAILY FACILITY HOUSEKEEPING and EVAPORATION PAD (Tank T-11) INSPECTION REPORT

DATE (m/d/y): _____ TIME: _____

INSPECTOR (Full Name): _____

Please include inspectors' full name and full date of inspection.

A Daily Facility Inspection Report shall be completed and shall include any deficiencies noted and corrective action taken. The following items shall be addressed in the inspection and subsequent report. Please check satisfactory or unsatisfactory for each item inspected and submit completed form to the Compliance department.

FACILITY HOUSEKEEPING	Satisfactory	Unsatisfactory
Overall facility appearance		
Trash on site or other signs of un-orderly facility maintenance		
Evaluate dust condition of facility roadways		
Miscellaneous tools are stored in an orderly fashion		
EVAPORATION PAD		
Cracks or signs of deterioration (inspect if unit is empty)		
Presence of spills on pad		
General housekeeping in the area		
Inspect secondary containment for presence of liquids (if present, depth = _____ inches)		
Ensure that a minimum of six-inch freeload is maintained		
Maintenance Area		
Check integrity of gasoline, diesel and used oil tanks. Verify tanks and hoses connected to tanks are not leaking.		
AFTER STORMS INSPECTIONS (complete only after storm event of 0.25" or greater (Facility Inspection Plan Section 5.1.2)		
Amount of Rainfall recorded: _____ inches		
Ensure proper functioning of leachate collection and removal systems		
Inspect landfill run-off control ditches to ensure they are not obstructed by the presence of sediment or debris		
Inspect landfill above grade dikes for signs of instability or erosion		
Inspect the daily cover applied for wind dispersal control for erosion and areas with exposed waste		

Any items which have been determined to be "Unsatisfactory" shall be noted below. Corrective Action will be tracked on this form or the "Inspection Deficiency Corrective Action Report form".

*Remarks/Corrective Action:

_____

_____

*If corrective action is performed, include type of action taken, date complete, and individual performing corrective action.

Revised 10/2/09

BEATTY

CMU #1, Tanks T-4, T-5, T-6, T-7 and T-8 Daily Inspection

PCB Building

DATE (m/d/y): _____ TIME: _____

INSPECTOR (Full Name): _____

Please include inspectors' full name and full date of inspection.

INSPECTED ITEMS	SATISFACTORY	
PCB PROCESSING AND STORAGE	YES	NO
PCB PROCESSING AND STORAGE: Audible Alarms (insure working order)		
Storage Tanks (corrosion, erosion or leaks)		
Valves, lines, and fittings (corrosion, erosion or leaks)		
PCB processing: Storage Area (signs of spills, leaks, deteriorated/damaged containers)		
PCB Items, articles, and containers in storage are properly labeled and identified.		
PCB containers in storage are within seven months of their accumulation start date		
RCRA STORAGE : RCRA container storage (signs of leaks, spills, damaged/deteriorated containers, open containers in storage)		
RCRA waste in storage is compatible with stored PCB waste		
RCRA containers in storage are properly labeled, marked, and identified		
RCRA containers in storage are within seven months of their accumulation start date		
GENERAL : General Housekeeping (trash, debris, etc.)		
Run-on/Run-off controls (dikes, berms sloughing or erosion)		
Concrete flooring and containment for expansion cracks, corrosion and other signs of deterioration		
Safety equipment present in proper working condition and properly stored. Chains on walkways on PCB storage tanks in 'closed' position.		
RCRA/PCB containers palletized and stored with a minimum three foot aisle space		
Emergency shower/eyewash functional		
If >500 VOC – are containers managed per Subpart CC requirements: Meet Level 1 Standards (**)		
AFTER STORMS INSPECTIONS (complete only after storm event of 0.25" or greater (Facility Inspection Plan Section 5.1.2)		
Inspect tank containment for standing liquid or erosion		
FLOOR CONDITION (40 CFR Part 761)		
The epoxy coating is in tact and in good condition		
The colored undercoat is not exposed		
There is no evidence of spills and/or contamination		
The floor/building is maintained in a clean and orderly manner		

*Any items which have determined to be "Unsatisfactory" shall be noted below. Corrective Action will be tracked on this form or the "Inspection Deficiency Corrective Action Report".

*Remarks/Corrective Action:

_____

_____

*If corrective action is taken: include action taken, date completed and name of individual taking the action.

** 40 CFR Part 264.1086 (c)
- (1) i DOT approved container.
  - ii Adequate cover with no holes, gaps, or open spaces
  - iii Hazardous waste is not exposed to the atmosphere
- (2) Adequate closure device
- (3) Maintained in closed position

BEATTY

CMU #16, Tanks T-18 and T-19 Daily Inspection

Container Management and Stabilization Building

DATE (m/d/y): _____ TIME: _____

INSPECTOR (Full Name): _____

Please include inspectors' full name and full date of inspection.

INSPECTED ITEMS		
STABILIZATION TANKS	SAT	UNSAT
Inspect tank for excessive damage that might cause unit failure		
Inspect unit's secondary containment for the presence of liquids		
Inspect surrounding area for presence of spillage/odor		
Ensure good housekeeping is maintained		
BUILDING/AUXILARY EQUIPMENT		
Reagent Storage System (corrosion, erosion or leaks)		
Valves, lines, and fittings (corrosion, erosion or leaks)		
CONTAINER STORAGE AREA		
Signs of leaks and spills		
All containers in storage are properly labeled, marked, and identified		
All containers stored with a minimum two foot isle space		
All containers are closed and in good condition		
Temporary Dock		
Signs of spillage/litter at portable ramp/dock		
Insure safety rails are secure		
Cleanliness around dock (stains, spills, trash, debris, etc.)		
Other		
GENERAL		
General Housekeeping (trash, debris, etc.)		
Concrete flooring and containment-expansion cracks, corrosion or other signs of deterioration		
All required safety equipment present in proper working condition and properly stored. Emergency shower/eyewash functional		
Control room is clean & well maintained		
Unloading dock structurally sound		

*Any items which have determined to be "Unsatisfactory" shall be noted below. Corrective Action will be tracked on this form or the "Inspection Deficiency Corrective Action Report".

*Remarks/Corrective Action:

_____

_____

_____

_____

_____

Revised 10/2/09

Attachment 8

Visitor/Contractor On-Site Authorization Record (Sample Only)

USEcology, Inc.

VISITOR/CONTRACTOR ON - SITE AUTHORIZATION

As a visitor/contractor to a US Ecology, Inc. subsidiary facility, you are required to adhere to operational safety policies and procedures. Therefore, carefully read the following important information:

FACILITY SECURITY

- **Visitors/contractors must sign in upon arrival and sign out upon exiting the facility.**
- **All drivers and passengers in operating vehicles must wear seatbelts while at the facility and obey all traffic and informational signs including posted speed limits.**
- **Visitors/contractors will be escorted at all times while at the facility unless otherwise authorized by the Facility Manager, Health and Safety Officer, or facility sponsor. If authorization is given to proceed unaccompanied, you must strictly limit yourself to those areas you are authorized to enter.**

FACILITY EQUIPMENT

- **US Ecology, Inc. and its subsidiaries assume no liability for the misuse of any equipment on the premises by any visitor/contractor, including equipment made available for use by the facility.**

SMOKING

- **Smoking is prohibited at all times within the facility except for areas designated as "Authorized Smoking" areas.**

FOOD AND BEVERAGE

- **The possession and/or consumption of food, beverages and tobacco products is prohibited in waste-handling areas.**

ILLEGAL DRUGS

- **Possession of illegal drugs will result in immediate expulsion from the facility. Persons expelled from the facility due to possession of drugs may be refused reentry into the facility.**

MOBILE PHONE USE

- **Do not use a mobile phone while operating a vehicle or other mobile equipment. Radio communication is allowed only as a means to communicate operating instructions with on-site personnel.**

SAFETY EQUIPMENT

- **Visitors/contractors entering the site must have the proper personal protective equipment (PPE), including an appropriate respirator for the type of waste being hauled/handled, if needed, in certain areas of the facility. Typical PPE includes hard-hat, safety glasses, steel-toed work boots, gloves, and disposable coveralls.**
- **Safety equipment such as a hard hat and safety glasses may be issued, if available, but must be returned prior to leaving the site.**

EMERGENCIES

- The facility has a specific detailed Emergency Contingency Plan covering the following emergency conditions: fire; explosion; earthquake; unplanned release of hazardous materials to the air, soil, surface or groundwater; immediate medical assistance for injured or ill personnel; intrusion of persons not associated with the facility; or any event which may present an imminent hazard.

- If you observe an emergency condition, immediately notify the nearest facility personnel and follow their instruction regarding actions you are to take pertaining to your safety.

- All accidents/injuries are to be reported immediately to the Health and Safety Supervisor, Operations Manager, or your facility sponsor.

- All facility personnel are trained in emergency response. If the Emergency Contingency Plan is implemented, follow all instructions given to you by facility personnel. Do not initiate any action on your own.

Release of Liability and Assumption of Risk Agreement

I understand that there are certain risks and dangers associated with operations of a hazardous waste landfill. I agree that US Ecology, Inc. or a subsidiary thereof has provided to me policies and procedures, information and instructions for my safety and the avoidance of those potential hazards. By signing below, I agree that I have read and understand all the policies and procedures as provided. I understand that failing to comply with any of these requirements may result in my being requested to leave the facility.

FOR AND IN CONSIDERATION OF RECEIVING PERMISSION AS A LICENSEE OR A BUSINESS INVITEE TO ENTER UPON A US ECOLOGY, INC. SUBSIDIARY FACILITY, THE UNDERSIGNED HEREBY WAIVES ALL RIGHT TO FILE ANY CLAIM AGAINST US ECOLOGY, INC. AND ITS SUBSIDIARIES AND THEIR RESPECTIVE OFFICERS, DIRECTORS, AGENTS AND EMPLOYEES (COLLECTIVELY "US ECOLOGY") FOR INJURIES, ACCIDENTS, SICKNESS AND DAMAGES OF WHATSOEVER NATURE SUSTAINED BY THE UNDERSIGNED DUE TO HIS OR HER NEGLIGENCE, WILLFUL MISCONDUCT OR FAILURE TO ABIDE BY THE RULES AND POLICES SET FORTH HEREIN AND FURTHER AGREES TO INDEMNIFY AND HOLD HARMLESS US ECOLOGY FOR ALL CLAIMS AND EXPENSES ARISING THEREFROM.

I, _____ ,have read and understand the Visitor/Contractor On-Site Authorization and agree to abide by the rules set forth therein. I further understand that I have given up substantial rights by signing below, and sign freely and voluntary without any inducement.

Name (please print)

SIGNED: _____

DATE: _____

EMPLOYER: _____

ADDRESS: _____

_____

Contractors who may be on-site for extended periods may be required to participate in additional training.

Contractor Safety Instruction

This Safety Standard must be given to each contractor who performs work at the US Ecology Facility, Beatty NV. A signed copy will be retained by the US Ecology representative and forwarded to the Safety Department. The contractor will be specifically advised and warned of any hazardous condition which would not be apparent to him if he is unfamiliar with the facility operations.

It is the responsibility of the contractor to instruct his/her employees properly on the information within this standard. The contractor shall comply with the laws, orders and regulations of all governmental authorities relating to the contractor's performance of this contract.

The contractor shall comply with US Ecology rules and regulations while the contractor is engaged in the performance of this contract.

With signing this document, I have read and will follow the US Ecology Contractor SOP.

Contractor Company's name: _____

Contractor's name and signature _____

Work to be done at _____

Date _____

USEcologyNevada

Contractor Safety Questionnaire

PURPOSE: The purpose of this questionnaire is to provide US Ecology Nevada with necessary information about your company's safety program. All items must be completed.

Return completed form to FAX No. 775 553 2942

Or
Mail to

US Ecology
11 miles South of Beatty
Beatty, NV 89003
Attn.: Safety

Company Name: _____

Address: _____

Safety Director: _____ Phone #: _____
(Person responsible for safety)

FAX #: _____

1. Accident/Injury Experience

Using last year's OSHA 300 Log or Worker's Compensation Documentation, fill in the following:

A. Number of recordable injuries/illnesses _____

B. Number of restricted work days _____

C. Number of lost work days _____

D. Number of fatalities _____

E. Employee hours worked last year _____

F. Number of injuries/illnesses requiring hospitalization _____

2. Safety Program

A. Does your company have a written safety program?

Yes _____ No _____

USEcologyNevada

Is the program revised/updated annually?

Yes _____ No _____

B. Does your written program contain a statement that your company abides by all federal (OSHA), state and local rules and regulations relating to safe work practices?

Yes _____ No _____

C. Do you have a new hire orientation program pertaining to safety training?

Yes _____ No _____

Does it include any training on the following?: (If your company has a handbook, please submit a copy if requested).

Head Protection Emergency Procedures
Eye Protection Hazardous Substances
Hearing Protection Trench & Evacuation
Respiratory Protection Barricades
Safety Belts & Lifelines or Fall Protection Electrical Safety
Scaffolding Rigging & Crane Safety
Housekeeping Hand & Power
Fire Protection Tool Safety
Hand Protection Others
Confined Space Entry

D. Do you have a foreman safety training program?

Yes _____ No _____

E. Do you conduct regular safety meetings? Yes _____ No _____

How often? Are records kept? Yes _____ No _____

F. Do you generate accident investigation reports?

Yes _____ No _____

G. Do you perform project safety inspections?

Yes _____ No _____

Who conducts them? Name _____

Job Title _____

How often? _____

3. Lockout/Tagout

A. Does the work that you are submitting a bid for; involve any "Lockout/Tagout" situations? Yes _____ No _____

B. If yes, please submit a copy of your written Lockout/Tagout procedures.

4. Hazard Communication

A. Does the work that you are submitting a bid for; involve the use of any "Hazardous Substances"? Yes _____ No _____

B. If yes, please submit a copy of your written hazard communication program and material safety data sheets for any hazardous substance that you will be using in your work.

5. Confined Spaces

A. Does the work you are bidding involve working in a "Confined Space"?

Yes _____ No _____

B. If yes, include your work plan, copies of training certification of the pertinent employees, entry permit and who will be in the confined space permit required.

6. Elevated Work and Fall Protection

A. Does the work that you are submitting a bid for; involve any "Elevated Work"?

Yes _____ No _____

B. If yes, please submit a copy of your fall protection and elevated work rules policy.

7. Powered Industrial Vehicles

A. Does the work that you are submitting a bid for; involve the use of any powered industrial vehicles? (i.e., fork trucks, highlifts, etc.)

Yes _____ No _____

B. Have designated people been trained on such?

Yes _____ No _____

8. Respiratory Compliance

A. Does your company have a written respiratory program or policy?

Yes _____ No _____

B. Have employees been fit tested quantitatively or qualitatively?

Yes _____ No _____

C. Do you have established medical surveillance procedures?

Yes _____ No _____

D. What type of respiratory training has your employee had?

_____

_____

E. What type of respiratory equipment are they permitted to wear?

_____

_____

9. Key Personnel

List the key onsite people you would use for this project.

Name: _____

Title: _____

Name: _____

Title: _____

10. Liability Insurance
Please provide a copy of your liability insurance.

USEcologyNevada

For Company Use Only:

Recommendations: _____

Comments: _____

Approved *Yes ____ No____ AUTHORIZATION

I certify that I have conducted a review of the information contained in this questionnaire and approve the contractor for the above described work.

* Further detailed on attachment: Yes __ No__

Name: _____

Signature: _____

Title: _____ Date: _____

Attachment 9

Training Sign-In Form (Sample Only)

Training Verification

Department, Shift, & Date: ______________________________

Objective: To verify the following team members have received a comprehensive training session.

Check box below

☐ Compliance

☐ Health & Safety

Applicable Standards: ____________________ **Duration:** ____________________

Trainer(s): ______________________________

Trainers Directions: In box below, Identify a simulated task that will evaluate the training effectiveness. Test each trainee and record the results.

Printed Name	Date	Trainees Signature	Department	Trainers Initials

Attachment 10

Facility Contingency Plan

RCRA CONTINGENCY PLAN

US Ecology Nevada

October 2009

Revised March 2016

SECTION 7

RCRA CONTINGENCY PLAN

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CONTINGENCY PLAN

7.1.0 Facility Description

US Ecology Nevada (USEN) operates a waste management facility in the Amargosa Desert 11 miles south of Beatty, Nevada. Wastes accepted on-site include RCRA hazardous wastes, PCBs regulated under the TSCA, and non-hazardous wastes.

In the event that an emergency condition occurs that has the potential to threaten human health or the environment, the following contingency plan will be implemented until the condition has been stabilized.

7.2.0 Emergency Coordinator

The General Manager appoints the primary and alternate Emergency Coordinators (EC). An EC is on site or readily available 24 hours a day, 7 days a week. When the Contingency Plan is implemented, the EC is authorized to commit the resources needed to carry out the Contingency Plan. The EC Phone Number List (Appendix A) contains all emergency notification telephone numbers.

7.3.0 Implementation of the Facility Contingency Plan

Employees[1] will immediately notify the EC upon identifying any fire, explosion or release of hazardous waste or constituents which could threaten human health or the environment.

Upon notification and verification that one of these events has occurred, the EC[2] will implement the Contingency Plan, or delegate responsibilities to other facility employees, such as the Lab Manager for waste identification, the Environmental Manager for external notifications, and the Health & Safety Manager for traffic control or selection of appropriate PPE.

7.3.1 Fire and/or Explosion Involving Hazardous Materials

A “fire that could threaten human health or the environment” is defined as combustion of waste such that it is not readily controllable by facility personnel using on-site equipment and/or available fire extinguishing material (e.g.; fire extinguishers, water, dirt). Incidental fires in non-waste management areas or in controlled areas, such as the stabilization pan, which can be readily extinguished, may be an “incident” for purposes of this plan if they pose a threat to human health or the environment.

In the event of a fire and/or explosion requiring implementation of the Contingency Plan, the following actions will take place:

---

[1] Including, for the purposes of this plan, any off-hour security employees or contractors.

