INTEGRATED DISPOSAL FACILITY
ADDENDUM F
PREPAREDNESS AND PREVENTION
CHANGE CONTROL LOG

Change Control Logs ensure that changes to this unit are performed in a methodical, controlled, coordinated, and transparent manner. Each unit addendum will have its own change control log with a modification history table. The “Modification Number” represents Ecology’s method for tracking the different versions of the permit. This log will serve as an up to date record of modifications and version history of the unit.

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## ADDENDUM F

**PREPAREDNESS AND PREVENTION**

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F.1 INTRODUCTION

This addendum addresses preparations and preventive measures in effect at the Integrated Disposal Facility (IDF) dangerous waste management units (DWMUs) that comprise Operating Unit Group 11 of WA7890008967, Hanford Facility Resource Conservation and Recovery Act [RCRA] Permit (hereinafter referred to as the Hanford Facility Resource Conservation and Recovery Act Permit). The IDF provides storage, treatment, and disposal of mixed waste and non-dangerous low-level waste from Hanford on-site generators. The IDF consists of four DWMUs: a storage pad, a treatment pad, and two disposal cells. Descriptions of and details about the IDF DWMUs are provided in Addendum C, “Process Information.”

The IDF is designed, constructed, maintained, and operated to minimize the possibility of damage caused by fire, other emergency, or an unplanned release of dangerous waste or dangerous waste constituents to air, soil, surface water, or groundwater that could threaten public health or the environment. This addendum describes preparations and preventive measures that help avoid or mitigate such situations. This addendum complies with requirements set forth in Washington Administrative Code (WAC) 173-303-340, Preparedness and prevention, WAC 173-303-806 (4)(a)(viii) and (ix), Final facility permits, and WAC 173-303-395(4), Other general requirements.

The requirements addressing the storage, treatment, and disposal of waste are applicable during the active life of the IDF. The active life of the IDF is the period from the initial receipt of mixed waste at the IDF until certification of final closure (WAC 173-303-040, Definitions). Although not defined by regulation, in this addendum the pre-active life refers to the facility maintenance period between construction and the start of active life.

F.2 PREPAREDNESS AND PREVENTION REQUIREMENTS

Preparedness and prevention requirements of WAC 173-303-340 are addressed in the following subsections. Section F.2.1 describes the measures implemented during the pre-active life. Section F.2.2 identifies the measures taken at the IDF during the active life.

F.2.1 Pre-Active Life

During the pre-active life, the Permittees will comply with the Hanford Emergency Management Plan (Permit Attachment 4), as applicable for a facility that does not contain dangerous waste. An emergency coordinator assigned to the IDF will manage and control aspects of the initial facility response when an emergency occurs.

F.2.2 Active Life

These subsections identify the measures implemented during the active life of the IDF.

F.2.2.1 Required Equipment

Equipment for communications, firefighting, spill control, and decontamination is available for use at the IDF, in accordance with the requirements of WAC 173-303-340(1).

F.2.2.1.1 Internal Communications

Immediate emergency instruction to personnel working at the IDF will be provided by hand-held two-way radios and/or cellular phones. During waste handling operations at IDF, all personnel involved will have immediate access to hand-held two-way radios or cellular phones capable of direct emergency communications with another employee. The communications devices described in this section meet the internal communications requirements of WAC 173-303-340(1)(a), (1)(b), and (2)(a).
F.2.2.1.2 External Communications
As required by WAC 173-303-340(1)(b), the communications equipment (two-way radios or cellular phones) is capable of contacting the Hanford Patrol Operations Center and Hanford Fire Department to request assistance from local emergency response organizations. The Point of Contact for the Hanford Patrol Operations Center can be contacted for 24-hour emergency communications and for information relays by landline telephone, cellular phone, or two-way radio.

State and local response organizations are contacted through the Hanford Patrol Operations Center by dialing emergency number 911 from site landline telephones, or (509) 373-0911 from cellular phones; or for non-emergencies, by dialing the main contact number for the Hanford Patrol Operations Center at (509) 373-3800. On-site responders are notified and/or dispatched through the Hanford Patrol Operations Center.

In the instance that there is only one employee at an IDF DWMU during operations, the individual will have immediate access to a hand-held two-way radio or cellular phone capable of summoning external emergency assistance. [WAC 173-303-340(2)(b)]

F.2.2.1.3 Emergency Equipment
IDF personnel are trained in the use of emergency equipment. Addendum G, “Personnel Training,” provides details for IDF personnel emergency training.

