

# Attachment 6

## Hazards Prevention Plan

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## **F.4 Preventive Procedures, Structures, and Equipment**

### ***F.4.a Unloading Operations***

In accordance with IDAPA 58.01.05.012 (40 CFR 270.14(b)(8)(i)), unloading procedures for waste shipments utilize safe and environmentally-sound methods to process and dispose of waste material. The facility handles both containerized and bulk shipments of solid and liquid wastes. Therefore, each type of waste shipment is addressed separately.

#### **F.4.a.(1) Bulk Solids Unloading**

All bulk solids unloading operations are performed under the direction of facility personnel. All personnel involved in unloading operations are trained in the handling of hazardous materials and are required to wear appropriate safety equipment.

Upon entering the site, transportation vehicles normally proceed to the Truck Scale and then to the staging area. After inspection and acceptance, each vehicle is directed to its designated unloading area. When a transportation vehicle arrives at the unloading area, an employee typically assists the driver in positioning of the vehicle. This allows control of vehicle movement by facility personnel while the vehicle is on-site. Prior to unloading, wind conditions and waste material type are assessed to determine if dust control measures are appropriate. Bulk solids are unloaded at the appropriate waste management area.

#### **F.4.a.(2) Bulk Liquid Unloading**

After inspection, compatibility testing, and acceptance, each vehicle is directed to the designated unloading area at either the tank storage, surface impoundment, or treatment unit. Prior to off-loading of wastes into tanks, surface impoundments, or treatment systems, the compatibility of the new waste is determined in accordance with the procedures in the WAP.

All bulk unloading operations are performed under the direction of facility personnel. All personnel involved with unloading of bulk liquid wastes don the proper PPE prior to the off-loading of waste material. Each transportation vehicle is positioned in a stable manner prior to unloading. It is then grounded to reduce the possibility of static electrical discharge. For bulk liquid truck unloading operations, all hose and piping connections are secured and checked prior to unloading. After all connections are checked for proper fit and tightness, valves are checked for proper operation and waste unloading begins. All connections are monitored during the unloading process for any evidence of leakage or other possible problems.

When a waste material is to be stored in one of the tanks, the tank identification, quantity, and work order number of the waste is recorded in the operating records. When a waste material is transferred to the surface impoundment or a treatment system, the quantity and work order number of the waste is recorded in the operating records.

Several control procedures are utilized to provide for the proper bulk handling of multiple liquid materials. By following the WAP, established procedures are used to determine the chemical and physical characteristics of each waste so adequate information has been obtained for the proper and safe management of the waste. Individual waste streams are accepted and processed for management in specified units. These units are designated to service specific wastes so only compatible wastes are managed in the same unit. This batch method of operation minimizes the potential for mixing of incompatible waste materials. Batch operation also facilitates the safe operation of treatment units. Prior to introduction of a different waste compatibility type, compatibility is checked in accordance with Section C.6.5 of the facility WAP.

Liquid waste shipments that are not compatible with materials of construction of the management unit or with the materials currently stored in the management unit are evaluated for storage in a different unit at the facility. Wastes that are not compatible and are not suitable to be managed at the facility are rejected and either returned to the generator or shipped to an alternate facility.

#### **F.4.a.(3) Containerized Waste Unloading Procedures**

Upon arrival at USEI, transportation vehicles normally proceed to the Truck Scale and then to a staging area for preparation for unloading. Each vehicle then proceeds to its designated unloading area under the direction of site personnel. Facility personnel in the unloading area are instructed with respect to proper PPE for use in handling the incoming waste material based on the Waste Profile Form (WPF) or Work Order as appropriate. All handling of containers at the facility is performed with the appropriate equipment. When individual drums are transported from one area of the facility to another, a bobcat, drum dolly, or other appropriate piece of drum handling equipment is utilized. When multiple drums on wooden pallets are moved or staged in another area, a front-end loader, forklift or other appropriate equipment is used.

If an incoming transportation vehicle is carrying containerized waste that is to be placed into a CMU, the vehicle proceeds under the direction of facility personnel. The vehicle is positioned on a stable unloading area and all containers are removed from the vehicle with appropriate container handling equipment.

Each incoming container is visually inspected for integrity and to verify that labeling and marking are complete with respect to container identity. Containers that do not conform to these guidelines are designated for further processing and identification and/or repackaging, if necessary. Containers that cannot be identified or whose discrepancies cannot be resolved are either re-characterized, returned to the generator, or sent to an alternate facility.

Upon acceptance at the staging/storage facility, individual containers may be placed on pallets, as needed. Prior to initiating work in the storage area, all personnel don the appropriate PPE. If the material is ignitable or reactive, appropriate precautions are taken as detailed in paragraph F.5 .