1. The EC will notify all facility personnel by activating the Emergency Alert System either at the main panel at the Administration building, outside the front door of the PCB building, or outside the CMS control room. This is the primary emergency notification system.
2. When the emergency alarm is activated:
   A. All key personnel in possession of FM radios will immediately establish voice communication with the EC.
   B. The EC will determine which facility operations might likely be impacted by emergency response activities and will instruct those operations to cease or otherwise alter their operations, as appropriate.
   C. If directed by the EC, all personnel will proceed to their designated emergency muster areas.
   D. If and as directed by the EC, incoming vehicular traffic will be halted or reduced, with the exception of emergency assistance traffic, if required.
3. Injured personnel will be immediately removed to a safe location, and qualified personnel will administer appropriate first aid. **Note**: Employees requiring medical treatment will be transported to the appropriate medical facility by any means necessary, as determined by the extent of their injuries.
4. All movement to the emergency muster area will be via an up-wind route. An up-wind route may be established by watching any visual emissions or wind socks. If movement via an up-wind route is not possible, the affected personnel will notify the EC of the situation.
5. The EC will account for all personnel, visitors and contractors.
6. The EC will begin assessment of the incident through observations for the following criteria:
   - The nature and extent of the incident (fire and/or explosion, and magnitude);
   - The location of the incident;
   - The nature and quantities of materials involved (review of waste profiles, manifests, disposal records, computer records, cell coordinates);
   - The potential for escalation through subsequent explosions or the spread of fire to other hazardous materials;
   - The intensity of the fire or explosion;
   - The extent of released material to the air and immediate surrounding area;
   - Wind direction and relative speed;
   - The potential for short and long-term effects, with regards to human health and the environment;
   - The need for additional outside assistance and/or evacuation. (NOTE: No firefighting will be attempted if there is significant risk of injury to facility

personnel. Normally, only outbreak stage fires, which can be rapidly contained and controlled, will be handled);

- The proper extinguishing medium for the fire will be established by the EC (e.g., foam, dry chemical, water, soil, etc.);
- If the EC, determines that 1) the fire and/or explosion threatens human health and the environment outside the facility boundaries; 2) additional outside assistance is necessary to bring the incident under control; or 3) evacuation of local the area is necessary; the EC will immediately establish communication with local emergency response agencies, as appropriate, in accordance with Section 7.0 of this plan. Emergency telephone numbers can be found in the EC Phone Number List (Appendix A).

7. If the EC determines that the potential for an impending explosion is high, the EC will notify local emergency response agencies for assistance.

8. The EC will direct all on-scene USEN response efforts and, as appropriate and necessary, coordinate activities involving outside agencies. The EC will direct the following response efforts, as appropriate and necessary:

- Ensure all personnel not required for response efforts are evacuated to a safe area (i.e., non-essential personnel, visitors, contractors.);
- Establish necessary lines of communication;
- Provide all necessary PPE;
- Continually monitor the affected areas through observation for sign of escalation, release, or impending explosions due to gas or vapor build-up;
- Monitor piping systems and tanks if those areas are involved or threatened;
- Ensure all feed lines to the PCB storage tanks and propane tank are closed, if necessary and possible;
- Limit or restrict the use of motor vehicles in the affected area to avoid ignition or re-ignition of flammable vapors and/or gases;
- If practical, remove or isolate any waste containers or shipments that could become involved if the situation escalates or if the waste containers or shipments would be detrimental to the present situation;
- Collect and/or contain, to the extent practical, any released waste; and / or
- Construct soil dikes and/or barrier walls to serve as firebreaks and as temporary segregation measures, to prevent the spread of fire to other waste containing areas, and to control run-off discharge from the facility. These structures will be constructed utilizing heavy equipment as long as the operation of such equipment will not increase the potential for ignition or re-ignition of any flammable vapors.

9. Upon recovery from the emergency, the EC will ensure that all contaminated emergency equipment will be decontaminated. Decontamination procedures will typically be conducted on the Decon Pad to ensure that cleaning residues are contained and collected for appropriate management.
10. When the incident has been brought under full control, and no longer presents a threat to human health or the environment, the EC will initiate appropriate remedial clean-up operations.

7.3.2 Sudden or Non-Sudden Releases or Spills of Hazardous Materials

For purposes of this section, a "release or spill" is defined as 55 gallons or more of material (liquid or solid) outside of its container or tank, not on sacrificial soils or not contained within other containment structures. For materials on sacrificial soils or inside a containment structure, a spill or release will be considered to have occurred if the material poses a threat to other materials within the same containment unit.

In the event that a Reportable Quantity release or spill occurs at the facility, the EC will take the following actions:

1. Determine internal notification requirements and ensure such notifications are made;
2. Determine which facility operations might be impacted by emergency response activities and instruct those operations to cease or alter their operations, as necessary.
3. Assess the incident through observation, for the following criteria:
    - The nature and extent of the incident;
    - The location of the incident;
    - The nature and quantities of the materials involved (review of waste profiles, manifest, computer records, disposal records, truck placards, etc.);
    - Wind direction and relative speed;
    - The potential for short and long-term effects, with regards to human health and the environment;
    - The potential for fire and/or explosion; and
    - The need for additional outside assistance and/or evacuation.
4. If the EC determines that 1) the incident threatens human health and the environment outside the facility boundaries; 2) additional outside assistance is necessary to bring the incident under control; or 3) evacuation of the local area is necessary; the EC will establish communications with local emergency response agencies, as appropriate. The EC will also contact NDEP and the NRC, as necessary, in accordance with Section 7.7.0 of this plan. Emergency telephone numbers can be found in the EC Phone Number List (Appendix A).

5. The EC will direct all on-scene USEN response efforts and, as appropriate, coordinate activities involving outside agencies. The EC will direct the following response efforts, as appropriate and necessary:
   - If the incident involves the PCB processing area, all feed lines to the storage tanks will be closed;
   - If the surrounding materials could be reactive with the released waste, the EC will ensure they are removed to a safe location; and
   - If the incident involves leaking containers, the EC will ensure that the containers are appropriately managed.
6. Upon recovery from the emergency, the EC will ensure that all contaminated emergency equipment will be collected for decontamination. Decontamination procedures will typically be conducted on the Decon Pad to ensure that cleaning solutions are contained and collected for disposal.
7. When the incident has been brought under full control, and no longer presents a threat to human health or the environment, the EC will initiate appropriate remedial clean-up operations.

7.3.3 Remedial Clean-Up Operations

When the emergency has been brought under control and the threat to human life or the environment has been minimized, the EC will immediately initiate the following remedial actions, as appropriate, in order to restore the facility to operational readiness:

1. The entire area involved in the incident will be cordoned off and only those operations directly related to the remedial clean-up will be allowed in that area. No waste disposal, storage or treatment will be conducted in the cordoned-off area until clean-up operations are completed and permission to resume normal facility operations in the area is granted by the EC.
2. The EC will continue to monitor the area during remedial operations. Monitoring will be through observation and direct reading instruments, such as a portable six-gas monitor (PID), if necessary. Monitoring will be conducted for the presence of gas or vapor build-up, which could cause fire and/or explosion, if necessary.
3. The EC will ensure that all remedial operational personnel are properly equipped with necessary PPE.
4. All recovered waste, contaminated soil or other solid material resulting from the incident will be appropriately stored, treated, and / or disposed.
5. The EC will ensure that no waste that may be incompatible with the released or recovered material is treated, stored or disposed of in the affected area, until remedial clean-up procedures are completed.

6. When all spilled, released or fire-fighting liquids have been removed, the EC will have the area soil sampled and analyzed to ensure that the foreign material has been removed and no further contamination exists, as appropriate. The sampling will be as follows:
   - A minimum of two samples will be taken. This number will vary with the size and extent of the spill.
   - A sample will be taken from outside the periphery of the spill (background) and from the center of the spill (confirmation of clean-up).
   - Depth of samples will be determined by the EC based on visual observation.
   - Specific analysis will depend on materials involved.
7. Clean-up of any spill involving regulated PCBs will be conducted following the U.S. Environmental Protection Agency's (EPA's) Spill Clean-Up Policy.
8. All necessary reports will be submitted to the applicable agencies, informing them of the incident and all response measures taken to re-establish normal facility operations.
9. When remedial clean-up measures have been completed, the EC will ensure that the emergency equipment listed in the contingency plan is decontaminated, cleaned and fit for its intended use, before resuming normal operations. Other decontamination operations include:
   A. Disposable PPE will be appropriately managed.
   B. Respiratory protection equipment will be inspected and decontaminated, if necessary. Any required maintenance will be performed before reuse.
   C. Heavy equipment (e.g., dozers, front-end loaders, forklifts, etc.) will be transported to the Decon Pad for decontamination, if necessary.
   D. Incidental equipment, such as fire extinguishers, shovels, pumps, and reusable PPE, will be removed to the Decon Pad and thoroughly decontaminated, if necessary.
10. Liquids and other materials resulting from decontamination operations will be appropriately managed in accordance with the WAP.
11. Fire extinguishers will be inspected in accordance with the Facility Inspection Plan before being placed back in service.

7.3.4 Earthquakes

The USEN facility is located ~10 miles west of the Furnace Creek Fault Zone, and ~100 miles south of the Las Vegas Shear Zone. The following contingency response measures will be conducted in the event of significant seismic activity to the extent required by the EC:

1. Communication between key facility personnel and the EC will be immediately established;

2. Facility personnel will exit buildings, to an open area, if the building's structural integrity appears to be failing;
3. Facility personnel in operational areas will immediately halt or alter operations;
4. Heavy equipment operators will shut down equipment and egress to a safe open area;
5. Personnel located in the landfill will move away from the trench walls to the center open area and remain until the earthquake and associated initial after-shocks have dissipated;
6. Immediately following the earthquake and initial after-shocks, all personnel will proceed directly to the designated muster area;
7. The EC will account for all facility personnel;
8. Qualified personnel will administer first aid to injured personnel. Injured personnel will be transported for medical treatment, if necessary;
9. The EC will designate inspection teams and begin necessary measures to appraise facility damage;
10. Inspection of the facility will be conducted in an organized manner and will include the following areas:
    - The active landfill will be inspected for wall failure, cracks, exposed waste, severe depression in the floor and visible gas vapor emission.
    - Inactive cells will be inspected for cap integrity and fugitive visible emissions.
    - All access roads will be inspected for cracks and severe depressions.
    - Facility perimeter fencing will be inspected for integrity.
    - All electrical and utility systems will be inspected for operational effectiveness.
    - All facility equipment will be inspected for operational integrity.
    - All monitoring wells and sumps will be inspected for integrity.
    - The PCB processing area will be inspected for structural integrity of the building, flooring, valves, pipes, tanks, and containment controls. Signs of cracks, leaks or malfunction will be reported to the EC.
    - The propane tank and ancillary equipment will be inspected for leaks, cracks or malfunction.
11. The EC will ensure that all inspection personnel are properly equipped with PPE.
12. In the event that a fire and/or explosion result from the earthquake, subsequent contingency response will be in accordance with Section 3.1 of this plan.
13. In the event that a release of hazardous material occurs, subsequent contingency response will be in accordance with Section 3.2 of this plan.
14. The EC will then initiate any remedial actions necessary to bring the facility up to operational readiness.
15. All necessary reports will be submitted in accordance with Section 7.0 of this plan.

7.4.0 Evacuation Plan

All emergencies require prompt and deliberate action. The EC will be responsible for determining if a facility evacuation is required. In the event that this determination is made, the following actions will be taken:

1. The emergency horns will be activated twice. This is the primary signal for immediate facility evacuation. In addition, radio communications will be established and the verbal order for evacuation will be given.
2. All facility personnel will immediately don proper PPE, if required, and proceed to the primary evacuation route (Appendix B).
3. All evacuations will be coordinated by the EC in such a manner as to minimize potential exposure (i.e., up-wind egress).
4. All facility visitors and contractors will exit the facility immediately, under the direction of the EC.
5. In the event that evacuation by the primary designated route is not possible (due to blockage by releases or fire), the EC will authorize the sacrifice of facility fencing by use of heavy equipment or motor vehicles to create alternate routes. All personnel evacuating the facility in this manner will immediately proceed to the evacuation muster area when clear of danger or to an alternate muster area designated by the EC.
6. When the evacuation is complete, the EC will immediately account for all facility personnel, visitors and contractors.
7. No attempt will be made to find personnel unaccounted for, if it involves the endangering of lives of others by re-entry into the facility.
8. Re-entry into the facility will only be made after the EC gives clearance.

7.5.0 Equipment Requirements

The facility will maintain sufficient safety and emergency equipment for immediate response to most emergency situations. All facility communications and alarm systems, fire extinguishers, spill control equipment and decontamination equipment will be inspected and maintained in accordance with the Facility Inspection Plan.

7.5.1 Emergency Response Equipment

For a more comprehensive list of emergency equipment, see Appendix D.

7.5.2 Safety Equipment

The facility will maintain sufficient safety equipment to provide for immediate response to emergency situations.

7.5.2.1 Respiratory Protection

Air purifying half- or full-face respirators with appropriate cartridges will be available and stocked in the Health and Safety Storage room located in the Administration Building. A specific list of available equipment and locations include:

- Air purifying respirators (issued to each operational employee);
- Self-contained breathing apparatus (SCBAs) (located in the safety van, Stabilization Building, CMS Building and PCB Building);
- Spare bottles for SCBAs (located in the Emergency Response Trailer); and
- Cartridges for air purifying respirators (located in the Health and Safety Storage room located in the Administration Building, Stabilization Building, and the Emergency Response Trailer).

7.5.2.2 Personal Protective Equipment

Available PPE, in addition to the PPE issued to operational employees, includes:

- Tyvek™ outer garments (located in the stabilization building, trench shed, PCB Building, CMS Building, Maintenance Building, Emergency Response Trailer, and Health and Safety Storage room);
- Chemical-resistant suits (located in the Health and Safety Storage room, PCB Building and Stabilization Building);
- Chemical-resistant gloves (located in the Trench Shed, Stabilization Building, H&S Van, PCB Building, Site Laboratory, CMS Building, Maintenance Building, and Health and Safety Storage room);
- Face shields (located in the PCB Building and Health and Safety Storage room); and
- Chemical resistant over-boots for safety shoes (located in the PCB Building and Health and Safety Storage room).

7.5.2.3 Fire Extinguishers

Portable fire extinguishers, rated for class “ABC” fires, are available at multiple locations on-site. Specific lists of units (and respective locations) include:

- ABC units on all heavy equipment;
- ABC units stored on the loading dock and H&S Van;
- D unit stored in Trench Shed;
- 2 – Compressed foam units mounted in the bed of 2, 4-wheel utility vehicles
- 250-pound Ansul at the Stabilization Building;
- 3 - 250-pound Ansul at the CMS Building

7.5.2.4 Heavy Equipment and Vehicles

The facility routinely utilizes multiple pieces of heavy equipment and vehicles (such as trucks) to support on-site operations and this equipment is available for emergency response efforts. Typical equipment used on-site includes track-hoes, bulldozers, water trucks, forklifts, etc. Although this equipment is available on-site, it is not for "emergency response" purposes, per se, and is routinely exchanged for other similar equipment when its economic life is complete. Therefore, although this equipment is on-site, it is not listed here.

7.5.2.5 Spill Control and Response Equipment

A specific list of spill control and response equipment, in addition to on-site heavy equipment, includes:

- Recovery drums (inside the PCB Building and outside the CMS Building);
- Absorbent material for containment and solidification (inside the PCB Building);
- Spill control pads (PCB Building and facility laboratory); and
- Shovels (PCB Building, Maintenance Building, and wash pad).

7.5.2.6 Decontamination Equipment

Decontamination of contaminated equipment will typically take place at the Decon Pad, and all decontamination run-off will be collected in the wash pad holding tank. Additional equipment typically available for decontamination includes:

- High pressure and steam cleaning units (kept at the Decon Pad);
- Decon water soluble cleaning solution (PCB Building);
- Sponges and mops (PCB Building), and
- Portable and fixed emergency deluge showers and eye wash stations (fixed units located at the Waste CMS Building, PCB Building, Stabilization Area, Decon Pad and Lab).

7.5.2.7 First Aid Supplies

Typically available first aid supplies include:

- A complete emergency trauma kit (located in the H&S Van and Receiving Office);
- Basic first aid kits (located in CMS Building, PCB Building, and Stabilization Office);
- One stretcher (located in the H&S Van); and
- One burn pack (located in the H&S Van).

7.5.2.8 Water For Fire Control

The facility maintains a 20,000 gallon water storage tank located adjacent to the PCB building, and a water storage pond located west of the main access gate.

Other fire fighting capabilities includes two mechanical foam spraying units. One is located in Trench 12 mounted in the bed of a 4-wheel utility vehicle, and the other is located outside of the Receiving Office in the bed of the other 4-wheel utility vehicle.

7.5.2.9 Internal Communication Systems

Internal communications consist of three (3) independent systems. The primary system is an emergency warning siren. The system consists of three (3) high-intensity warning horns, one (1) located at the PCB Building, one (1) at the CMS/Stabilization Building, and one (1) at the office compound area. The second system consists of radio units. This system consists of a minimum of eight (8) hand-held units located throughout the facility. All radios are interfaced for monitoring and communication purposes. The EC will monitor at least one unit at all times during normal facility operations. The third system consists of a telephone system.

7.5.2.10 External Communication Systems

External communications for summoning outside emergency assistance will be accomplished by telephone. There will be a minimum of six (6) telephones readily available for this purpose. One (1) will be located in the laboratory facility, one (1) in the Facility Manager's office, one (1) in the break area, and three (3) in the Administrative office.

7.6.0 Plan Distribution/Coordination Agreements

The following facilities and agencies are in possession of copies of the Emergency Coordinator Phone Number List (Appendix A.) These agencies were invited to participate in an orientation intended to familiarize response personnel with the facility layout, properties of the wastes handled at the facility and associated hazards. Each agency was asked to review and comment on the plan and establish specific actions that they will take in response to an emergency.

1. Beatty Volunteer Fire/Rescue;
2. Beatty Ambulance Service;
3. Beatty Medical Clinic;
4. Beatty Substation Nye County Sheriff; and
5. Mercy Air Ambulance Service.

A copy of the coordination agreement letter provided to each agency is included as Appendix C.

7.7.0 Reports

As soon as possible after implementation of the Contingency Plan, the Emergency Coordinator, or designee, will record the time, date, and details of the incident. USEN will orally report to the Nevada Division of Environmental Protection (NDEP) any incident requiring implementation of the Contingency Plan. The NDEP and the National Response Center will be notified of any incident involving a release to the environment of hazardous waste, pollutant or contaminant in a quantity equal to, or greater than the reportable quantity specified by 40 CFR Part 302.

The oral reports described above will be provided as soon as possible after becoming aware of the release, but no later than 24 hours following the incident. However, the EC must notify the NDEP that the facility is in compliance with the following items before operations are resumed in the affected area(s) of the facility:

1. No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
2. All emergency equipment listed in the Contingency Plan is cleaned and fit for its intended use before operations are resumed. In this case, the EC may substitute equivalent emergency equipment in the affected area while repairing, replacing, or recharging used emergency response equipment.