IDF relies on the Hanford Fire Department to respond to fires and other emergencies, as described in the Hanford Emergency Management Plan ( Permit Attachment 4). IDF emergency equipment, required by WAC 173-303-340(1)(c), is identified in Addendum J, “Contingency Plan.” Testing and maintenance of equipment to assure proper operation in time of emergency [per WAC 173-303-340(1)(d)] is addressed in Addendum I, “Inspection Plan.”

F.2.2.2 Water for Fire Control
The primary water supply for fire protection is provided from the 200 East Area raw water distribution system. Fire hydrants are located north of each of the IDF disposal cells and west of Disposal Cell 1 and provide water at adequate volume and pressure to supply fire control equipment. When needed, the Hanford Fire Department will use these hydrants to supply water for fire control equipment and fire suppression.

F.2.2.3 Aisle Space Requirement
Container storage at IDF will occur on both the storage pad and treatment pad. A minimum aisle spacing of 76 cm (30 in) is used on the pads, meeting the requirements in WAC 173-303-630(5)(c), Use and management of containers. In accordance with WAC 173-303-340(3), this aisle spacing is maintained to allow for the unobstructed movement of personnel and equipment during emergency situations (e.g., container-moving equipment and pallets are cleared from aisles when not in use). Rows of containers are no more than two containers wide. Aisle spacing requirements described in this section do not apply to the IDF disposal cells.

F.3 PREVENTIVE PROCEDURES, STRUCTURES, AND EQUIPMENT
The following subsections address preventive procedures, structures, and equipment in effect at the IDF during the active life.

F.3.1 Container Loading, Unloading, and Handling Preventive Measures
Containers may be loaded or unloaded from transport vehicles on the IDF storage and treatment pads. Land disposal restriction compliant containers may be moved directly into the disposal cells. To minimize the potential for container damage or accidental opening during loading, unloading, and/or handling operations, the following preventive measures are observed by IDF personnel:
• Containers are U.S. Department of Transportation or U.S. Department of Energy compliant.
• Operators conduct physical inspections for container damage and abnormal appearance. The inspections are performed prior to loading and unloading operations.
• Containers, including long length, are handled by equipment appropriate for unloading and container movement (e.g., forklift, high weight capacity forklift, or crane).
• Waste is not loaded or unloaded without the approval of IDF operations supervision.
• Pathways from unloading locations to storage, treatment, or disposal areas are kept clear of obstructions.
• Transport vehicles are positioned in a manner that provides an unobstructed work space to load and offload containers.
• Containers stored on the pads are moved into the disposal cells or to an alternate location (e.g., a different on-site or off-site treatment, storage, and disposal facility) as soon as is practical.
• Collected wastes resulting from spills and leaks are removed, as soon as possible, in a manner that prevents release of dangerous waste constituents.
• Operators must comply with container stacking, aisle spacing, and segregation requirements.

F.3.2 Prevention of Run-on, Runoff, and Contamination of Water Supplies

The design and/or operation of the IDF storage pad, treatment pad, and disposal cells are intended to mitigate run-on and runoff, minimize the generation of potentially contaminated leachate or liquids, and prevent migration into local groundwater resources. Detailed descriptions of the design, construction, and operation of each DWMU are provided in Addendum C. A general description for preventing run-on, runoff, and contamination of water supplies and groundwater is provided in the following subsections.

F.3.2.1 Integrated Disposal Facility Disposal Cells

Each disposal cell was designed, constructed, and installed in accordance with WAC 173-303-665, Landfills, to prevent migration of wastes out of the landfill to the adjacent subsurface soil, groundwater, or surface water at any time during the active life of the landfill. The liner systems are constructed of materials that prevent wastes from passing through the liner during the active life of the facility.

Run-on is controlled by drainage ditches or berms around the perimeter of the lined landfill. The drainage ditches or berms were constructed with conventional earthmoving equipment such as graders and small dozers. Any overland flow approaching the landfill is intercepted by the ditches or berms and conveyed to suitable discharge points. Ditches and berms are designed to handle the peak 25-year flow from the potential drainage area. By using low channel slopes, design flow velocities in the ditches will be maintained below established limits for sand channels.

Between the landfill crest and the perimeter road, the area is graded to provide drainage toward the perimeter road. The perimeter road is sloped outward, at a grade of approximately 2 percent, to provide drainage away from the landfill.