#### **F.4.a.(4) Unloading at Stabilization Facility**

Waste determined to be suitable for stabilization may be forwarded directly to the Stabilization Facility. Each waste to be stabilized is evaluated in accordance with the facility WAP to evaluate treatability and handling requirements. After the determination of acceptability, the waste transport vehicle is directed by facility personnel to the proper unloading location.

Procedures set forth in F.4.a.(1) and F.4.a.(2) are also followed when the waste arrives at the Stabilization Facility.

#### **F.4.a.(5) Unloading at the Indoor Stabilization Building**

Incoming wastes are evaluated for compatibility with existing waste in the Mixing Bin Tanks in accordance with the procedures of the facility WAP. If necessary, the laboratory performs a compatibility test (in accordance with the WAP) prior to waste mixing.

General procedures for unloading bulk solids, as described in paragraph F.4.a.(1), are followed in these areas. General procedures for unloading bulk liquids, as described in paragraph F.4.a.(2), are followed in the Indoor Stabilization Building. Stabilization Building components and systems are in place to prevent fugitive emissions during unloading operations as described in Section D.

### **F.4.b Run-Off**

Site drainage and run-off controls are designed to convey and control rainfall from a 25-year, 24-hour precipitation event. Active waste disposal, storage, and treatment operations are segregated from stormwater by a series of berms, interceptor channels, engineered grades, and collection ponds.

Rainwater from within the perimeter road is impounded or directed to Collection Pond #1 or #3 by interceptor channels and engineered grades.

Rainwater from outside the perimeter road is directed off-site by grade, interceptor channels, and berms. The perimeter road berms generally prevent run-on to the facility.

Appendix D.4.7 contains further discussion on run-on/run-off control.

### ***F.4.c Water Supplies***

To the best of USEI's knowledge, there are no domestic groundwater drinking water sources within 3,000 feet of the facility. The run-on and run-off control systems and the waste handling operations have been designed to prevent the contamination of either domestic groundwater drinking supplies or surface-water supplies. All treatment and disposal activities take place in areas that are sloped and graded to prevent uncontaminated off-site water from entering the site, as well as to prevent run-off from leaving the facility.

### ***F.4.d Equipment and Power Failure***

In the event of a power outage, certain site processes are shut down. However, operations which do not require electrical power can usually continue unimpeded. Portable lighting is used, if necessary, to provide safe working conditions. Mobile radios are battery powered to provide uninterrupted communications.

Ventilation systems at the Indoor Stabilization Building are required to be in operation for certain waste (e.g., fine waste) management activities. If ventilation is off-line and an emergency situation occurs, then procedures in the Contingency Plan should be followed as applicable. Functionality of the ventilation system does not typically require implementation of the Contingency Plan if there is not release or threat of a release to human health or the environment.

### ***F.4.e Personal Protection Equipment***

Personal protective equipment (PPE) is issued to individual employees to provide protection beyond that afforded by the engineered safety controls described throughout this document. This PPE may include the following:

- Respirator Protection
- Foot Protection
- Head Protection
- Eye Protection
- Hand Protection
- Coveralls, Tyvek, and chemical resistant outer coverings

Facility personnel are trained in the appropriate use of PPE for each individual working area and condition. Special requirements for specific waste streams are designated by the Health & Safety Manager or are listed on the WPF and/or the Work Order as discussed in applicable sections of the facility WAP. Facility personnel are fit tested for respirators and instructed regarding the use of applicable safety equipment. If an employee notices a defect, it is their responsibility to request replacement of the defective equipment. If any employee determines a particular task does not comply with safe operating

practices, it is their responsibility to notify their supervisor of the task in question. To facilitate this process, all employees are trained in the safe operating practices to be used in handling hazardous materials.

#### ***F.4.f Decontamination Procedures***

A vehicle wash station is provided for washing/decontaminating equipment. This unit is also used to spray vehicles that traverse the landfill or other designated waste handling areas. This system is used to avoid tracking material off-site.

Personnel are instructed to clean waste handling equipment in designated areas prior to exiting designated portions of the facility.

A two-step decontamination system is utilized in the Indoor Stabilization Building to prevent the spreading of waste to other locations. An initial gross decontamination of personnel and equipment is conducted inside the Stabilization Building. If necessary, further decontamination of personnel and equipment are accomplished at the Decon facility and vehicle wash station, respectively.

### **F.5 Prevention of Reaction of Ignitable, Reactive, and Incompatible Wastes**

The processing, storage, treatment, and disposal of ignitable, reactive and incompatible wastes pose various handling problems. USEI makes every effort to prevent any reaction involving ignitable and reactive waste and to minimize the opportunities for the mixing of incompatible wastes.