A written report providing details on any incident requiring implementation of the Contingency Plan will be submitted to the NDEP Administrator within 15 days. The following information will included in the written notification to the Administrator:

1. Name, address and telephone number of the owner/operator of the facility;
2. Name, address and telephone number of facility;
3. Date, time, and type of incident (e.g.; fire, explosion);
4. Name and quantity of material(s) involved;
5. The extent of injuries, if any;
6. An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
7. Estimated quantity and disposition of recovered material that resulted from the incident.

7.8.0 Plan Modification

The Emergency Coordinator, or designee, may find it necessary to adapt the Contingency Plan to a specific emergency situation in order to adequately protect human health or the environment. In addition, the Contingency Plan will be reviewed and amended, if necessary, whenever:

1. The facility permit is revised;
2. The plan fails in an emergency;

3. The facility changes – in its design, construction, operation, maintenance, or other circumstances – in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
4. The list of emergency coordinators changes; or
5. The list of emergency equipment changes.

Copies of the modified plan will be distributed as described in Section 6.0.

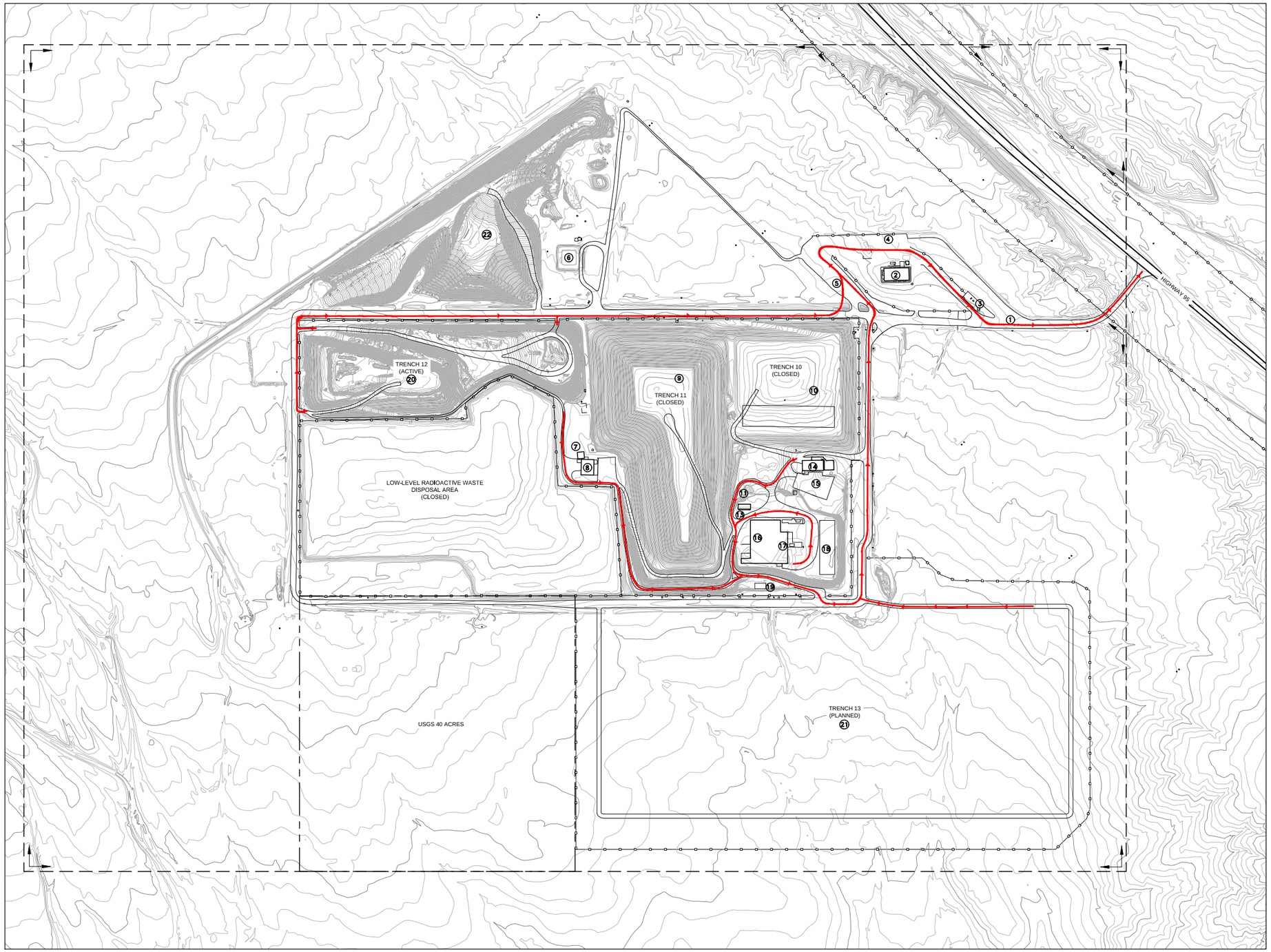
Appendix A

List of Emergency Coordinators

LIST OF EMERGENCY COORDINATORS					
US ECOLOGY – BEATTY, NEVADA					
EMERGENCY COORDINATOR (EC)	**NAME**	**JOB TITLE**	**STREET ADDRESS**	**CONTACT NUMBERS**	
Primary Coordinator	Robert Marchand	Gen Mgr	1225 A Avenue North Beatty, Nevada 89003	Home	775-553-2367
				Cell	702-280-2596
1ST Alternate	Dan Church	OPS Mgr	3100 Prairie Ave. Pahrump, NV 89048	Cell	775-990-9826
2nd Alternate	Josue Partida	CMS Supr	901 2nd St. Beatty, NV 89003	Cell	775-537-5095
3rd Alternate	John Dyer	Env Mgr	1100 N A Ave., #A-7 Beatty, NV 89003	Cell	775-420-2197
4th Alternate	Ronald Browning	Haelth & Safety Mgr	1100 N A Ave., #B-27 Beatty, NV 89003	Cell	775-346-1083

Appendix B

Evacuation Routes Map



1. MAIN SITE ENTRANCE
2. ADMINISTRATION OFFICE
3. SECURITY AND DRIVERS TRAILER
4. INBOUND AND OUTBOUND SCALES
5. PROFILING STATION
6. WATER STORAGE
7. FUEL STORAGE
8. MAINTENANCE SHOP
9. WEATHER STATION AND TRENCH 11 LYSIMETER
10. DRY HAZARDOUS WASTE STORAGE AREA 3
11. OUTDOOR TREATMENT PANS
13. OPERATIONS OFFICE
14. PCB PROCESSING AREA AND STORAGE/PCB TANK FARM
15. REAGENT SOLIDS STORAGE
16. CONTAINER MANAGEMENT AND STORAGE BUILDING
17. INDOOR TREATMENT PANS
18. DRY HAZARDOUS WASTE STORAGE AREA 2
19. EVAPORATION TANK (TRUCK WASH PAD)
20. TRENCH 12 (ACTIVE)
21. TRENCH 13 (PLANNED)
22. SOIL STOCKPILE

- USGS 40 ACRES
- PROPERTY LINE
- SECURITY FENCE
- TORTOISE FENCE
- INTERNAL ROADWAYS
- EVACUATION ROUTE

US ecology

LOCATION: BEATTY, NV 89003

DATE: MARCH 2016

HAZARDOUS WASTE MANAGEMENT FACILITY

EVACUATION PLAN

500 0 500 1000

SCALE: 1"= 500'

Appendix C

Coordination Agreement Letters

Appendix D

List of Emergency Equipment

List of Emergency Equipment (Typical)		
Equipment	**Location**	**Physical Description / Capabilities**
SCBAs	H&S Van, Emergency Response Trailer, Stabilization Change Room, PCB Bldg, & CMS Building Control Room	Face piece covering eyes & air supply of 30 minutes. NIOSH approved. These units are not approved for fire fighting.
Spare Bottles for SCBA	Emergency Response Trailer	Air Supply of 30 minutes
Protective Outer Garments	Health and Safety Storage Room, Stabilization Area, CMS Bldg., PCB Bldg., and Landfill	One-piece coveralls
Gloves	Health and Safety Storage Room, Stabilization Area, CMS Bldg., PCB Bldg., and Landfill	Chemical resistant gloves
Face Shields	PCB Bldg., Laboratory, and Health and Safety Storage Room	Hard plastic shield for protecting eyes from splashes
Booties / Rubber Boots	Health and Safety Storage Room and PCB Bldg.	Water or chemical resistant boots or covers
Fire Extinguishers	Heavy Equipment, Stabilization Area, CMS Bldg., PCB Bldg., and Landfill	Various sizes and types for fighting incipient fires
Overpack Drums	PCB Bldg. and CMS Bldg.	For containing waste, spill residues
Absorbents / Pozzolons	Stabilization Area, PCB Bldg.	These materials are soils or materials for sorption of liquids
Spill Control Pads	PCB Bldg., CMS Bldg & Lab	These materials are for absorbing liquids
Emergency Showers & Eye Wash Units	Various locations	Deliver water for drenching contaminated personnel

Attachment 11

Waste Analysis Plan

WASTE ANALYSIS PLAN

US ECOLOGY NEVADA

March 2010

Revised October 2011

SECTION 8
WASTE ANALYSIS PLAN
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8.1.0 INTRODUCTION

This Waste Analysis Plan (WAP) documents how US Ecology Nevada (USEN[1]) obtains detailed chemical and physical analysis of a representative sample before hazardous wastes are stored, treated or disposed. USEN uses a pre-acceptance process to determine if sufficient information exists, and to determine if the waste can be managed at the facility within permit limits. Pre-acceptance also determines how wastes will be treated and how employee safety will be protected. USEN inspects all incoming waste shipments and, if necessary, analyzes each shipment received at the facility to determine if it matches the identity of the waste specified on the accompanying manifest. In addition, post-treatment testing confirms that wastes meet land disposal restrictions prior to disposal.

This Waste Analysis Plan describes how USEN complies with these responsibilities. Specifically and in accordance with 40 CFR §264.13(b), this plan delineates the following:

- The waste analyses hazardous waste generators supply (Section 8.2.0);
- The sampling methods used to obtain a representative sample of the waste to be analyzed (Section 8.2);
- The parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters [i.e.; how analysis for these parameters will provide sufficient information on the properties of the waste (Section 8.6.6);
- The test methods used to test for these parameters (Section 8.6.6);
- The frequency with which the initial analysis of the waste will be reviewed or repeated to assure the analysis is accurate and up to date (Section 8.4.0 and Section 8.6.7);
- The procedures used to inspect and, if necessary, analyze hazardous waste received on-site to assure it matches the identity of the waste designated on the accompanying manifest or shipping paper, including:
  - (i) the procedures used to determine the identity of waste managed at the facility (Section 8.6.0); and the sampling method used to obtain a representative sample of the waste to be identified (Section 8.2.0)
  - (ii) the procedures used to determine whether a hazardous waste generator or treater has added a biodegradable sorbent to the waste (Section 8.3.0).
  - (iii) The procedures used to document waste movements within the facility prior to off-site shipment or on-site disposal (Section 8.8.0)
  - (IV) The methods used to meet the additional waste analysis requirements for specific waste management methods as specified in 40 CFR §§264.17, 264.314, 264.341, and 268.7 (Section 8.8.0).
  - (V) Since the facility uses no surface impoundments exempted from land disposal restrictions under 40 CFR §268.4(a), no special procedures or schedules are provided for such surface impoundments.

[1] For the purpose of this WAP, "USEN" means any US Ecology Nevada and any other US Ecology laboratory, subsidiary/affiliated laboratory, or designated contract laboratory.

8.2.0 REPRESENTATIVE SAMPLING METHODS

Sampling and analysis are commonly performed by waste generators or their representatives to characterize wastes. Typically, when a waste shipment arrives on-site for treatment, storage, or disposal, a determination has already been made by the generator that the waste is either:

- a listed hazardous waste, as defined in Subpart D of 40 CFR Part 261;
- a characteristic hazardous waste, as defined in Subpart C of 40 CFR Part 261; or
- a solid waste which is not hazardous waste, as defined by 40 CFR §261.4(b).

USEN's instructions for its Waste Product Questionnaire[2] refer generators to 40 CFR Part 261, Appendix I for sampling procedures. This Appendix, in turn, references both ASTM methods and EPA methods. Samples collected using protocols for these types of wastes are considered by EPA to be representative samples.

The generator's waste characterization normally includes an analysis of a representative sample of the waste, however, in some cases, generator knowledge of the waste is sufficient. Waste generators may also provide data originally used to characterize wastes, or provide existing published or documented data on the hazardous waste or data on hazardous waste generated from similar processes. The generator or an independent laboratory (including USEN) may perform analyses using standard test methods (EPA, ASTM, AWWA, or other approved standards) or alternative methods approved in USEN's RCRA permit.

The generator also evaluates the candidate waste for additional characteristics that may exclude the waste from acceptance at USEN and certifies that the waste does not exhibit any of these characteristics. For example, wastes restricted from on-site management (i.e.; pyrophoric wastes) will not be approved for on-site management.

Each WPQ includes a generator certification statement that reads, "I certify under penalty of law that I am familiar with this waste stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, and that all known or suspected hazards have been disclosed. Furthermore, I certify that this form was completed in accordance with the instructions provided."

See Attachment 1 for an example of the WPQ form and related instructions.

8.3.0 PRE-ACCEPTANCE REVIEW

USEN's pre-acceptance review determines whether adequate information is available to determine the acceptability of the waste for on-site management. Waste may be rejected or accepted based on the conditions or limitations of existing permits, the waste's compatibility with other wastes being managed on-site, or the waste's suitability for management utilizing the process options available on-site.

Pre-acceptance review commonly takes place on-site before waste is scheduled for delivery. Pre-acceptance information may also be collected at another US Ecology facility, or upon receipt of the load prior to waste acceptance.

USEN commonly obtains the following information for each new waste stream that is a candidate for on-site management:

- Pertinent chemical and physical data (i.e., waste characteristics) and, when appropriate, information concerning representative sampling methods and certification on the WPQ.
- A representative sample, unless pre-acceptance review determines that a representative sample is not necessary.
- Land Disposal Restriction (LDR) Notification/Certification and/or data, unless data is submitted with each load.

[2] Also commonly known as the "waste profile."

- Other supporting documentation as appropriate, including any information such as a description of the process generating the waste, additional analytical results, Material Safety Data sheets, product ingredients, etc.

The pre-acceptance review identifies the Fingerprint Analyses and any Supplemental Analyses necessary on a sample collected upon receipt of the waste. These additional analyses may be required in order to determine appropriate waste management techniques to be used.

Selected waste management techniques are based on:

- Management methods available;
- Conditions or limitations of existing permits and regulations;
- Capability to manage the waste in a safe and environmentally sound manner;
- WPQ description of the process generating the waste;
- WPQ description of the chemical and physical properties of the waste;
- Any additional documentation supplied by the generator, including information that the waste is subject to a Land Disposal Restriction of 40 CFR Part 268, if appropriate;
- Results of Fingerprint Analyses, if necessary;
- Results of Supplemental Analyses, as appropriate; and
- Management's technical experience and judgment.

The pre-acceptance evaluation concludes with a documented decision regarding the acceptability of the waste and the proposed method of management. Included within the documentation is the required notification to the generator that the waste is approved for management in accordance with the facility's permit and 40 CFR §264.12(b).

Copies of these decisions are sent to the NvDEP for review and for their concurrence, modification or rejection.

USEN maintains copies of generator-supplied and USE-developed information. This information may be accessed electronically or via hard copy.

8.3.1 NDEP RESTRICTED WASTES

Wastes that are identified by NDEP as "Restricted Wastes" are wastes that USEN are not authorized by NDEP to receive, treat, store, dispose of, or otherwise manage. The following steps will be taken to identify and avoid accepting restricted wastes:

- All USEN technical staff authorized to approve profiles will be aware of which wastes are considered restricted. Training will be performed as needed.
- Ask generators for additional analysis or MSDSs if needed.
- Request the assistance of the US Ecology Inc. Radiation Safety Officer for any material that may contain any radiological component.

8.4.0 WASTE PROFILE RE-EVALUATION

A waste profile is re-evaluated if:

- A generator notifies USEN that the process generating the waste has changed;

- 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).

When the waste profile is re-evaluated, the generator may be asked to review and update the current waste profile, to supply a new profile, and/or to submit a sample for analysis. USEN may also develop new data by using a representative sample collected from a load of the waste.

8.5.0 WASTE TREATMENT RECIPE DEVELOPMENT

Typically, USEN requires a representative sample of wastes prior to on-site treatment to develop a treatment recipe. The waste sample is mixed in the lab with various reagents[3] to determine an acceptable mix design (recipe) by which the waste is ultimately treated to meet required standards.

In some cases, it may be appropriate to create mix designs after acceptance, but prior to treatment (e.g., when aggregated batches of mixed wastes streams are treated together). Recipes may also be adjusted after treatment if the recipe is unsuccessful or if more efficient treatment techniques are developed.

Treatment effectiveness is verified prior to disposal except when wastes from the same source are routinely received. In that case, samples are collected from the first batch of treated wastes, and at least once a year, thereafter[4]. Sampling frequency may be increased for waste streams that exhibit significant variable characteristics.

Since wastes are treated based on a developed or verified recipe, they are assumed to meet the applicable treatment standards and may be staged in storage or disposal units pending confirmatory analyses. If post-treatment analyses determine a treated batch does not meet applicable standards, the waste will be retrieved for re-treatment or off-site management.

A treatment certification is issued to the generator for each batch successfully treated.

8.6.0 INCOMING WASTE SHIPMENT INSPECTION AND SAMPLING

Each shipment of waste is inspected, sampled and analyzed before acceptance, except as noted below, to compare the actual waste identity with that determined in the pre-acceptance phase and ensure proper disposition of the waste for treatment, storage, and/or disposal. A USEN-approved subcontractor or a USEN employee operating off-site can provide the analyses required for acceptance. Waste shipments arriving on-site are <u>in process</u> until a final decision regarding waste acceptability is made. At such time, the wastes are accepted or rejected.

Subject to the exceptions below, bulk waste loads are sampled and analyzed, except where large volumes of a single waste stream are received from a single source, (e.g.; a site cleanup, a large volume generator, etc.). In such cases, all shipments are inspected and at least 10% of such loads are sampled and analyzed. Bulk waste may also be sampled in an original bulk container (rail cars, for example) prior to loading into trucks or other containers.

At least 10% of non-bulk containers from each waste stream in the shipment are sampled, except as noted below. Container samples from the same profile may be composited prior to analysis, providing the individual samples have similar physical descriptions. At a minimum, all remaining un-sampled containers are visually inspected for container integrity and labeling. If a significant discrepancy in waste type is discovered, the contents of all of the containers for that waste stream are inspected. In some cases, where the waste stream is consistent but packaged for ease of transportation or disposal (e.g., multiple cubic yard bags containing the same waste), the load may be managed as a bulk load.