Precipitation falling on the disposal cells is removed by either evaporation or the Leachate Collection and Removal System (LCRS). Precipitation that percolates to the bottom of the trench is captured in the LCRS and is managed as rainwater during the pre-active life following the pollution prevention and best management practices in State Waste Discharge Permit Number ST 4511. During the active life, these liquids will be managed as multi-source leachate waste (F039). No runoff from the disposal cells is expected because the cells are constructed below grade.
F.3.2.2 Integrated Disposal Facility Storage and Treatment Pads

Containers with free liquids or holding ignitable, reactive, or incompatible wastes are not accepted at the IDF. Run-on into and runoff away from the IDF storage and treatment pads are prevented by one or more of the following characteristics:

- Engineering controls, such as perimeter curbs, to prevent run-on.
- Elevated or otherwise graded foundations slope away from the pads to prevent and/or divert run-on from adjacent areas.
- Positive drainage control design to preclude runoff.
- Storage areas may utilize equipment (e.g., spill pallet and pallet) to elevate containers.

Storage areas and containers are inspected weekly for integrity during the active life of the facility in accordance with WAC 173-303-630 (see Addendum I, “Inspection Plan”).

F.3.3 Equipment and Power Failure

Loss of electrical power at IDF does not constitute an emergency. Electricity supplies power to the sump pumps used to remove accumulated leachate from the primary and secondary liners of the IDF disposal cells. Electrical power outages will be restored as soon as possible. Backup equipment will be acquired, if necessary, to provide electrical service. Failed equipment will be repaired or replaced as soon as possible.

F.3.4 Personal Protective Equipment

IDF minimizes personnel exposure to occupational injury, dangerous wastes, and hazardous chemicals by ensuring the availability and use of adequate personnel protective equipment (PPE) during normal operations and emergencies. Personnel are required to wear PPE specified by work authorization documentation in accordance with training, posted requirements, and administrative instructions when working at the IDF DWMUs. PPE required during the active life varies, depending on the form, content, and waste handling activities. When possible, engineering and/or administrative controls are first implemented to minimize the possibility of exposure.

F.4 PREVENTION OF REACTION OF IGNITABLE, REACTIVE, AND/OR INCOMPATIBLE WASTE

Waste acceptance requirements prohibit the storage, treatment, and disposal of ignitable, reactive, and/or incompatible waste at IDF. Addendum B, “Waste Analysis Plan,” identifies measures to prevent the storage, treatment, and final disposal of ignitable, reactive, and incompatible waste.

If, during waste profile or waste acceptance reviews, ignitable, reactive, and/or incompatible wastes are identified, then the submitted waste stream or profile will be rejected, and the affected waste will be prohibited at IDF. In the instance that ignitable, reactive, or incompatible waste is discovered during the course of storage or treatment of containers at the IDF storage and treatment pads, such waste will be segregated and managed pursuant to the requirements of WAC 173-303-395(1).

F.5 PREVENTION OF RELEASES TO THE ATMOSPHERE

Reasonable precautions are taken at the IDF to prevent releases to the atmosphere. Waste at the IDF is containerized and disposed in closed containers. Containers may contain vents, if required, and potential emissions will be managed in accordance with applicable air permits. Particulate matter emissions at IDF will be managed via dust control, such as periodic watering or use of soil stabilization products. Periodic watering may be used for excavations, backfill, haul roads, and other disturbed areas that show signs of blowing dust. Soil stabilization products may be used to mitigate wind and water erosion of areas disturbed by operations. Waste covering activities and storage pile work will be curtailed during high winds.
F.6 ARRANGEMENTS WITH LOCAL AUTHORITIES

Written emergency assistance agreements are in place with local authorities that include arrangements to provide local hospitals, police departments, fire departments, and city and county emergency response teams with Hanford Facility information. The response agreements designate primary emergency authority in accordance with WAC 173-303-340(4)(a) through (d). Hanford Facility agreements with state emergency response teams, emergency response contractors, and equipment suppliers are addressed in the Hanford Emergency Management Plan (Permit Attachment 4). If state or local authorities decline to enter into a response agreement or arrangement with the Hanford Facility, the Permittees will record the refusal in the IDF portion of the Hanford Facility Operating Record, as required by Hanford Facility RCRA Permit Condition II.I.1.g. [WAC 173-303-340(5)]

F.7 REFERENCES

Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901, et seq. Available at:
http://www.epa.gov/rcraonline/.

State Waste Discharge Permit Number ST0004511 (Miscellaneous Streams), Washington State Department of Ecology, Olympia, Washington. Available at:
https://fortress.wa.gov/ecy/nwp/permitting/WWD/.


303-040, Definitions.
303-340, Preparedness and prevention.
303-395, Other general requirements.
303-630, Use and management of containers.
303-665, Landfills.
303-806, Final facility permits.
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