#### ***F.5.a Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Waste***

In accordance with IDAPA 58.01.05.012 and 58.01.05.008 and [40 CFR §§270.14(b)(9) and 264.17], and prior to handling ignitable material, USEI makes every effort to eliminate any potential situation which could cause an ignition of reactive or ignitable waste.

Prior to handling any reactive or ignitable waste, personnel will survey the immediate work area for any sources of ignition, open flame, or any other potential problems which may lead to a possible uncontrolled event. These sources include, but are not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks, spontaneous ignition and radiant heat. These sources are removed from the work area. If handling equipment is used, only equipment that is compatible with the material is used. Transportation vehicles are turned off and secured to prevent movement, and tankers are grounded to prevent static discharges. Each work station is equipped with the appropriate fire-fighting equipment to handle minor incidents. Smoking is not permitted in any waste handling area. A "No Smoking" sign is clearly posted at the entrance of the active yard area. Personnel can contact the area supervisor by two-way radio or other means in the event of an uncontrolled event. These and other emergency equipment maintained on-site are described in detail in the Contingency Plan.

#### ***F.5.b General Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste***

Every effort is made to minimize the potential for adverse reactive situations at the facility. Incompatible waste categories are handled separately at a given unit/sub-unit. All materials handling and processing equipment are decontaminated, as necessary, following activities with each waste category.

Decontamination procedures for each change of waste category handling are determined by operations supervisors. Incompatible wastes are segregated by compatibility group via physical separation (barriers, berms, or dikes). Batch treatment techniques for individual categories of wastes (one compatibility group at a time) are utilized to minimize the adverse effects that may result from processing incompatible, reactive, or ignitable waste streams.

Incompatible wastes are not stored together in containers or placed in contact with each other in surface impoundments or landfills at the facility. Wastes are tested or evaluated using the waste characterization/acceptance process for compatibility (as described in the WAP) prior to acceptance of the material at the facility. Individual waste shipments with uncertain properties are sampled and tested for compatibility prior to contact with other wastes or equipment. EPA-600/2-80-076, "A Method for Determining the Compatibility of Hazardous Wastes," was used as a guideline in developing compatibility categories for the management and processing of hazardous wastes. The criteria used for developing these categories were established to avoid producing a potentially dangerous situation. Hence, wastes are segregated from other incompatible wastes that, when contacted, could result in an adverse reaction, including any of the following:

- Generation of extreme heat or pressure, fire or explosions, or violent reactions.
- Production of uncontrolled flammable fumes, dusts or gases in sufficient quantities to threaten human health or the environment.
- Production of uncontrollable flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion.
- Damage to the structural integrity of the device or facility.
- Creation of a threat to human health or the environment.

Segregation of potentially incompatible wastes in the landfill is facilitated by facility review of each waste stream (per requirements of the facility WAP) and utilization of the Work Order. When wastes are received and fingerprinted, the chemist will note on the Work Order any considerations of incompatibility. Conditions of incompatibility are not a concern where wastes have been treated to meet LDR standards. These wastes are in a physical state in which no adverse reactions will occur when the material is placed into the landfill. However, USEI also receives non-regulated materials for direct disposal (i.e. solid corrosives) that may be incompatible. To meet the requirements of 40 CFR 264.17(b) within the landfill cells, materials that may pose a potential for adverse reactions are segregated within separate subcells within the landfill. To create the subcell, any potentially incompatible materials are placed at least three (3) feet away from other materials. The space between materials is then filled with Group E material or clean fill. Group E or clean fill is packed around each container to create a totally separate and segregated area for these wastes within the landfill cell. If Group E material is used as fill material it must be inert and non-hazardous soil meeting LDR. Confirmation screening will be performed to verify that the fill soil is not flammable, combustible, or reactive prior to use as fill.

### ***F.5.c Management of Ignitable or Reactive Wastes in Containers***

Prior to acceptance of any wastes, USEI uses the management system described in the facility WAP to determine the status for acceptance or rejection or acceptance of materials for disposal on-site. This system is designed to provide USEI the necessary precautions to avoid accepting ignitable, reactive, or incompatible wastes.

Any ignitable or reactive wastes are stored in segregated areas and comply with the requirements of 40 CFR §264.17(c). Paragraph D.1 of Section D identifies the locations of the waste management areas and processing areas. Per IDAPA 58.01.05.008 and 58.01.05.012 (40 CFR §§270.15(c) and 264.176), no ignitable wastes are stored or treated within 15 meters of the property line.