8.6.1 Wastes Meeting the Treatment or Technology Standard upon Arrival

USEN frequently receives waste meeting applicable treatment standards that has been treated by the generator, treated by another treatment facility, or verified to meet the

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[3] Typical reagents used on-site include fly ash, portland cement, cement kiln dust, lime, gypsum, water, clays, oxidizers, and carbon, although other treatment reagents may be used, Including other wastes with characteristics appropriate for treatment.

[4] A sample of a treated waste stream may be used during one year to provide the annual verification testing for the following year. If this occurs, waste streams treated before or after this are not affected in any way as a result of the analytical results received or resultant recipe changes. The Lab Manager may change the recipe immediately or upon the new annual period.

standard as initially generated. These shipments must be accompanied by a proper notification and certification or, if determined to meet the standard by USEN, USEN may complete the correct certification. See Attachment 2 for a copy of the LDR Form. This form must include the applicable analytical data or reference to such data, in accordance with 40 CFR §268.7.

These wastes may be analyzed for conformance with the treatment standards during the pre-acceptance review, during the load acceptance review, or when USEN believes the waste may meet the appropriate standard or method.

8.6.2 Wastes Subject to LDRs

Initial waste shipments subject to the Land Disposal Restrictions which require treatment must be accompanied by a one-time notification to USEN of the appropriate treatment standard or prohibition, including any applicable data or reference to such data or documentation which must be met in accordance with 40 CFR §268.7, except as otherwise allowed. See Attachment 3 for a copy of this form.

When verifying that waste has been treated to meet LDR treatment standards, compliance with concentration level standards is based on grab sampling. When there is any uncertainty in achievement of treatment standards, the treated waste is resampled.

8.6.3 Wastes Which Are Not Sampled

Sampling and analysis of some waste materials is not required because the chemical and physical characteristics of the waste are known in sufficient and reliable detail, or the waste has been previously characterized and shipped from another generator, broker or TSDF, or visual inspection of these shipments is sufficient for verification of their identity. USEN may waive incoming waste load sampling and analysis where the pre-acceptance documentation supplies sufficient information to assure compliance with permit conditions and operational constraints, or any of the following conditions exist:

- Obtaining a representative sample poses an unnecessary hazard of acute or chronic exposure of USEN employees to carcinogenic, mutagenic, neoplastigenic, teratogenic, or other hazardous or sensitizing materials;
- The material may react violently with air or moisture;
- The material's odor causes a public nuisance when sampled; or
- A sample cannot be reasonably obtained, such as filter cartridges, tank clean-out sludge (prior to the clean-out), large pieces of contaminated material, or contaminated debris.

In these cases, the shipment will still be inspected for conformance with manifest and pre-acceptance documentation as previously described.

The following types of wastes are typically excluded from sampling and analysis upon receipt:

- Waste contained in a lab-Pack (combination packaging). Combination packaging is defined in 49 CFR §171.8 as "...one or more inner packagings secured in a non-bulk outer packaging" and is subject to the Department of Transportation shipping package requirements of 49 CFR Part 173.
- Commercial products or chemicals: off-specification, outdated, unused, contaminated or banned. This also includes products voluntarily removed from the market place by a manufacturer or distributor.
- "Empty" containers of waste materials, commercial products or chemicals. This applies to portable containers which have been emptied, but which may hold residues of the product, chemical, or containers containing other empty containers. Examples of containers are: tanks, drums, barrels, cans, bags, liners, etc. A container shall be determined "empty" according to the criteria specified at 40 CFR §261.7. These empty containers may be crushed, shredded, or landfilled intact.

- Residue and debris from the cleanup of spills or releases of chemical substances, previously approved wastes, commercial products, or a waste which would otherwise qualify as an exception.
- Waste that is visually identifiable through an inspection process. Examples may include cathode ray tubes, batteries, fluorescent light tubes, filters and filter cartridges, wire or tubing, paper products, metal sheeting and parts, crushed glass, piping, and other debris.
- Demolition wastes. This consists of waste produced from the demolition or dismantling of industrial process equipment or facilities contaminated with chemicals from the process. Knowledge of the process and chemicals used in the process allows characterization of the waste sufficient for safe management.
- Debris as defined at 40 CFR §268.2. These materials will be visually inspected prior to acceptance in order to ensure the waste meets the definition of debris.
- Articles, debris, non-RCRA wastes, equipment and clothing containing or contaminated with polychlorinated biphenyls (PCBs). This includes PCB capacitors, transformers, gloves or aprons from draining operations, empty drums that formerly held PCBs, etc.
- PCB drainings and flushings removed from PCB articles. This includes PCB articles flushed with a substance (e.g. toluene or unused diesel).
- USEN site-generated waste, including hazardous and non-hazardous waste.
- Household hazardous waste, pesticide, waste from small quantity generators, and/or small volume waste streams (<100 tons per year). For these exceptions, the generator will supply USEN with sufficient chemical and physical characteristics information for proper management of the waste.
- Controlled substances regulated by government agencies including drugs and/or materials from clandestine labs.
- Materials designated for storage and trans-shipment off-site. These materials are received for storage and subsequent trans-shipment only and are not otherwise actively managed on-site. If USEN processes a waste previously designated for storage and subsequent trans-shipment, the waste will be subject to the normal pre-approval process prior to on-site processing. For materials received at another regulated company and subsequently shipped to USEN, the other facility may transmit the relevant information to USEN for use in the pre-acceptance or load arrival review programs, as is appropriate.
- Wastes from remedial projects in which the waste characterization is known through a sampling plan that was approved by a federal or state agency (e.g.; CERCLA project) or other well-developed plan.
- Contaminated personnel protective equipment (PPE) (e.g., gloves, tyveks, respirator cartridges).
- Aerosol cans.
- Vitrified, Cemented, and Other Materials Exhibiting High Structural Integrity which are not conducive to sampling. Structural steel, tanks, pipe, cement, glass, empty drums, machinery, equipment, manufactured items, monolithic / cemented materials, and similar materials do not allow for normal sampling protocols. They are inspected and analyzed case-by-case.
- Environmental remediation wastes where a government clean-up agency, generator, or contractor has established a data base and waste characterization information. This information may be used in lieu of pre-acceptance analytical and incoming load analytical information, and the physical appearance screen will be used to confirm material acceptability upon arrival.
- Exempt Radioactive Waste (including NORM, NARM, etc).

8.6.4 SAMPLING METHODS, MATERIALS AND EQUIPMENT

Sampling methods used for specific materials are consistent with those referenced in 40 CFR Part 261, Appendix I. The sampling equipment and procedures described in this

WAP represent USEN's customary sampling protocol for general types of waste materials and containment. Specific waste materials or shipments may require different sampling techniques. For example, if examination indicates strata in the waste, then each layer may be composited in proportion to its estimated volume or analyzed separately. Deviations from the recommended protocol may occur based on waste inspection and testing, and such deviations are consistent with the purposes and practices of this WAP.

The equipment used for different materials is presented in the following table.

Table 1: Sampling Materials and Equipment

Material	Equipment
Extremely viscous liquid	Thief or COLIWASA/tube sampler
Crushed or powdered material	Tube sampler, trier, auger, scoop, or shovel
Soil-like material	Tube sampler, trier, auger, scoop, or shovel
Fly ash-like material	Tube sampler, trier, auger, scoop, or shovel
Containerized liquids	COLIWASA/tube sampler, weighted bottle, cup, bomb, or tank sampling port
Steel or Large Solid Objects (e.g.; tanks, process devices)	Drill

8.6.4.1 Container Sampling

USEN samples various container types, such as drums, tanks, portable transport units (e.g., tote bins, roll-off boxes, lugger boxes), tankers, or dump-type trucks. Sampling devices are selected depending on the size and type of the container and on the specific material involved.

Specific sampling procedures are dependent on both the distribution and the nature of the waste components in the container. Due to these variations, minor modifications may be needed to the recommended sampling procedure in order to obtain a sample. Although preferential sampling devices in Table 1, other devices identified in agency guidance or selected at the Lab Manager's direction may be used.

Methods for sampling small containers (e.g., drums, cartons, & other small units) vary with the nature of the waste. For flowable materials, the sampling device of choice is a Coliwasa or tubing. For non-flowable wastes, a tubing or trier is typically used to obtain a representative sample.

Large containers and tanks of flowable or solid materials may be either stationary or mobile. Liquids may be sampled with Coliwasa, tubing, weighted bottle, or bomb sampler to sample at various depths. Tank sampling may be accomplished through ports or taps located along the side of the tank or sampling through pumps or fittings. These samples may be composited to yield a representative sample. Light, dry powders and granules may be sampled with a scoop, tubing or thief. Heavier solids such as contaminated soils may be sampled by trier, shovel, or by coring with heavy tubing. Tank sediments may be sampled from the bottom-sampling valve when not readily sampled from above.

8.6.5 WASTE MANIFEST REVIEW & DISCREPANCY RESOLUTION

Upon arrival of a waste shipment at USEN, the accompanying manifest is reviewed for completeness and the shipment is inspected for agreement with the manifest information.

Waste is non-conforming if there is a significant discrepancy between the waste shipment and the manifest (as defined in 40 CFR §264.72), unless the discrepancy can be resolved through contact with the waste generator, transporter or broker. Non-conforming wastes may be rejected immediately, or may be re-evaluated for acceptance despite the inconsistency. Changes to the manifest or WPQ may be made with the customer's concurrence or at the customer's request. Any corrections or other changes made to the manifest or WPQ are initialed by the person making the change. Other manifest discrepancies may be corrected or noted on the manifest.

For bulk loads manifested by weight, the load is typically weighed on-site. However, if the scale is out of service, other methods may be employed to estimate the weight of the delivery. These include off-site scales, weight estimation techniques, and using tare weights to calculate approximate net weights. If a significant weight discrepancy is noted, the procedures of 40 CFR §264.72 are employed. For bulk loads manifested by volume, this mechanism is not appropriate as visual estimates are too subjective, settling may occur during transport, liquids are subject to phase separation, and specific gravity calculations can be inaccurate. For piece count deliveries (e.g., vans of containers, etc.), the piece count is confirmed.

Non-conformance is typically conducted upon delivery to the facility or during the load acceptance process. Occasionally, a load is delivered and staged prior to being approved or accepted, or small containers are contained within heat shrink material and cannot be counted prior to breaking the load. In these instances and consistent with 40 CFR §264.71(a)(3), the transporter is given a signed copy of the manifest. If a significant weight or piece count discrepancy is later discovered, USEN will attempt to reconcile the discrepancy. If this cannot be done within 15 days of discovery, notification of the discrepancy will be sent to the NvDEP, along with the steps taken to resolve the discrepancy.

Manifest discrepancies are resolved, if possible, by contacting the generator, transporter, or their representative to obtain the needed information. Entire loads or portions of loads may be rejected (e.g., a bulk load may contain un-profiled or unacceptable[5] materials). The requirements of 40 CFR 262 Subpart B "Manifests" are followed when documenting rejection of waste loads and their return to the generator.

8.6.6 FINGERPRINT TESTING UPON WASTE RECEIPT

USEN inspects waste shipments and conducts fingerprint testing to confirm consistency of received waste with pre–acceptance characterization contained in the Waste Product Questionnaire[6], waste analysis, or other information. The waste characterization on the WPQ provides information concerning the contaminant type and concentration and the nature of the waste.

All incoming wastes are inspected to assure that readily-observable characteristics (color, form, absence or presence of odors, size, etc.) are consistent with pre-acceptance data. Inspectors can also observe whether free liquids are present and determine whether additional fingerprint testing, such as a paint filter test, may be needed.

Fingerprint testing provides general waste identification and confirmation. Results are compared with pre-acceptance information to confirm that the waste is the same.

5 The material may be "unacceptable" due to permit constraints or the inability of the facility to manage the waste..

6 Also commonly referred to as a "waste profile".

Results may be used in conjunction with other waste analyses and information to further identify a waste and/or ensure the type of on-site management chosen is suitable for that particular waste.

Specific fingerprint tests are established during pre-acceptance based on the characteristics of the waste and limits of fingerprint parameter variability. Certain types of waste streams that are not conducive to fingerprint sampling such as debris and solid resins, are not readily sampled and fingerprint testing may be limited to field testing and inspection. Other wastes may need additional testing due to the results of initial tests or due to direct observations.

The following Fingerprint Analyses may be employed:

- **Physical Description** is observed for every waste to determine its general properties (color, physical appearance, texture, presence of absence of odors, presence of free liquids).

- **pH Screen** measures the corrosive nature of the waste, but commonly is not used for organic wastes, oily waste, or other wastes which are not water soluble.

- **Water Reactivity Screen (Water Compatibility)** determines whether the waste has a potential to vigorously react with water to form gases or other byproducts or significant heat. The reactivity screen is not used for wastes that are already in contact with excess water or if sufficient analytical data indicate no potential reactivity with water.

- **Flammability Potential Screen** can be applied to all waste liquids, semi-solids or solids. It is used to identify obvious inconsistencies, such as a flammable sludge substituted for an inert solid. This test is not commonly performed on solids unless the waste contains free liquids.

- **Cyanides Screen** indicates whether the waste can produce hydrogen cyanide gas upon acidification below pH 2. It is not required if the pH of the waste is < 5.0, or if the waste is not water-soluble.

- **Sulfide Screen** indicates whether the waste has the potential to produce hydrogen sulfide gas upon acidification below pH 2. It is not required if the pH of the waste is < 5.0, or if the waste is not water-soluble.

- **Radioactive Screen** ensures compliance with Waste Acceptance Criteria, and is only used when radioactivity may be present.

8.6.7 SUPPLEMENTAL ANALYSES

USEN decides whether supplemental analyses are required for a particular waste based upon:

- Results of Fingerprint Analyses;
- Knowledge of generator and/or waste-generating process;
- Results of pre-acceptance evaluation;
- Waste codes.

Further testing will be conducted if inspections or fingerprint tests indicate inconsistencies with pre-acceptance analytical results, or if there is suspicion the waste composition has changed. USEN may obtain supplemental analyses to:

- Confirm and/or augment existing information on the waste;

- Further identify a waste;
- Further ensure the appropriate treatment, storage, or disposal processes can be used, or
- To provide operations information used for control of these processes.

Supplemental Analyses may also be performed on any waste sample, when necessary for pre-acceptance purposes, if the generator-supplied information is not sufficient.

The parameters which constitute Supplemental Analyses are described in Attachment 4 and primarily consist of standard analytical techniques (recognized by the EPA, ASTM or other authoritative sources).

USEN may use other standard analytical techniques and unique analyses (developed by USEN) to monitor operating equipment or treatment techniques where this use does not impact regulatory decisions or reporting. These supplemental tests are not specifically covered by this WAP. Analyses are not necessarily repeated for sequential activities or movement of the same waste within the facility unless required by changes in the waste's character. Facility Management may waive specific tests if performing the analysis presents a safety hazard in the laboratory (e.g., organic extraction on an oxidizing waste) or if the characteristic or constituent (e.g.; Underlying Hazardous Constituents) are not reasonably expected to be in the waste. See Attachment 5 for a list of other techniques and analyses.

8.7.0 GENERAL SAMPLING AND ANALYSIS ISSUES

8.7.1 Disposition of Samples

Samples of waste streams are commonly disposed in the same fashion as the waste stream itself. If, for example, a waste is approved for stabilization and landfilling, the sample may be stabilized in the lab, in containers, or mix bins and subsequently disposed. Samples received which are unauthorized for management on-site are typically returned to the generator (or representative) or aggregated (under the provisions of 40 CFR §262.34) and sent off-site to an authorized facility for subsequent management. To facilitate sample management, samples approved for the same management processes may be consolidated (e.g.; in tanks or containers) and managed under the provisions of 40 CFR §262.34. Should samples arrive on-site from an identified generator, but without proper waste identification, USEN will contact the generator to identify the associated waste and appropriate hazardous waste codes, if any. If sample identity cannot be resolved, USEN will return the sample to the generator, or manage the sample as on-site generated waste for the characteristics/contaminants reasonably expected.

8.7.2 Sampling Safety Precautions

Per the USEN Health and Safety Plan, personnel wear personal protective equipment. Load receipt personnel check the manifest or other shipping or pre-acceptance information to be familiar with the material and ensure necessary precautions are taken. Pre-acceptance reviews may result in specific requirements for personal protective equipment.

8.7.3 Remote Project Sampling and/or Analysis

In cases where USEN directs off-site sampling or analysis to assure that a waste meets Waste Acceptance Criteria, USEN will instruct off-site personnel in the requirements of this WAP, or a company representative will be present to assure compliance with the WAP.

8.7.4 Interim Processing Loads

Following treatment, the treated waste is sent to the landfill for final disposal and staged in the landfill while applicable verification testing is performed (See Section 8.6.2). A

maximum of 50 batches may be staged at any point in time for up to 10 working days. The staged waste will be isolated within the landfill and stored on a plastic liner.

USEN may submit an extension request to the NvDEP if additional time is needed to verify treatment due to sampling and analysis requirements (e.g., samples need to be sent offsite for analysis and results are not expected within 10 working days).

Wastes treated and staged in an interim processing area that do not meet treatment standards may be re-sampled for verification analyses. If the re-sampling indicates the waste meets treatment standards, the waste will be disposed. If re-sampling indicates the material does not meet treatment standards, the waste will be retrieved for further treatment.

8.7.5 Lab Packs

Lab pack materials which are proposed to be managed on-site are inventoried by the generator, and the inventories are sent to USEN for review for incompatibility of contained materials, land disposal restrictions, and use of appropriate packing materials. Since lab packs contain many small quantities of individual materials, they are not sampled, but are inspected to ensure adequate packing material is present and the drum is at least 90% full (if destined for direct landfilling). If necessary, absorbent material may be added until the lab pack is 90% full.

8.7.6 Management of Residues[7]

Waste residues and other miscellaneous equipment or debris originating from on-site management areas or activities may be characterized and managed as on-site-generated wastes. If on-site-generated waste is derived from a specific identifiable waste, it will be managed in accordance with the approved management conditions for that waste (e.g.; a spill of F002 material is managed as F002). If precluded by permit, regulation, or operational conditions, the waste may be subject to alternative management, as appropriate. Stabilization residues and other treatment residues will carry the waste code(s) of the last waste stream in the unit and will be managed in the same manner. For example, sludges removed from a stabilization mix bin which last received K061 wastes carry the K061 code and must meet appropriate treatment standards for K061 before being land disposed on-site. Residues from truck washouts and equipment washes conducted in the truck wash bay are managed as on-site-generated waste. Residues of “RCRA Empty” containers are not subject to this WAP since they are not solid or hazardous wastes.

8.7.7 Non-Hazardous Wastes (NHW)

USEN accepts wastes which are not hazardous as defined under RCRA. Although non-hazardous wastes are not subject to RCRA WAP requirements, USEN commonly uses this WAP to review non-hazardous wastes. Depending on the specific waste, specific sections of this WAP may not be applicable (e.g.; manifesting provisions, LDR verification of treated wastes, etc.).

8.7.8 Protectively-Characterized Wastes

Generators occasionally “protectively” characterize[8] wastes sent to off-site TSDFs for a variety of reasons (including public relations, legal reasons, financial incentives, lack of characterization experience, or lack of specific analytical information). When USEN collects specific analytical data or possesses process knowledge or regulatory knowledge, USEN may characterize waste during the pre-acceptance or load-arrival

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7 Residues is used to mean solids and liquids contained or generated in sumps, truck & equipment washing units, tank cleaning, equipment maintenance, repair, or replacement, pipes, valves, filters, filter media, miscellaneous samples, and personal protective equipment.

8 “Over-characterization” means the practice of applying waste codes or UHCs to a waste which do not regulatorily apply and/or to the practice of not applying appropriate LDR Notifications or Certifications.

process. Prior to disposal, USEN will complete appropriate notifications, and/or prepare an appropriate LDR Certification, as necessary.

8.8.9 Standard Profiles

"Standard profiles" may be used for waste streams which are similar in physical or chemical characteristics, or which are generated by similar industries or processes. All the wastes within a standard profile are generally managed at USEN using the same treatment process.

USEN reviews generator-provided information to evaluate whether an individual waste stream is sufficiently similar in physical and/or chemical characteristics to an established standard profile. The specific waste stream information must fall within the standard profile representative ranges in order to incorporate that waste stream into the standard profile. Specific candidate waste streams which conform to an existing approved standard profile will be managed under the waste management decision for that standard profile.

8.7.10 Trans-Shipped Wastes

Waste destined for other facilities may not be subject to this WAP since they will be subject to the waste analysis plan of the facility to which they will be forwarded. For proper segregation, the materials will be segregated into areas appropriate to the DOT Hazardous Class. For materials received at another USE affiliate company and subsequently shipped to the USEN Facility, the shipping facility will transmit the relevant analytical information to USEN for use in the pre-acceptance or load arrival review programs, as appropriate.

8.7.11 Changes in Rules and Procedures

References are made throughout this plan to regulations promulgated by the EPA regarding waste analysis requirements for hazardous waste management facilities. These requirements are generally found in 40 CFR Part 260 to 264, which has been adopted by reference in the rules of the Nevada Division of Environmental Protection (NvDEP). Unless otherwise specified herein, cited federal regulations have been adopted by reference by the NvDEP.

If underlying EPA regulations change, USEN will create a written protocol specifying the new testing and frequency requirements prior to processing regulated waste. USEN may also periodically revise the WAP to reflect scientific advances, additional land ban requirements, and/or other pertinent factors. If WAP revisions are necessary because of a new regulatory rule, the revisions will be submitted for NvDEP approval within 90 days of the regulatory change.

8.7.12 Special Procedures for CAMU-eligible Wastes

For each CAMU remediation waste proposed for acceptance, USEN will submit a CAMU-eligible waste stream information package for review by the Director unless exempted as provided below. The information package will document that:

1. The designation of CAMU-eligible waste has been performed by a duly authorized agency,
2. Principal hazardous constituents have been identified and are required to be treated to meet any of the standards referenced in 40 CFR §264.555 (a) (2),
3. The CAMU-eligible waste designating authority provided a public notice and an opportunity for public comment for both the CAMU designation and the placement of the CAMU in an off-site permitted hazardous waste landfill,
4. The approval is specific to a single remediation,
5. All information provided by the person seeking approval (the waste generator) to the duly authorized agency making the CAMU-eligible waste designation has been included in the information package.

For each CAMU-eligible waste proposed for acceptance, the Director and persons on the USEN mailing list will be notified of USEN's intent to receive CAMU-eligible wastes. This notification shall include the source of the remediation waste, the principal hazardous constituents in the waste, and the treatment requirements. The mailing list notice will be sent within 7 days of the request to the Director and will state that comments or objections to receipt of the waste may be submitted to the Director within 15 days of the notice. Proof of the mailing list notification will be submitted to the Director within seven (7) days of completion.

USEN must comply with 40 CFR § 268.7(b)(4) except the certification must state the CAMU wastes meet the referenced treatment requirements at 40 CFR § 264.555(a)(2). USEN must dispose of all CAMU-eligible wastes in permitted landfill cells only. Prior to disposal, all CAMU-eligible wastes must meet one of the standards as discussed in 40 CFR § 264.555(a)(2)(i), (ii), or (iii).

The Permittee may not receive any CAMU-eligible waste until written approval is received from the Director. The Director may take a 30-day review period, with an optional 30-day extension, from the date of receipt of the request from USEN.

The Director may object to USEN's acceptance of any specific CAMU-eligible waste stream. If such written objection is issued, USEN may not receive the specific CAMU-eligible waste stream. If at the end of the review period the Director has not notified USEN that he or she has chosen not to object, USEN may not receive the specific CAMU-eligible waste stream until the objection has been resolved, or USEN obtains a permit modification specifically authorizing receipt of the specific CAMU-eligible waste stream.

As part of the permit modification process, the Director may modify, reduce, or eliminate the notification requirements described in this section of the WAP as they apply to specific categories of CAMU-eligible waste, based on minimal risk.

8.8.0 PROCESS OPERATIONS

During movement of a waste within the facility, changes in its characteristics may occur. These changes may make the waste subject to additional inspection, sampling, and analysis to determine appropriate handling and management of the waste. Many of the analyses needed for the treatment, storage, and/or disposal functions are performed during incoming shipment identification and are not repeated unless waste characteristics may have significantly changed during storage or processing or new information is necessary for the safe management of the waste.

Existing and anticipated process operations at the facility, for which current and periodic sampling and analyses are important, include the following:

- Storage;
- Treatment; and
- Disposal

The analytical procedures for each of these processes are described separately below.

8.8.1 STORAGE

Before waste is placed into storage USEN assesses the compatibility of the waste with wastes already in storage.

8.8.1.1 Liquid Storage / Transfer

Liquid wastes may be transferred from containers to tanks or to trucks although a waste may be fed directly to the designated treatment unit (e.g.; stabilization tank).

Upon arrival, liquid waste will be tested as specified for waste identification and commingled waste compatibility test, as needed to assure safe storage. If a liquid load is exempted from sampling, the waste will be segregated from other wastes based on its compatibility class.

8.8.1.2 Containerized Storage

Using the predominant hazard classification on incoming containerized waste, a storage area will be designated to insure incompatible waste segregation.

Based on the initial hazard determination made by the generator on the WPQ and/or the final identification of the waste shipment, containerized waste will typically be segregated in the following manner: flammable, corrosive, and oxidizing waste materials will be separated from incompatible materials or stored in separate areas. Wastes are separated/maintained in separate storage areas until they are treated, transferred, or disposed.

8.8.1.3 Special Requirements for Ignitable or Reactive Wastes

Ignitable or reactive wastes will not be stored within 15 meters (50') of the facility's property line.

8.8.1.4 Special Requirements for Incompatible Wastes

In accordance with the requirements of 40 CFR §264.177, USEN has developed a program to prevent the accidental commingling or reaction of incompatible wastes, including:

- Proper identification of the hazardous characteristics of incoming waste streams during the waste stream approval process.
- Proper segregation of incompatible materials.
  - Incompatible wastes or materials will not be stored or placed in the same container.
  - Wastes will be segregated according to the designated compatibility group, and placed so as to prevent waste-to-waste contact that could lead to a reaction.
- Proper identification of the potential for incompatible reactions through the waste stream verification program including testing of incoming shipments in accordance with the WAP.

Compatibility between the waste and storage container will be ensured by placing waste into clean containers; or though use of technical knowledge of the waste and containers

8.8.2 TREATMENT AND TRANSFER OPERATIONS

This section discusses analyses for hazardous waste treatment operations and off-site transfer of material for combustion.

The treatment sampling & analysis program may be divided into three (3) segments:

- Pre-treatment analyses confirm the waste falls within the selected process design and allows adjustment of the process operational conditions during treatment;
- In-process analyses to monitor treatment progress; and
- Post-treatment analyses to confirm successful treatment and to determine characteristics of the process effluent. Process residues for LDR wastes will be analyzed and/or evaluated, as needed, against the appropriate treatment standards or prohibitions. Any residues or waste sent off-site for disposal or further management will have the appropriate notification and/or certification form (in accordance with 40 CFR Part 268).

8.8.2.1 Bulking for Treatment or Off-Site Shipment

Wastes aggregated for consolidated treatment or disposal are not typically identified during the pre-acceptance process. Instead, these wastes are typically reviewed upon receipt to determine appropriate waste characterization, and to develop treatment recipes. Liquid or solid wastes may be bulked for on-site consolidated treatment or disposal. In-process analyses may be performed to assure the aggregation/bulking of wastes does not create a reactivity or incompatibility issue and to confirm that the resultant waste is within the receiving facility's specifications. Grab samples are placed in a bucket or other container and observed to ensure no negative reaction occurs. Incidental mixing of wastes that occurs when several waste streams are bulked is not considered blending.

Wastes may also be aggregated for off-site delivery, for example to off-site incinerators, lime kilns or similar operations. Pre-acceptance analyses may be used to determine the acceptability of each waste stream as a fuel or heat source. Additional analysis for heat value may be required for materials destined for supplemental fuel. Bulking in this case typically involves pumping containerized liquid / semi-solid wastes into tank trucks or other large containers for delivery off-site. Wastes containing sufficient heating values for combustion are bulked with other suitable waste. Post-treatment analyses may be used to confirm that the bulked material is suitable for use as fuels or for incineration. The resultant bulked materials are used to provide heat content for combustion processes (either as hazardous waste derived fuel (HWDF) or as a hazardous waste, as applicable.

8.8.2.2 Specific Treatment Technologies

Federal regulations define distinct treatment technologies including Stabilization Chemical Oxidation, Chemical Reduction, Deactivation, Macro/Micro Encapsulation, Neutralization, Adsorption, Bio-remediation, Evaporation, and Precipitation.

Stabilization is defined by 40 CFR §268.42 as stabilization with the following reagents (or waste reagents) or combinations of reagents (1) Portland Cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust). This definition does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set/cure time and/or compressive strength, or to reduce leachability of hazardous constituents. A mix design is developed prior to the treatment of a waste stream. Stabilization may be performed within Mix Bin Tanks or Containers. Treatment may occur with the Container Building, at the outdoor stabilization unit, or within containers. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP

Chemical Oxidation is a treatment process targeted primarily at organic constituents, (e.g., toluene and benzene) but may be used for inorganic constituents as well (e.g., cyanides and heavy metals such as mercury). An organic or inorganic species is oxidized when its respective chemical oxidation

number increases (i.e., the compound loses electrons). Consistent with 40 CFR 268.42, the following oxidation reagents (or waste reagents) may be used in part or whole: (1) Hypochlorite (e.g. bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; and/or (9) other oxidizing reagents of equivalent efficiency. An approved mix design is formulated and tested prior to treatment.

Chemical oxidation may be performed within Mix Bin Tanks or Containers. Treatment is performed to meet EPA LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Chemical reduction or redox occurs when the targeted component/constituent atoms change as a resultant transfer of electrons from one chemical species to another. The chemical oxidation number for the targeted components decreases (i.e., gains electrons) when the target constituents are reduced. Conversely, the reducing reagents used in this process lose electrons or become oxidized. Derived from 40 CFR 268.42, the following reducing reagents (or waste reagents) may be used in whole or part: (1) Sulfur dioxide; (2) sodium, potassium, (salts), or other alkali salts or sulfites, bisulfites, metabisulfites and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency. An approved mix design is formulated and tested prior to treatment.

Chemical reduction may be performed within Mix Bin Tanks or Containers. Treatment is performed to meet EPA LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Deactivation treats wastes that exhibit the characteristics of ignitability, corrosivity, and/or reactivity. Appropriate use of this treatment technology is determined during the pre-acceptance process. A mix design is developed prior to the treatment of the waste stream. Deactivation may be performed within Mix Bin Tanks or Containers. Treatment is performed to meet applicable LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Macro-encapsulation is a confining or immobilization technology used to treat all types of hazardous debris independent of the hazardous constituents involved (with the exception of cyanide-reactive debris). The macro-encapsulation process encases the debris to provide a physical barrier that prevents/minimizes potential leaching of hazardous constituents from the debris. The encapsulating barrier does not need to chemically bond to either the debris or hazardous constituents. Macro-encapsulation is defined in 40 CFR §268.42, Table 1 as the application of surface coating materials such as polymeric organics (e.g., resins, plastics) or use of a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Inert non-waste material, or waste meeting appropriate LDRs, may be used for filler material.

Macro-encapsulation does not require specific testing for LDR constituent standards. This waste is treated at the facility to meet all requirements of the LDR treatment technology standard and is certified by USEI to meet these requirements prior to disposal. Macro-encapsulation may be performed at the Container Building or within the landfill.

The performance standard for the macro-encapsulation technology is described under 40 CFR Part §268.45, Table 1, entitled “Alternative Treatment Standards for Hazardous Debris”. This standard states that “Encapsulating material must completely encapsulate debris and be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other wastes, microbes).”

Micro-encapsulation is confining or immobilization technology that requires the stabilization of the debris with the following types of reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust) (3) Additional reagents (e.g., iron salts, silicates, carbon, polymers or clays) as appropriate.

Micro encapsulation does not require specific testing for LDR constituent standards. Following the treatment process, the micro-encapsulated debris is visually inspected. Micro encapsulation may be conducted in tanks or containers. The performance standard for the micro-encapsulation technology is described under 40 CFR Part §268.45, Table 1 titled “Alternative Treatment Standards for Hazardous Debris”. This standard states that “Leachability of contaminants must be reduced”.

Neutralization renders corrosive matrices non-corrosive. According to 40 CFR 268.42, the following reagents (or waste reagents) in part or whole may be used for neutralization: (1) Acids; (2) Bases; or (3) water (including wastewater's) resulting in a pH greater than 2 but less than 12.5 measured in the aqueous residuals. An approved mix design will be formulated and tested before waste is treated by neutralization.

Neutralization may be performed within Mix Bin Tanks or Containers. Treatment is performed to meet EPA LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Precipitation is the process by which regulated metals and/or inorganics are precipitated out as insoluble precipitates of oxides, hydroxides, carbonates, sulfates, chlorides, fluorides, or phosphates. This process entails adjusting the pH of the waste matrix between 9 and 11. This pH range is ideal for hydroxide precipitation. An alternative to this common standard practice is sulfide precipitation. Sulfide precipitates are less soluble and non-amphoteric (less pH dependent than hydroxyl precipitates). However, caution must be employed to ensure hydrogen sulfide is not released at harmful levels by maintaining a pH greater than 8 throughout the treatment process. Based on 40 CFR 268.42, the following reagents (or waste reagents) are typically used alone or in combination: (1) Lime (i.e., containing oxides and/or hydroxides of calcium and/or magnesium; (2) caustic (i.e., sodium and/or potassium hydroxides; (3) soda ash (i.e., sodium carbonate); (4) sodium sulfide; (5) ferric sulfate or ferric chloride; (6) alum; or (7) sodium sulfate. Additional flocculating, coagulation or similar reagents/processes that pertain to precipitation are not precluded from use. An approved mix design will be tested prior to treatment.

Precipitation may be performed within Mix Bin Tanks or Containers. Treatment is performed to meet EPA LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Adsorption is the use of an appropriate reagent (e.g. activated carbon or treated clay) to remove chemical components from aqueous or compressed gas waste

streams. It is most commonly employed for the removal of organic compounds, although some inorganic constituents are effectively removed as well. This process is achieved through physical, chemical, and electrostatic interactions between the waste material and the adsorbent media. Pursuant to 40 CFR 268.42, Total Organic Carbon can be used as an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues.

Adsorption primarily occurs in tanks, however it may be performed within Mix Bins, Tanks or Containers. Treatment is performed to meet EPA LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Evaporation uses natural conditions to remove water from wastes. At USEN this takes place at the Evaporation Pad. The Evaporation Pad reduces the volume of waste by solar evaporation of liquids. Pre-acceptance evaluation and waste receipt controls are also used as part of the waste process controls. Wastes designated for placement in the Evaporation Pad are predominantly aqueous waste. No wastes subject to 40 CFR Part 264, Subpart CC management requirements are accepted for management in this unit. VOC testing will be performed annually to verify the unit meets Subpart CC requirements.

Bio-remediation is the use of biological mechanisms to destroy, transform, or immobilize environmental contaminants. Bio-remediation is normally conducted in-situ, however, there may be scenarios where it would be conducted within tanks or containers.

8.8.2.3 Treating Wastes Containing Free Liquids

When wastes contain free liquids, the wastes are treated to solidify free liquids. Free liquids may be detected with a paint filter test or by direct observation. If free liquids are observed, USEN can conclude the waste has free liquids without testing. Direct observation may also be used to determine that free liquids are not present and that a paint filter test is not needed.

If free standing liquids are present, they are:

- Removed by vacuum, decanting, or bailing,
- stabilized by placing a stabilization agent in the container,
- stabilized by placing the contents into a stabilization tank and crushing or shredding the container, or
- stabilized by shredding the container and its contents and stabilizing the shredded material.

If free liquids are removed, any remaining material containing free liquids will be stabilized using appropriate reagents prior to landfilling.

Bulk loads, which otherwise do not contain significant quantities of free standing liquids may be “spot stabilized” in order to meet the requirements of 40 CFR §264.314(a)(2) as is sometimes necessary for otherwise dry wastes which have received visible precipitation during transportation. Stabilized wastes will be tested using the Paint Filter Liquids test if the presence of free liquids is still suspected. If free-standing liquids are not observed, then the waste may be landfilled directly. If wastes have been inspected and/or tested and incidental water is detected during the off-loading process, free liquids will be stabilized *in situ.*

For each CAMU-eligible waste proposed for acceptance, the Director and persons on the USEN mailing list will be notified of USEN's intent to receive CAMU-eligible wastes. This notification shall include the source of the remediation waste, the principal hazardous constituents in the waste, and the treatment requirements. The mailing list notice will be sent within 7 days of the request to the Director and will state that comments or objections to receipt of the waste may be submitted to the Director within 15 days of the notice. Proof of the mailing list notification will be submitted to the Director within seven (7) days of completion.