### ***F.5.d Management of Incompatible Wastes in Containers***

As pursuant to IDAPA 58.01.05.008 and 58.01.05.012 (40 CFR 264.177, 270.15(d)) the mixing of incompatible wastes in containers is not permitted unless 264.17(b) is complied with. In accordance with the applicable section of the facility WAP, each waste entering the facility is tested and its destination noted on the Work Order. All containerized waste is separated from other incompatible waste via physical separation barriers (e.g., dikes, berms, or walls). Any waste container that is reused for future waste handling purposes is properly cleaned prior to reuse.

Bulk or containerized waste was previously stored within the Containment Building (Debris Portion) in designated areas. Segregation of incompatible wastes was maintained during storage and/or staging for processing. Only one compatibility group at a time was processed in each sort floor and mixing bin area. When waste spills occurred, the spill material was collected, removed, and the area appropriately cleaned prior to any staging and/or processing of incompatible waste within the area. The Containment Building (Debris Portion) will be converted to a covered, unenclosed container storage pad (CSP #8). Waste containers will be managed as they were in the Containment Building (Debris Portion) until curbs are installed to create separate areas for different compatibility groups.

### ***F.5.e Management of Ignitable or Reactive Wastes in Tank Systems***

Not Applicable. The facility manages ignitable and reactive wastes per the requirements of Section C.6.4 of the facility WAP.

### ***F.5.f Management of Incompatible Waste in Tank Systems***

Prior to the addition of a new waste stream into a tank, a waste to waste compatibility test is performed as required by the applicable sections of the facility WAP. If an incompatibility is determined, the new waste stream is not accepted into that tank as per IDAPA 58.01.05.012 and 58.01.05.008 (40 CFR §§264.199, 270.16(j)) unless §264.17(b) is complied with.

When an empty tank is designated to hold a compatibility group different than it previously held, appropriate cleaning and/or evaluation is performed before introducing any of the new compatibility group waste into the vessel. Cleaning procedures may include washing the inside of tanks and collecting the wash solution. These wash solutions may be treated as hazardous wastes if they exhibit a hazardous waste characteristic. The tanks are washed and/or emptied sufficiently so that when added to the tank, the new waste does not react with the waste wash water. Tests may be run on the wash water to verify adequate tank cleaning, to determine the degree of hazard and/or to determine disposition.

### ***F.5.g Management of Ignitable or Reactive Wastes Placed in Waste Piles***

Not Applicable. The facility does not have any waste piles.

### ***F.5.h Management of Incompatible Wastes Placed in Waste Piles***

Not Applicable. The facility does not have any waste piles.

### ***F.5.i Management of Ignitable or Reactive Wastes Placed in Surface Impoundments***

Not Applicable. The facility does not accept ignitable or reactive wastes for management in surface impoundments.

### ***F.5.j Management of Incompatible Wastes Placed in Surface Impoundments***

Material designated for disposal in a surface impoundment is tested for compatibility with the material already in the unit, as required by the facility WAP. If, through testing, the wastes in question are determined to be incompatible and would result in generation of heat or fire, production of toxic or flammable emissions, damage to the unit's structural integrity, or threaten human health or the environment, the new material is not introduced into the surface impoundment as per IDAPA 58.01.05.012 and 58.01.05.008 (40 CFR 270.17(h), §§ 264.229) unless §264.17(b) is complied with.

### ***F.5.k Management of Ignitable or Reactive Wastes Placed in Landfills***

The facility does not accept air and highly water reactive wastes for direct placement in the landfill as described in the facility WAP. In accordance with the WAP and per IDAPA 58.01.05.012 and 58.01.05.008 (40 CFR §§270.21(f), 264.312), no ignitable or reactive hazardous waste is placed in a landfill unless it is treated or otherwise rendered non-ignitable or non-reactive. All incoming hazardous wastes are properly characterized and, if stabilization or treatment is required prior to placement in a landfill, special instructions are placed on the Work Order to clearly state the process to be followed.

### ***F.5.l Management of Incompatible Wastes Placed in Landfills***

Wastes are not placed in contact with other incompatible wastes in the landfill as per IDAPA 58.01.05.012 and 58.01.05.008 (40 CFR §§270.21(g), 264.313). The identification and segregation of potentially incompatible wastes in the landfill is accomplished by the review of each waste stream in accordance with the WAP. Additional precautions to avoid mixing of incompatible wastes in landfills is provided by the waste locator system as described in paragraph D.6 of Section D.

### ***F.5.m Management of Ignitable or Reactive Wastes Placed in Land Treatment Units***

Not Applicable. The facility does not have any land treatment units.

### ***F.5.n Management of Incompatible Wastes Placed in Land Treatment Units***

Not Applicable. The facility does not have any land treatment units.