USEN must comply with 40 CFR § 268.7(b)(4) except the certification must state the CAMU wastes meet the referenced treatment requirements at 40 CFR § 264.555(a)(2). USEN must dispose of all CAMU-eligible wastes in permitted landfill cells only. Prior to disposal, all CAMU-eligible wastes must meet one of the standards as discussed in 40 CFR § 264.555(a)(2)(i), (ii), or (iii).

The Permittee may not receive any CAMU-eligible waste until written approval is received from the Director. The Director may take a 30-day review period, with an optional 30-day extension, from the date of receipt of the request from USEN.

The Director may object to USEN's acceptance of any specific CAMU-eligible waste stream. If such written objection is issued, USEN may not receive the specific CAMU-eligible waste stream. If at the end of the review period the Director has not notified USEN that he or she has chosen not to object, USEN may not receive the specific CAMU-eligible waste stream until the objection has been resolved, or USEN obtains a permit modification specifically authorizing receipt of the specific CAMU-eligible waste stream.

As part of the permit modification process, the Director may modify, reduce, or eliminate the notification requirements described in this section of the WAP as they apply to specific categories of CAMU-eligible waste, based on minimal risk.

8.8.0 PROCESS OPERATIONS

During movement of a waste within the facility, changes in its characteristics may occur. These changes may make the waste subject to additional inspection, sampling, and analysis to determine appropriate handling and management of the waste. Many of the analyses needed for the treatment, storage, and/or disposal functions are performed during incoming shipment identification and are not repeated unless waste characteristics may have significantly changed during storage or processing or new information is necessary for the safe management of the waste.

Existing and anticipated process operations at the facility, for which current and periodic sampling and analyses are important, include the following:

- Storage;
- Treatment; and
- Disposal

The analytical procedures for each of these processes are described separately below.

8.8.1 STORAGE

Before waste is placed into storage USEN assesses the compatibility of the waste with wastes already in storage.

8.8.1.1 Liquid Storage / Transfer

Liquid wastes may be transferred from containers to tanks or to trucks although a waste may be fed directly to the designated treatment unit (e.g.; stabilization tank).

Upon arrival, liquid waste will be tested as specified for waste identification and commingled waste compatibility test, as needed to assure safe storage. If a liquid load is exempted from sampling, the waste will be segregated from other wastes based on its compatibility class.

8.8.1.2 Containerized Storage

Using the predominant hazard classification on incoming containerized waste, a storage area will be designated to insure incompatible waste segregation.

Based on the initial hazard determination made by the generator on the WPQ and/or the final identification of the waste shipment, containerized waste will typically be segregated in the following manner: flammable, corrosive, and oxidizing waste materials will be separated from incompatible materials or stored in separate areas. Wastes are separated/maintained in separate storage areas until they are treated, transferred, or disposed.

8.8.1.3 Special Requirements for Ignitable or Reactive Wastes

Ignitable or reactive wastes will not be stored within 15 meters (50') of the facility's property line.

8.8.1.4 Special Requirements for Incompatible Wastes

In accordance with the requirements of 40 CFR §264.177, USEN has developed a program to prevent the accidental commingling or reaction of incompatible wastes, including:

- Proper identification of the hazardous characteristics of incoming waste streams during the waste stream approval process.
- Proper segregation of incompatible materials.
  - Incompatible wastes or materials will not be stored or placed in the same container.
  - Wastes will be segregated according to the designated compatibility group, and placed so as to prevent waste-to-waste contact that could lead to a reaction.
- Proper identification of the potential for incompatible reactions through the waste stream verification program including testing of incoming shipments in accordance with the WAP.

Compatibility between the waste and storage container will be ensured by placing waste into clean containers; or though use of technical knowledge of the waste and containers

8.8.2 TREATMENT AND TRANSFER OPERATIONS

This section discusses analyses for hazardous waste treatment operations and off-site transfer of material for combustion.

The treatment sampling & analysis program may be divided into three (3) segments:

- Pre-treatment analyses confirm the waste falls within the selected process design and allows adjustment of the process operational conditions during treatment;
- In-process analyses to monitor treatment progress; and
- Post-treatment analyses to confirm successful treatment and to determine characteristics of the process effluent. Process residues for LDR wastes will be analyzed and/or evaluated, as needed, against the appropriate treatment standards or prohibitions. Any residues or waste sent off-site for disposal or further management will have the appropriate notification and/or certification form (in accordance with 40 CFR Part 268).

8.8.2.1 Bulking for Treatment or Off-Site Shipment

Wastes aggregated for consolidated treatment or disposal are not typically identified during the pre-acceptance process. Instead, these wastes are typically reviewed upon receipt to determine appropriate waste characterization, and to develop treatment recipes. Liquid or solid wastes may be bulked for on-site consolidated treatment or disposal. In-process analyses may be performed to assure the aggregation/bulking of wastes does not create a reactivity or incompatibility issue and to confirm that the resultant waste is within the receiving facility's specifications. Grab samples are placed in a bucket or other container and observed to ensure no negative reaction occurs. Incidental mixing of wastes that occurs when several waste streams are bulked is not considered blending.

Wastes may also be aggregated for off-site delivery, for example to off-site incinerators, lime kilns or similar operations. Pre-acceptance analyses may be used to determine the acceptability of each waste stream as a fuel or heat source. Additional analysis for heat value may be required for materials destined for supplemental fuel. Bulking in this case typically involves pumping containerized liquid / semi-solid wastes into tank trucks or other large containers for delivery off-site. Wastes containing sufficient heating values for combustion are bulked with other suitable waste. Post-treatment analyses may be used to confirm that the bulked material is suitable for use as fuels or for incineration. The resultant bulked materials are used to provide heat content for combustion processes (either as hazardous waste derived fuel (HWDF) or as a hazardous waste, as applicable.

8.8.2.2 Specific Treatment Technologies

Federal regulations define distinct treatment technologies including Stabilization Chemical Oxidation, Chemical Reduction, Deactivation, Macro/Micro Encapsulation, Neutralization, Adsorption, Bio-remediation, Evaporation, and Precipitation.

Stabilization is defined by 40 CFR §268.42 as stabilization with the following reagents (or waste reagents) or combinations of reagents (1) Portland Cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust). This definition does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set/cure time and/or compressive strength, or to reduce leachability of hazardous constituents. A mix design is developed prior to the treatment of a waste stream. Stabilization may be performed within Mix Bin Tanks or Containers. Treatment may occur with the Container Building, at the outdoor stabilization unit, or within containers. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP

Chemical Oxidation is a treatment process targeted primarily at organic constituents, (e.g., toluene and benzene) but may be used for inorganic constituents as well (e.g., cyanides and heavy metals such as mercury). An organic or inorganic species is oxidized when its respective chemical oxidation

number increases (i.e., the compound loses electrons). Consistent with 40 CFR 268.42, the following oxidation reagents (or waste reagents) may be used in part or whole: (1) Hypochlorite (e.g. bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; and/or (9) other oxidizing reagents of equivalent efficiency. An approved mix design is formulated and tested prior to treatment.

Chemical oxidation may be performed within Mix Bin Tanks or Containers. Treatment is performed to meet EPA LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Chemical reduction or redox occurs when the targeted component/constituent atoms change as a resultant transfer of electrons from one chemical species to another. The chemical oxidation number for the targeted components decreases (i.e., gains electrons) when the target constituents are reduced. Conversely, the reducing reagents used in this process lose electrons or become oxidized. Derived from 40 CFR 268.42, the following reducing reagents (or waste reagents) may be used in whole or part: (1) Sulfur dioxide; (2) sodium, potassium, (salts), or other alkali salts or sulfites, bisulfites, metabisulfites and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency. An approved mix design is formulated and tested prior to treatment.

Chemical reduction may be performed within Mix Bin Tanks or Containers. Treatment is performed to meet EPA LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Deactivation treats wastes that exhibit the characteristics of ignitability, corrosivity, and/or reactivity. Appropriate use of this treatment technology is determined during the pre-acceptance process. A mix design is developed prior to the treatment of the waste stream. Deactivation may be performed within Mix Bin Tanks or Containers. Treatment is performed to meet applicable LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Macro-encapsulation is a confining or immobilization technology used to treat all types of hazardous debris independent of the hazardous constituents involved (with the exception of cyanide-reactive debris). The macro-encapsulation process encases the debris to provide a physical barrier that prevents/minimizes potential leaching of hazardous constituents from the debris. The encapsulating barrier does not need to chemically bond to either the debris or hazardous constituents. Macro-encapsulation is defined in 40 CFR §268.42, Table 1 as the application of surface coating materials such as polymeric organics (e.g., resins, plastics) or use of a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Inert non-waste material, or waste meeting appropriate LDRs, may be used for filler material.

Macro-encapsulation does not require specific testing for LDR constituent standards. This waste is treated at the facility to meet all requirements of the LDR treatment technology standard and is certified by USEI to meet these requirements prior to disposal. Macro-encapsulation may be performed at the Container Building or within the landfill.

The performance standard for the macro-encapsulation technology is described under 40 CFR Part §268.45, Table 1, entitled “Alternative Treatment Standards for Hazardous Debris”. This standard states that “Encapsulating material must completely encapsulate debris and be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other wastes, microbes).”

Micro-encapsulation is confining or immobilization technology that requires the stabilization of the debris with the following types of reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust) (3) Additional reagents (e.g., iron salts, silicates, carbon, polymers or clays) as appropriate.

Micro encapsulation does not require specific testing for LDR constituent standards. Following the treatment process, the micro-encapsulated debris is visually inspected. Micro encapsulation may be conducted in tanks or containers. The performance standard for the micro-encapsulation technology is described under 40 CFR Part §268.45, Table 1 titled “Alternative Treatment Standards for Hazardous Debris”. This standard states that “Leachability of contaminants must be reduced”.

Neutralization renders corrosive matrices non-corrosive. According to 40 CFR 268.42, the following reagents (or waste reagents) in part or whole may be used for neutralization: (1) Acids; (2) Bases; or (3) water (including wastewater's) resulting in a pH greater than 2 but less than 12.5 measured in the aqueous residuals. An approved mix design will be formulated and tested before waste is treated by neutralization.

Neutralization may be performed within Mix Bin Tanks or Containers. Treatment is performed to meet EPA LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Precipitation is the process by which regulated metals and/or inorganics are precipitated out as insoluble precipitates of oxides, hydroxides, carbonates, sulfates, chlorides, fluorides, or phosphates. This process entails adjusting the pH of the waste matrix between 9 and 11. This pH range is ideal for hydroxide precipitation. An alternative to this common standard practice is sulfide precipitation. Sulfide precipitates are less soluble and non-amphoteric (less pH dependent than hydroxyl precipitates). However, caution must be employed to ensure hydrogen sulfide is not released at harmful levels by maintaining a pH greater than 8 throughout the treatment process. Based on 40 CFR 268.42, the following reagents (or waste reagents) are typically used alone or in combination: (1) Lime (i.e., containing oxides and/or hydroxides of calcium and/or magnesium; (2) caustic (i.e., sodium and/or potassium hydroxides; (3) soda ash (i.e., sodium carbonate); (4) sodium sulfide; (5) ferric sulfate or ferric chloride; (6) alum; or (7) sodium sulfate. Additional flocculating, coagulation or similar reagents/processes that pertain to precipitation are not precluded from use. An approved mix design will be tested prior to treatment.

Precipitation may be performed within Mix Bin Tanks or Containers. Treatment is performed to meet EPA LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Adsorption is the use of an appropriate reagent (e.g. activated carbon or treated clay) to remove chemical components from aqueous or compressed gas waste

streams. It is most commonly employed for the removal of organic compounds, although some inorganic constituents are effectively removed as well. This process is achieved through physical, chemical, and electrostatic interactions between the waste material and the adsorbent media. Pursuant to 40 CFR 268.42, Total Organic Carbon can be used as an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues.

Adsorption primarily occurs in tanks, however it may be performed within Mix Bins, Tanks or Containers. Treatment is performed to meet EPA LDR standards. Sampling, analysis verification of the treatment effectiveness and frequency of testing follows the guidelines presented in this WAP.

Evaporation uses natural conditions to remove water from wastes. At USEN this takes place at the Evaporation Pad. The Evaporation Pad reduces the volume of waste by solar evaporation of liquids. Pre-acceptance evaluation and waste receipt controls are also used as part of the waste process controls. Wastes designated for placement in the Evaporation Pad are predominantly aqueous waste. No wastes subject to 40 CFR Part 264, Subpart CC management requirements are accepted for management in this unit. VOC testing will be performed annually to verify the unit meets Subpart CC requirements.

Bio-remediation is the use of biological mechanisms to destroy, transform, or immobilize environmental contaminants. Bio-remediation is normally conducted in-situ, however, there may be scenarios where it would be conducted within tanks or containers.

8.8.2.3 Treating Wastes Containing Free Liquids

When wastes contain free liquids, the wastes are treated to solidify free liquids. Free liquids may be detected with a paint filter test or by direct observation. If free liquids are observed, USEN can conclude the waste has free liquids without testing. Direct observation may also be used to determine that free liquids are not present and that a paint filter test is not needed.

If free standing liquids are present, they are:

- Removed by vacuum, decanting, or bailing,
- stabilized by placing a stabilization agent in the container,
- stabilized by placing the contents into a stabilization tank and crushing or shredding the container, or
- stabilized by shredding the container and its contents and stabilizing the shredded material.

If free liquids are removed, any remaining material containing free liquids will be stabilized using appropriate reagents prior to landfilling.

Bulk loads, which otherwise do not contain significant quantities of free standing liquids may be “spot stabilized” in order to meet the requirements of 40 CFR §264.314(a)(2) as is sometimes necessary for otherwise dry wastes which have received visible precipitation during transportation. Stabilized wastes will be tested using the Paint Filter Liquids test if the presence of free liquids is still suspected. If free-standing liquids are not observed, then the waste may be landfilled directly. If wastes have been inspected and/or tested and incidental water is detected during the off-loading process, free liquids will be stabilized *in situ.*

8.8.2.2.5 Treating Wastes to an Approved Delisting Requirement

Wastes treated to an approved delisting requirement shall be sampled and analyzed in accordance with the specific delisting requirements. Such sampling and analysis may be documented by the regulated delisting facility / activity.

8.8.2.2.4 Universal Waste

USEN is a Destination Facility[9] for Universal Waste. Universal Waste managed at a destination facility is subject to all applicable requirements of 40 CFR Parts 264, 265, 266, 268, 270, and 124.

8.8.2.2.5 Hazardous Debris Treatment

USEN manages RCRA Hazardous debris according to the treatment standards specified in 40 CFR Part 268.45. As stated in 40 CFR Part 268.2:

"Debris means solid material exceeding a 60 mm particle size that is intended for disposal and that is: A manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: Any material for which a specific treatment standard is provided in Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; Process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and Intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by Sec. 268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection."

RCRA Hazardous Debris is debris that contains a hazardous waste specified in 40 CFR Part 261. The land disposal restrictions (LDR) of Part 268 require that certain wastes meet treatment standards before land disposal. Treatment standards are either concentration-based or technology-based. A waste with a concentration-based standard may be treated to meet LDR using any effective treatment method (except impermissible dilution). A technology-based standard requires treatment by the specified technology. Appropriate technologies for treatment of hazardous waste are identified as "Alternative Treatment Standards."

40 CFR Part 268.45 outlines alternative treatment standards for hazardous debris. If a waste stream meets the debris definition, it may be treated using a technology based treatment standard, and land disposed in a Subtitle C landfill. Technology based treatment standards authorized for debris treatment include, extraction, destruction, and immobilization technologies. USEN currently performs the following immobilization treatment for hazardous debris:

Microencapsulation – As defined in 40 CFR Part 268.45, Table 1, microencapsulation is "Stabilization of the debris with the following reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) Portland cement; or (2) lime/ pozzolans (e.g., fly ash and cement kiln dust). Reagents (e.g., iron salts, silicates, and clays) may be added to enhance the set/cure time and/or compressive strength, or to reduce the leachability of the hazardous constituents."

Microencapsulation treatment is performed in the indoor or outdoor stabilization unit.

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[9] As defined at 40 CFR §273.9.

Macroencapsulation – As defined in 40 CFR Part 268.45, Table 1 macroencapsulation is "Application of surface coating materials such as polymeric organics (e.g., resins and plastics) or use of a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media."

In some cases, it is advantageous to macroencapsulate debris subject to this standard in the landfill. The debris is placed in a suitable final location within the landfill, and macro-encapsulation is performed in-place with the selected reagent(s) or materials (e.g.; HDPE, LDPE, Portland cement, etc).

Hazardous debris that has been treated by immobilization technologies remains hazardous, but meets the alternative treatment standards. Immobilized hazardous debris is disposed in the landfill.

8.8.3 LANDFILL DISPOSAL

USEN's sampling & analyses program is an integral part of this phase of operation as the results serve to evaluate compliance with permit constraints and land disposal restrictions, and determine safety constraints. Wastes destined for direct landfill disposal generally require only pre-disposal analyses. Wastes to be landfilled are typically subject to the Fingerprint Analyses for pre-acceptance samples and incoming waste shipments.

8.9.0 QUALITY ASSURANCE/QUALITY CONTROL

The following quality assurance/quality control (QA/QC) information for this facility is being provided as required by 40 CFR §270.30(e) and in accordance with the following EPA guidance documents:

- *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846*, Third Edition, Final Update I, U.S. EPA, Office of Solid Waste, Washington, DC, July 1992, Chapter One, as updated
- *Handbook for Analytical Quality Control in Water and Wastewater Laboratories,* EPA 600/4-79-019, March 1979, US Environmental Protection Agency (USEPA), Environmental Monitoring and Support Laboratory (EMSL), Cincinnati, OH..

Quality protocols are applicable to both sampling and analytical techniques. This section does not provide specific QA/QC performance standards for individual sampling and analysis techniques. Such specifics are defined in the USEN Laboratory QA/QC Plan The specific performance standards are dynamic and are revised as warranted to reflect technological advances in sampling and analytical techniques. These performance standards are described in policies maintained and used at USEN. USEN has developed a program of analytical quality practices and procedures to ensure that precision and accuracy are maintained. These programs include use of control standards, duplicates, spikes, and blanks. Third party laboratories employed by USEN demonstrate quality control practices that are comparable to USEN's practices. Good laboratory practices which encompass sampling, sample handling, housekeeping and safety are required by specific USEN procedures.

Sampling and analytical quality practices help ensure the data obtained are precise and accurate for the waste stream being sampled. The analytical results are used by facility management to decide whether or not to accept a particular waste and, upon acceptance, to determine the appropriate method of treatment, storage, and disposal. Results are also important to ensure that wastes are managed properly by the facility and that incompatible wastes are not inadvertently combined. The quality of these results are as important as the results themselves. Thus, the quality of the analytical data, the thoroughness and care with which the sampling and analyses are performed and reported, provides an important basis for day-to-day operational decisions.

ATTACHMENT 1

WPQ Form and Instructions

Disclaimer

This information was prepared by American Ecology Corporation. It is not legal advice, and may not be current. AEC is not a law firm, nor does it provide legal advice on specific State and Federal regulatory interpretations. Therefore, this information does not create, expressly or impliedly, an attorney-client relationship. This information is not a substitute for legal advice from an attorney licensed in the reader's state or country. AEC is not responsible for actions taken or not taken as a result of this information, nor for any errors or omissions it may contain. Hazardous waste regulations are lengthy and complex, and this guidance is not intended to define all hazardous waste generator and disposal scenarios. For further guidance, please use the following link to access the Code of Federal Regulations: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=%2Findex.tpl

Introduction

This guidance document helps customers prepare the US Ecology (USE) Waste Product Questionnaire (WPQ) that is used for waste stream review. A current copy of the WPQ is available from US Ecology's Customer Service Representatives or in electronic form from American Ecology's website at (www.americanecology.com). For specific waste acceptance questions, please contact US Ecology's Customer Service team at one of the locations below:

US Ecology - Nevada	**US Ecology- Idaho**	**US Ecology- Texas**
PO Box 578	PO Box 400	PO Box 307
Hwy 95, 11 mi. South	20400 Lemley Road	3.5 mi. S. on Petronila Rd.
Beatty, NV. 89003	Grand View, ID. 83624	Robstown, TX. 78380
T- (800) 239-3943	T- (800) 274-1516	T- (800) 242-3209
T- (775) 553-2203	T- (208) 834-2275	T- (361) 387-3518
F- (775) 553-2742	F- (208) 834-2919	F- (361) 387-0794

Section A- Customer Information:

Provide the Generator's name, facility address, and the mailing address (if different from facility address). Provide a technical contact name and telephone number for technical inquiries and resolution of off-spec (non-conforming waste) loads. Identify generator status as Industrial or Non-industrial if shipping waste to Texas. If the waste is state regulated (for example, Cal-Haz), provide the state EPA ID number.

Use 40 CFR § 261.5 and § 262.44 to determine EPA generator status. If the material is a RCRA hazardous waste, provide the Generator's EPA status (e.g. CESQG, SQG, LQG) and EPA ID number. Include the State EPA ID number if applicable. Texas Class 1 industrial non-hazardous wastes must have both EPA and Texas State ID numbers. An EPA ID number is not required for Conditionally Exempt Small Quantity Generators (CESQG) or for non-RCRA and/or non-hazardous wastes. Please use "N/A" for EPA ID numbers for Non Regulated/Non RCRA material and "CESQG" for Conditionally Exempt Small Quantity Generators.

Include the customer's National Industry Classification Code (NAICS). The following link provides the most current code list: http://www.census.gov/epcd/www/naics.html

If the billing company is different from the customer, provide the billing/broker information. If you wish electronic invoices, please provide the appropriate email address.

Section B- Shipping Description

If the waste is not a "hazardous material" per Department of Transportation rules, enter "Non-DOT Regulated Waste Material"

If the waste is a hazardous material per DOT and RCRA regulations[10], please:

1. Provide the Proper Shipping Name that will appear on the manifest[11].
2. Provide the Hazard Class per DOT regulations.
3. Provide the UN or NA number per DOT regulations.
4. Provide the packing group per DOT regulations
5. Provide the reportable quantity (RQ), per DOT regulations, if applicable.

For all wastes:

6. Provide the container type(s) that will be used for shipments. Provide an estimated annual quantity and size of container in tons, yards, gallons, etc. If estimates are not known, please write "unknown".
7. Provide estimated frequency [12] of waste shipments.

Section C- General Material & Regulatory Information:

1. Provide the common name for this waste (e.g. lead contaminated soil, bag house dust, etc.).
2. Describe the process that generated the waste, include additional sheets as necessary. Please provide as much information as possible to enable US Ecology to identify safety hazards and determine if this process is specifically "listed" under RCRA, or if the waste may contain characteristic wastes[13].
3. Describe the physical appearance of the waste (e.g., soil with scrap metal) to enable US Ecology to perform a visual confirmation.[14]
4. Describe any odor that the waste may have.
5. Enter the source of knowledge used to determine the waste's regulatory status[15]. Check all boxes that apply. Please attach the appropriate information, such as lab results and/or Material Safety Data Sheets (MSDS).

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[10] Refer to the Department of Transportation regulations found in 49 CFR §105 through §180, and RCRA 40 CFR § 262, Subpart B- Manifesting

[11] Refer to 49 CFR §172.101- Hazardous Materials Table, and 49 CFR §172.101 Appendix A for reportable quantities (RQ's).

[12] This information enables USE to determine if the profile will need to be renewed on its anniversary date, which USE may be required to do by the facility permit.

[13] Refer to 40 CFR §261- Identification and Listing of Hazardous Waste, and §262 for Standards Applicable to Generators of Hazardous Waste

[14] Any material that does not reasonably match the physical description will be placed on hold and off-loading delayed while US Ecology contacts the broker/generator to resolve the discrepancy.

[6] Refer to 40 CFR §262.11- Hazardous Waste Determinations.

Notes on Other Information in Section C

- 40 CFR §264.1080 and §265.1080- Subpart CC regulate waste material greater than 500 ppmw VOC's managed in tanks, containers and surface impoundments.
- 40 CFR §61.340 subpart FF clean air rules contain the Benzene NESHAP regulations. Waste generated from chemical manufacturing, coke-by-product recovery plants, petroleum refineries or treaters of such waste are subject to subpart FF requirements.
- US EPA waste codes are found in 40 CFR Part 261-Identification And Listing Of Hazardous Waste
- 40 CFR §268 covers Land Disposal Restrictions. If wastes are subject to LDRs, please provide a completed LDR form, which is available from your customer service representative or on-line at (www.americanecology.com)
- 40 CFR §268.2 defines US EPA's "Treatment sub-categories" for wastes requiring LDR treatment.
- 40 CFR §268.2 and §268.40- Treatment Standards for Hazardous Wastes define "Underlying Hazardous Constituents" (UHCs).
- US EPA defines "treatment" of hazardous waste in 40 CFR §260.10 – Definitions.
- Subpart XX standards apply to ethylene production facilities
- 40 CFR §268.2(k) provides EPA's definition of soils subject to the LDRs under 40 CFR §268.49- Alternate LDR Treatment Standards for Contaminated Soils[16].
- For form codes, source codes and management codes, see EPA's Hazardous Waste Report Instructions and Forms at: http://www.epa.gov/epaoswer/hazwaste/data/br05/forms.htm

Section D- Material Composition (Physical/Chemical)

Describe the physical nature of the material and identify important chemical constituents. For example, if a waste is primarily soil and debris and is contaminated with gasoline, then describe the percentage and range of soil and debris and quantify the concentrations of gasoline compounds measured in the mixture.

The description should be as informative as possible, for example "brown, clay soil" and "debris such as PPE, rocks, wood, metal, and pipes." The sum of the percentages must equal or exceed 100%.

Chemical concentrations must include appropriate units of measure and differentiate TCLP results from Total results. List the typical value or range of concentrations. For example: Benzene "typical value"- 50 mg/l Total and range 30-100. If additional space is needed, please attach a list. Please list all TRI reportable components.

Sections E- Does the waste exhibit or contain the following:

- The EPA classifies oxidizers with an EPA waste code of D001. The correct DOT reference for oxidizers is 49 CFR §173.127. In general if the material has a DOT hazard class of 5.1, it is an EPA waste code of D001.
- Is the waste explosive?* See 40 CFR §261.23

[16] Wastes may be directly disposed if all the constituents are within 10 times the value found in the Universal Treatment Standard. In addition PCBs alone or in combination with other Halogenated Organic Compounds (Appendix III in 40 CFR §268) may be disposed without treatment if less than 1,000 ppm. See §268.32 - Soils Containing Metals And Containing PCB's - for guidance.

- Does the waste contain organic peroxide?**
- Is the waste shock sensitive?* See 40 CFR §261.23
- Does the waste contain tires? *
- Is the pyrophoric?* See 40 CFR §261.21 and 23
- Is the waste Radioactive? **
- Is the waste Exempt radioactive material? **
- Does the waste contain Halogenated Organic Compounds? See §268 Appendix III.
- Does the waste contain reactive sulfides? If "Yes" provide the concentration in ppm- See 261.23
- Does the waste contain reactive cyanides? If "Yes" provide the concentration in ppm-. See 261.23. If the material contains reactive cyanides that cause the material to be classified as waste code D003, then the amenable portion of the cyanides will need to be determined. Amenable cyanides are amenable to treatment by chlorination. Prior to land disposal, both the total and the amenable cyanides must meet the LDR treatment standards (i.e. 590 ppm and 30 ppm, respectively).
- Is the waste reactive to air or water?* See 40 CFR 261.23
- Is the waste thermally unstable?* See 40 CFR 261.21 and 23
- Is the waste TSCA PCB regulated? ***
- Is the waste medical/infectious? *
- Are there compressed gasses? ****

***** If the answer to this question is "Yes," please contact your customer service representative for guidance.
****** If the answer to this question is "Yes" and you are shipping to US Ecology's Idaho facility, please complete the Waste Acceptance Criteria (WAC) addendum and submit to your customer service representative for approval.
******* Consult your US Ecology customer service representative for guidance on handling RCRA/TSCA wastes.
******** Generally cylinders containing compressed gasses are not acceptable at US Ecology facilities. However empty cylinders that no longer have an intact valve may be acceptable. Different states regulate "aerosol cans" differently. Please contact your customer service representative for guidance.

Section F- Physical Properties:

1. Is the waste flashpoint <140^0 F? See 40 CFR §261.2 If "Yes", provide the flash point.
2. Provide the typical pH range. See 40 CFR §261.22
3. If the material is a solid, determine whether or not the material has the potential for the presence of incidental liquids due to transport (rain, etc.) or other reasons.
4. Does the waste pass the paint filter test when shipped?

Section G- Certification:

If the material is:

- non-RCRA and may be disposed of without further treatment (assume non-RCRA liquids are solidified prior to landfill) mark the box "Yes" In Texas a non-RCRA liquid industrial waste requires "treatment" prior to land disposal; or
- a restricted waste meeting LDR, mark the box "Yes"; and submit the appropriate LDR signed certification with the first shipment.
- A restricted waste needing treatment prior to landfill, mark the box "No" and submit the appropriate LDR.

ATTACHMENT 2

Land Disposal Restriction (LDR) CERTIFICATION FORM

ATTACHMENT 3

LDR FORM

IDENTIFIES TREATMENT NEEDED

ATTACHMENT 4

SUPPLEMENTAL ANALYSES

Supplemental Analyses identify wastes, provide safety information, and/or provide process control information. The results of these analyses provide additional confidence concerning the proper management methods. Most of the parameters, which constitute the Supplemental Analyses use the most recent standard analytical techniques recognized by EPA, ASTM and other authoritative sources or have been developed by US Ecology (USE) through its operating experience for general waste identification and/or proper waste management. Standard supplemental analytical parameters are identified in the following table; the referenced method or equivalent standard method will be used for analyses of these parameters.

Sample Work Up Techniques:	
Method	**Reference**
General Extractions	
EP Toxicity	1-1310A
TCLP	1-1311
Metals Acid Digestion	
Flame atomic absorption spectroscopy (AAS) or inductively coupled plasma spectroscopy (ICP)	1-3005, 3010
Microwave assisted	1-3015, 2-3030, 3-D4309, D5258
Graphite furnace atomic absorption spectroscopy (GFDAA)	1-3020
Oils, greases, or waxes	1-3031
Dissolution procedure for oils, greases, waxes	1-3040
Sludges, soils, and oils	1-3050
Microwave assisted	1-3051
Alkaline digestion	1-3060
Parr acid bomb digestion	3-E886, E926
Organic Extractions and Cleanups	
Extraction Procedure for Oily Wastes	1-1330
Organic Extraction and Sample Preparation	1-3500
Waste Dilution	1-3580, 3585
Separatory funnel liquid-liquid extraction	1-3510
Continuous liquid-liquid extraction	1-3520
Soxhlet extraction	1-3540, 3541
Sonication extraction	1-3550
Purge and Trap	1-5030
Solid phase extraction (SPE)	1-3535
Hexadecane Extraction and Screening of purgeable organics	1-3820
Alumina cleanup	1-3610, 3611
Florisil cleanup	1-3620
Silica gel cleanup	1-3630
Gel-permeation cleanup	1-3640
Acid-base partition cleanup	1-3650
Sulfur cleanup	1-3660
Sulfuric acid / permanganate cleanup	1-3665
Inorganic analytical methods:	
Inductively coupled plasma atomic emission spectroscopy	1-6010, 6020
Antimony	
Atomic absorption, direct aspiration method	1-7040, 4-204.1
Atomic absorption, furnace method	1-7041, 4-204.2
Arsenic	
Atomic absorption, furnace method	1-7060, 4-206.2

Sample Work Up Techniques:		
	Method	**Reference**
	Atomic absorption, gaseous hydride method	1-70614-206.3
	Barium	
	Atomic absorption, direct aspiration method	1-7080, 4-208.1
	Atomic absorption, furnace method	1-7081, 4-208.2
	Beryllium	
	Atomic absorption, direct aspiration method	1-70904-210.1
	Atomic absorption, furnace method	1-7091, 4-210.2
	Cadmium	
	Atomic absorption, direct aspiration method	1-7130, 4-213.1
	Atomic absorption, furnace method	1-7131, 4-213.2
	Calcium	
	Atomic absorption, direct aspiration method	1-7130, 4-213.1
	Atomic absorption, furnace method	1-7131, 4-213.2
	Chromium	
	Atomic absorption, direct aspiration method	1-7190, 4-218.1
	Atomic absorption, furnace method	1-7191, 4-218.2
	Hexavalent chromium: Co-precipitation	1-7195
	Hexavalent chromium: Colorimetric	1-7196, 2-3500CrD
	Hexavalent chromium: Chelation-extraction	1-7197, 4-218.4
	Hexavalent chromium: Diff. phase polarography	1-7198
	Copper	
	Atomic absorption, direct aspiration method	1-7210, 4-220.1
	Atomic absorption, furnace method	1-7211, 4-220.2
	Iron	
	Atomic absorption, direct aspiration method	1-7380, 4-236.1
	Atomic absorption, furnace method	1-7381, 4-236.2
	Phenanthroline method (ferrous)	2-3500FeD
	Lead	
	Atomic absorption, direct aspiration method	1-7420, 4-239.1
	Atomic absorption, furnace method	1-7421, 4-239.2
	Magnesium	
	Atomic absorption, direct aspiration method	1-7450, 4-242.1
	Manganese	
	Atomic absorption, direct aspiration method	1-7460, 4-243.1
	Atomic absorption, furnace method	1-7461, 4-243.2
	Mercury (manual cold-vapor technique	
	In liquid waste	1-7470
	In solid or semisolid waste	1-7471
	Nickel	
	Atomic absorption, direct aspiration method	1-7520, 4-249.1
	Atomic absorption, furnace method	1-7521, 4-249.2
	Osmium	
	Atomic absorption, direct aspiration method	1-7550
	Atomic absorption, furnace method	1-7551
	Selenium	
	Atomic absorption, furnace method	1-7740, 4-270.2
	Atomic absorption, gaseous hydride method	1-7741, 4-270.3
	Atomic absorption, gaseous hydride method	1-7742, 4-206.3
	Silver	
	Atomic absorption, direct aspiration method	1-7760, 4-272.1
	Atomic absorption, furnace method	1-7761, 4-272.2
	Thallium	
	Atomic absorption, direct aspiration method	1-7840, 4-279.1

Sample Work Up Techniques:		
	Method	**Reference**
	Atomic absorption, furnace method	1-7841, 4-279.2
	Vanadium	
	Atomic absorption, direct aspiration method	1-7910
	Atomic absorption, furnace method	1-7911
	Zinc	
	Atomic absorption, direct aspiration method	1-7950, 4-289.1
	Atomic absorption, furnace method	1-7951, 4-289.2
Organic Analytical Methods:		
Gas Chromatographic Methods		
	Halogenated volatile organics	1-8010, 8021
	Non-halogenated Volatile Organics	1-8015
	Aromatic Volatile Organics	1-8020, 8021
	Acrolein, Acrylonitrile, Acetonitrile	1-8031
	Phenols	1-8040, 8041
	Phthalate Esters	1-8060, 8061
	Nitrosamines	1-8070
	Organochlorine pesticides, halowaxes, and PCB's	1-8080, 8081
	PCBs	1-8080, 8082
	Nitroaromatics and cyclic ketones	1-8090, 8091
	Polynuclear Aromatic Hydrocarbons	1-8100
	Haloethers	1-8110, 8111
	Chlorinated Hydrocarbons	1-8120, 8121
	Organophosphate Pesticides	1-8140, 8141
	Chlorinated Herbicides	1-8150, 8151
Gas Chromatographic/Mass Spectroscopy Methods		
	Volatile Organics	1-8240, 8260, 7-624
	Semi-volatile Organics:	1-8250, 8270, 7-625
Other Organic Methods		
	Qualitative infrared (IR) spectroscopy method	1-8410, 8430, 8440, 3-D2621, D4053
	GC/FTIR method	1-8410
	Heating value, bomb combustion method	1-5050, 3-D240, D2015
	Halogen and Sulfur Content	
	Chlorine content	3-D808, D2361, D4327
	Halogen content	3-D808, D2361, D4327
	Sulfur content	3-D129, D3177, D4327
	Oil and Grease	1-4030, 9070, 9071, 2-5520, 4-413.1, 413.2
	Petroleum hydrocarbons, total recoverable	2-5520, 4-418.1
	Solvent distillation	4-D86, D1078
	Total organic carbon	1-9020, 9060, 2-5310, 3-D2579
	Total Organic Halides (TOX)	2-506
Screening Methods		
	Physical Description	3-D4979
	Flammability Screen	3-D4982
	Water Compatibility	3-D5058
	Oxidizer Screen	3-D4981
	pH Screen	3-D4980
	Sulfide Screen	3-D4978
		Gas Detection Tubes (e.g.; Dragger, Sensidyne, MSA)
	Cyanide Screen	3-D5049
		Gas Detection Tubes (e.g.; Dragger, Sensidyne, MSA)

Sample Work Up Techniques:		
	Method	**Reference**
	Commingled Liquid Waste Compatibility Test	3-D5058
	Polymerization Potential	3-D5058
	Paint Filter Test	1-9095
	Bulk Density and Apparent Specific Gravity Screen	3-D5057
	Polychlorinated Biphenyls (PCBs) screen	1-4020, 9097
	Liner Compatibility Screen	1-9090
Miscellaneous Analytical Methods:		
	Acidity	2-2310
	Alkalinity	2-2320
	Ammonia	2-4500NH_3, 4-350.3
	Anions	
	By ion chromatography	1-9056, 3-D4327, 4-300.0
	Chlorides	1-9250, 9251, 9252, 9253, 2-4500Cl^-, 4-300.0, 325.3
	Sulfates	1-9035, 9036, 9038, 2-4500SO_4^{2-}, 4-300.0, 375.3
	Nitrates	1-9200, 9210, 2-4500NO_3^-, 4-300.0, 352.1, 353.2
	Fluoride	1-9214, 2-4500F^-, 4-300.0, 340.2, 340.3
	Bromides	1-9211, 2-4500Br^-, 4-300.0, 320.1
	Phosphates	2-4500P, 4-300.0, 365.1
	% Ash	2-2540, 3-D482, D3174
	Conductivity / conductance	1-9050, 2-2510, 3-D1125, 4-120.1
	Cyanides	
	Total and amenable cyanides	1-9010, 9012, 9013, 2-4500CN^-, 4-335.1
	Dissociable cyanides	1-9213, 2-4500CN^-
	Test Method to Determine Hydrogen Cyanide Released from Wastes (Reactive Cyanides)	1-7.3.3.2
	Flash point / Ignitability	
	Pensky-Martens closed-cup method	1-1010, 3-D93
	Setaflash closed-cup method	1-1020, 3-D3278
	Cleveland open-cup method	3-D1498
	Oxidation / reduction (redox) potential (ORP)	3-D1498
	pH measurement	1-9040, 9041, 9045, 2-4500H^-, 3-E70, 4-150.1
	Solids	
	Total (TS) at 103/105°C	2-2540, 4-160.3
	Dissolved (TDS) at 180°C	2-2540, 4-160.1
	Total suspended (TSS) at 103/1`05°C	2-2540, 4-150.2
	Fixed and volatile at 500°C	2-2540, 4-160.4
	Total Solids (moisture content)	Various (e.g.; Ohaus, Microwave Oven)
	Specific Gravity	1-9030, 2-2710F, 3-D70, D891, D1217, D1429
	Sulfides	
	Extractable sulfides	1-9031
	Soluble sulfides	1-9215, 2-4500S^{2-}
	Test Method to Determined Hydrogen Sulfide Released from Wastes (Reactive Sulfides)	1-7.3.4.2
	Total sulfides	1-9030A, 2-4500S^{2-}
	Viscosity	3-D88, D446, D2983

Sample Work Up Techniques:		
	Method	**Reference**
	Water Content	3-D95, D3173, D4006, E203

The above referenced procedures are described in the following publications (although the latest update to any of the below referenced documents are acceptable). The first digit of the reference numbers above are keyed to the numbers shown below:

1.	***Test Methods for Evaluating Solid Waste***, SW-846, U.S. Environmental Protection Agency, Office of Water and Waste Management, Washington, D.C. 20406
2.	***Standard Methods for the Examination of Water and Waste Water***, American Public Health Association (APHA), American Water Works Associations, Water Environment Federation
3.	***Annual Book of ASTM Standards***, American Society for Testing Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428
4.	***Methods for Chemical Analysis of Water and Wastes***, EPA-600/4-79-020, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory (EMSL), Cincinnati, Ohio 45268
5.	"Infrared Analysis Method," IERL-RTP Procedures Manual: level I Environmental Assessment, EPA-600/7-78-201
6.	"Acid Digestion Bombs," Bulletin 4745, Parr Instrument Company, Moline, IL 61265
7.	"Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater," Title 40, Part 136, Appendix A, CFR, USEPA, EMSL
8.	Bellar, T.A., and Lichtenberg, J.J., "The Determination of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils," EPA-600/4-81-045, USEPA, EMSL

ATTACHMENT 5
ADDITIONAL ANALYSES

Standard analytical procedures not listed here, which may be needed, will be taken from the sources referenced in Attachment 4 or other recognized sources (e.g.; Official Methods of Analysis of the Association of Official Analytical Chemist (AOAC), 15th Edition, AOAC, Arlington Virginia, 1990) or more recent supplements or editions.

- Beilstein Screen indicates the presence of halogenated organics in aqueous and organic wastes.
- Bench-Scale Treatment Evaluation to determine the appropriate ratios of wastes to reagents or waste-to-waste to be used in the treatment process to produce the desired reaction / result.
- Chlorides determines if the major acid component is hydrochloric acid or its salt.
- Cyanides Peroxide Amenability determines the effectiveness of H2O2 for cyanide treatment.
- Cyanides Chlorination Amenability (Sodium Hypochlorite or direct Chlorination) determines the effectiveness of hypochlorite for cyanide treatment.
- Cyanides Conversion Amenability determines the effectiveness of other types of reagents treatment for cyanides.
- Filter Time determines filterability of waste.
- Filterable Residue quantifies the suspended solids present to determine filtration requirements in process operations.
- Flash Point/Ignitability further identifies ignitable wastes to establish proper storage mode and conformance with permit conditions.
- Gas Chromatographic Scan identifies specific organic compounds.
- Qualitative lR Spectroscopy provides a fingerprint spectrum of organic wastes.
- Liquid Waste Compatibility determines whether liquid wastes which are to be combined together are compatible. This is a required supplemental analysis when combining different wastes.
- Load Bearing Capacity Test determines structural integrity of stabilized material to be landfilled.
- Metals Content may be determined to quantify metals concentrations for process operating parameters or potential salt precipitation for monitoring certain processes.
- Nitrates determine if the major acid component is nitric acid or its salt.
- Non-Filterable Residue quantifies the dissolved solids present to determine acceptability for certain processes.
- Oil and Grease quantifies the amount of oil and grease so as not to impact certain processes.
- Organic Content (OC) provides a conservative measure of organic carbon in a waste. This determination may use the procedure for Total Organic Carbon (for suitable waste forms), or may be calculated based on the results of a water content test using Karl Fisher or Dean Stark methods. Organic content is conservatively determined as the difference of water and ash from the total sample.
- Oxidizer Screen indicates the oxidation characteristics of a waste stream.
- Paint Filter Test indicates if free liquids are present in a solid or semi-solid material.
- PCB Screening indicates whether or not PCBs are present in a waste.
- PCBs in Aqueous Liquids determines whether PCBs are present in liquid waste.
- Percent Acidity determines the acidity in the waste. It may be performed if the waste is aqueous and below a pH of 4.
- Percent Alkalinity determines the amount of alkalinity in the waste. It may be performed if the waste is aqueous and above a pH of 7.
- Percent Ash determines the ash content in waste feeds to the indirect thermal desorber.
- Percent Solids by Centrifuge determines the percentage of suspended solids by centrifugation.
- pH provides a more precise measurement of pH and an indication of corrosivity when determining process parameters.
- Phosphates determines if the major acid component is phosphoric acid or its salt.

- Soluble Sulfides are analyzed to provide quantitative backup to the reactive sulfides screen.
- Solvent Screen identifies the presence of LDR solvent constituents.
- Specific Gravity / Bulk Density indicates density of the waste. This information convert weight of materials to volumes (and visa versa).
- Stabilization Treatment Studies determines if a waste is amenable to stabilization and to determine the appropriate reagent-to-waste ratio.
- Sulfates determine if the major acid component is sulfuric acid or its salt.
- Sulfide Peroxide Amenability determines the effectiveness of H2O2 for sulfide treatment.
- Sulfide Conversion Amenability determines the effectiveness of other types of reagents treatment for sulfides.
- Sulfur Content determines the sulfur content of waste to be incinerated and thus its capability to generate SO2 (SOX) gases.
- Total and Amenable Cyanides quantifies the concentration of all free and most complexed cyanides (total cyanides) and/or cyanide species amenable to alkaline chlorination (amenable cyanides). Results may be used for treatability determinations, to monitor treatment processes, and/or to meet disposal restrictions including Land Disposal Restrictions.
- TOC determines the organic concentration in waste and may be used as a surrogate for UHCs and other organic analyses.
- TOX determines the organic-chloride concentration in waste and may be used as a surrogate for chlorinated organic analyses.
- Total Solids quantifies suspended and dissolved solids and moisture content for selected processes.
- Total Sulfides quantifies the concentration of total sulfides to back up the sulfides screen.
- Viscosity determines the waste pumpability.
- Visual Oil and Grease provides a qualitative assessment of filterability and organic contents.
- Waste Compatibility is tested to determine whether wastes stored or processed together are compatible.
- Waste Compatibility determines whether the waste has a potential to react vigorously with water, to form gases, other products, or to generate extreme heat and to determine if it is soluble in water. This test does not apply to wastes already in contact with excess water nor to wastes known to be water reactive.
- Water Content determines the percent of water present in a waste.

Other standard analytical techniques parameters not listed here may be added used as required by changes in regulations, company policy, etc. These techniques will be taken from recognized sources (e.g.; SW-846, ASTM, AWWA, etc.).

Attachment 12

Training Plan

PERSONNEL TRAINING PROGRAM

US ECOLOGY NEVADA

March 2010

PERSONNEL TRAINING PROGRAM

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PERSONNEL TRAINING PROGRAM

6.1.0 Overview of RCRA Training Program

The RCRA training program provides facility personnel with the knowledge necessary to understand the processes and materials with which they are working. Training improves safety, reduces health hazards, prevents emergencies and prepares employees to respond to any situation. In addition, the program provides the knowledge for using, inspecting, repairing, and replacing facility emergency equipment.

Initial training of employees is completed within six (6) months of their start-work date. Each employee participates in an annual review of his or her initial training. Continuous instruction in safety is provided through safety meetings and drills. The goal is to have personnel trained to perform their specific job functions in a compliant manner and to maintain the facility in a state of preparedness.

6.1.1 RCRA Personnel Training Requirements

Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the Permit and regulations. Facility personnel must successfully complete the program within six (6) months of the date of their employment or reassignment, whichever is later. The program is designed to ensure that facility personnel are able to respond effectively to emergencies. Employees must successfully complete a program of classroom instruction <u>or</u> on-the-job training, and must be trained to perform their duties in a way that ensures the facility's compliance with this requirement.

6.1.2 "Facility Personnel" Defined

The regulations regarding facility personnel training require that employees responsible for managing hazardous waste be trained to the degree necessary that they can manage hazardous waste in compliance with the facility's permit and referenced regulations. For the purpose of this training program, the term "facility personnel" applies to those employees who work on-site for the purpose of managing (e.g., waste sampling, storing, treating, disposing) hazardous waste. There are also personnel on-site whose job functions do not involve the "management of hazardous waste" but may affect facility compliance. These persons/job descriptions include secretaries, load controllers, data entry clerks, receptionists, accountants, customer relation specialists, equipment mechanics, etc. At a minimum, these personnel will receive training in those areas of their jobs which may affect compliance. Not covered by this training program are persons from other divisions of US Ecology, consulting engineers, etc., who do not manage hazardous waste as described above (e.g., geologists, environmental samplers, construction personnel, auditors). Personnel from off-site who are involved in the management of hazardous waste will either be trained in accordance with this plan or the contractor or the employer must certify to the facility that all employees have been properly trained. This certification will be kept on-site in lieu of training records.

6.1.3 Training Records

Training records are maintained for each facility employee meeting the definition of facility personnel. Each record includes the job title of the employee, a description detailing the requisite skill, education, other qualifications, and duties related to that job title, and the amount of both introductory and continuing training that will be given to that employee. Also included in the file are records that document the training has been completed or job experience is satisfactory.

When personnel miss a refresher course (e.g., due to illness, vacation), they may review that topic with their supervisor, the training coordinator, or other qualified individuals or review the film of the training session. Such reviews are documented in the individual personnel training files.

Training records on current personnel will be kept until closure of the facility. Training records on former employees will be kept for at least three (3) years from the date the employee last worked at the facility except that, personnel training records may accompany personnel transferred within the company.

6.1.4 Off-Site Training

Training is available apart from the facility which can serve to fulfill the training required herein. In some areas, technical training, field experience, college credits or degrees can serve to exempt a person from further training in certain areas. For example, the General Manager and Lab Manager will normally have degrees or experience in engineering, chemistry, or other science-related fields. These personnel would not be well served by having to attend a course in "Chemical Terminology, Toxicology, and Handling." In fact, these personnel may serve as the on-site technical expert in that area. In those cases where a person has expertise in an area, formal education or job experience may be documented and serve as total fulfillment of that particular training need.

In some years, a person may attend an off-site seminar or training course which contains equivalent information contained in one or more of the on-site training sessions. This training may be documented by the trainee (self-certification) and serve as total fulfillment of that particular training need.

Management training often takes place in non-discrete sessions such as corporate staff meetings, compliance meetings, permit application work groups, permit negotiations, or other informal sessions and even self-directed learning sessions. These sessions often are of better quality for managers and can be documented by the trainee (self-certification) and serve as total fulfillment of that particular training need.

In summary, non-US Ecology sponsored training may be completed and documented to fulfill the training requirements contained in this plan. The training, if it is to be used as fulfillment of the requirements contained herein, must be documented appropriately.

6.2.0 US Ecology Sponsored Training

The RCRA training program is centered on the adequate training of facility personnel. USEN's employees are to be trained with safety and environmental protection as the primary concern. Training can be obtained from many sources, and frequent off-site training is encouraged to allow the free exchange of new ideas. However, to ensure that a basic core-training program is available to our employees, USEN sponsors and administers a comprehensive RCRA Training Program. The following descriptions are typical of the basic concepts administered through the USEN RCRA Training Program. These concepts may be taught as an entire training module, as part of a single module, or as part of several modules.

6.2.1 Company Orientation

All personnel, upon initial employment, are introduced to the company philosophy and method of operation as well as specific rules and regulations.

6.2.2 Chemical Terminology, Toxicology, and Handling

This training provides a basic understanding of relevant terminology and inherent properties of the waste groups managed on-site. Precautions to be taken in handling hazardous wastes and the reasoning for such measures are emphasized. Specific consideration is given to the procedures and practices governing the mixing of materials and prohibiting mixing of incompatible materials which may result in undesired events. As an example, container management personnel will receive training emphasizing storage of ignitable, reactive, and incompatible materials.

Instructions are typically provided by the Laboratory Manager, Environmental Manager, Health and Safety Manager, Training Coordinator, or other technical representatives. Discussions of toxicology and inherent hazards are tailored to meet the types of materials treated, stored, or disposed of on-site.

6.2.3 Operating Practices Summary

All operators (e.g., landfill operators, stabilization operators, container management operators) will be required to be familiar with the operating practices for their respective units. Each operator will be instructed in the permit modules applicable to their unit, and discussions will be held to answer questions. Procedures and actions will be discussed, and actual drills may be performed in the field. Other personnel will be trained, as needed, through orientation or review of other relevant plans.

6.2.4 Contingency Plan

All personnel are required to understand the Contingency Plan to the degree that it affects them and be prepared to put it into action at all times. The Contingency Plan covers response to spills, fires, releases, and other emergency situations. The plan also discusses notification, evacuation, and clean-up procedures. This area of training includes instruction in the procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment; the key parameters for automatic waste feed cut-off systems; emergency communications and alarm systems and signals; response to ground-water contamination incidents; and procedures to be followed in the event of a shutdown of operations, as applicable.

Procedures and actions are discussed and actual drills may be performed in the field. These periodic drills are held to simulate fires, explosions, or releases of hazardous wastes. Reviews are conducted at least annually and when changes in facility operation or personnel affect the coordinated effort needed for an emergency response.

6.2.5 Respiratory Equipment

For protection in atmospheres known or suspected to contain hazardous substances, designated personnel are instructed in the care and use of respiratory protection equipment. The training instructor is either a factory representative or an individual qualified due to their job skill (e.g., Health and Safety Manager, Training Coordinator, Fire Fighter, Paramedic). Training stresses proper use and fit and procedures for inspection and maintenance. The types of respiratory protection necessary are unique to each activity, depending on the inherent hazards of the materials handled, and the environment/area in which the material is located. For this reason, respiratory protection procedures are reviewed periodically and assessed for additional risk of respiratory insult because of changes in an operation.

Literature available for the respiratory protection equipment is read by and/or reviewed with employees. All repairs and inspections of equipment are performed by trained personnel when and where required. Reviews are held at least annually.

6.2.6 Unit and Equipment Operations

All personnel involved in the operation of hazardous waste management units or process equipment are required to be cognizant of proper operating procedures, emergency procedures, and maintenance particular to the unit or machinery he or she operates. Initial training covers operation of new or unfamiliar units, processes, or pieces of equipment. However, experienced personnel are also required to review the training topics (e.g., Safety Meetings).

6.3.0 Implementation of Training Program

Upon employment, assignment to the facility, or assignment to a new job at the facility, a training file is created or reviewed for the employee. The training record includes a job description, a summary of

all training, and a summary of required training. Training may begin before the employee works in a hazardous waste management unit but must be completed within six (6) months of their start-work date. Employees do not work in an unsupervised position until the required training is completed. Each employee will participate in a review of his or her initial training at least annually (once per calendar year). Also included in the training file are records that document that the required training has been completed.

6.3.1 Qualification of Trainers

US Ecology shall ensure that a person trained (as described in 29 CFR §1910.120(p)(7)(iii)) in hazardous waste management procedures of 29 CFR §1910.120(p) shall direct the training program, and shall teach facility personnel hazardous waste management procedures relevant to their employment position. The required qualifications for the individuals responsible for training implementation include knowledge of state, federal, and local regulations pertinent to hazardous waste management and disposal. Training will be provided by the management staff under the guidance of the Facility General Manager.

6.4.0 Training Topics

Initial 24 HAZWOPR Training will include:

- Respiratory Protection
- Facility Safety Requirements
- Personal Protection Equipment (PPE) Requirements
- PPE Use and Limitations
- Hearing Protection
- Exposure Control
- Decontamination Procedures
- Hazard Communication
- Medical Surveillance
- Emergency Communications
- Contingency Plan
- Location and Use of all Emergency Equipment
- Fire Control Equipment
- Overview of the Resource Conservation and Recovery Act (RCRA)
- Overview of the Toxic Substance Control Act (TSCA)
- General Overview of Department of Transportation (DOT) Regulations

Additional Training will include:

- 8 hour forklift training

- Storm Water Pollution Prevention (SWPP) Plan
- Spill Prevention, Control and Counter Measure (SPCC) Plan
- Heat Stress
- Blood Borne Pathogens
- Fall Restraints
- Biological Hazards
- Chemical Hazards
- Hazard Recognition
- Site Specific Standard Operating Procedures (SOPs)
- Any additional topics that management determines to be relevant.