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**ADDENDUM F**  
**PREPAREDNESS AND PREVENTION**

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**ADDENDUM F**  
**PREPAREDNESS AND PREVENTION**

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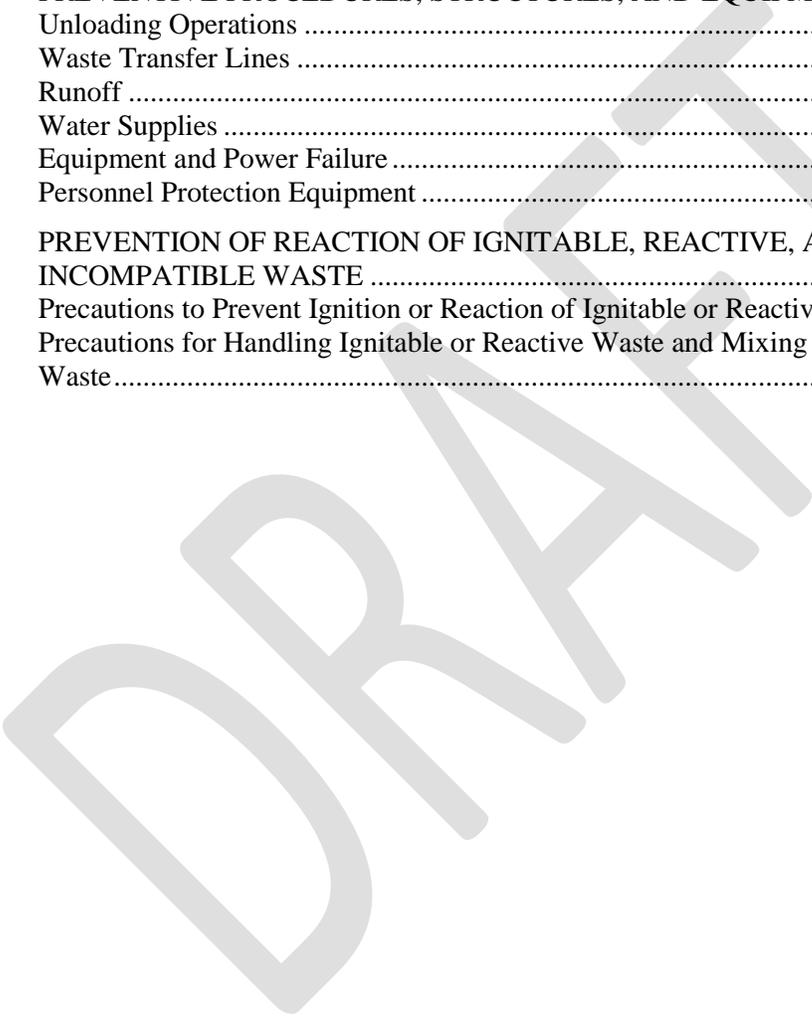
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1 **F PREPAREDNESS AND PREVENTION**

2 This Addendum discusses preparedness and prevention requirements; preventive procedures, structures,  
3 and equipment; and prevention of reaction of ignitable, reactive, and incompatible waste as related to the  
4 T Plant Complex (T Plant) Operating Unit Group.

5 **F.1 Preparedness and Prevention Requirements**

6 The following sections describe the preparedness and prevention measures to be taken at the T Plant  
7 Operating Unit Group.

8 **F.1.1 Equipment Requirements**

9 The following sections describe the internal and external communications systems, emergency  
10 equipment, and water for fire control required that could be activated by the T Plant Operating Unit  
11 Group Contingency Plan (Addendum J).

12 **F.1.1.1 Internal Communications**

13 The T Plant Operating Unit Group is equipped with an internal communication system to provide  
14 immediate emergency instructions to personnel. The communication system includes telephones,  
15 computers, public address system, and alarm systems. Telephones throughout the T Plant Operating Unit  
16 Group provide internal and external communication. Alarm systems exist to allow personnel to respond  
17 appropriately to various emergencies, including building evacuations, takeover events, and fire and/or  
18 explosion.

19 Immediate emergency instruction to personnel will be provided by a public address system using speaker  
20 horns and ceiling mounted speakers located throughout the T Plant Operating Unit Group.

21 **F.1.1.2 External Communications**

22 The T Plant will be equipped with devices for summoning emergency assistance from the Hanford Fire  
23 Department, the Hazardous Materials Response Team, and/or local emergency response teams as  
24 necessary. External communication will be made through the normal telephone system and/or two-way  
25 hand-held and vehicle mounted radios. In addition, the following external communication systems will  
26 be available for notifying persons assigned to emergency response organizations:

- 27 • Fire alarm pull boxes and fire sprinkler flow monitoring devices, connected to a system  
28 monitored around the clock by the Hanford Fire Department.
- 29 • Telephone number 911 from site offices phones/373-0911 from cellular phones, are the  
30 emergency contact points for the Hanford Facility; on notification, the Hanford Patrol Operations  
31 Center notifies and/or dispatches required emergency responders.
- 32 • Telephone number 373-3800, single point of contact for the emergency duty officer; this number  
33 can be dialed from any Hanford Facility telephone.
- 34 • Two-way radio system consisting of hand-held or vehicle radios; the system accesses the Hanford  
35 Site emergency network and can summon the Hanford Fire Department, Hanford Patrol, and/or  
36 any other assistance requested to handle emergencies.

37 **F.1.1.3 Emergency Equipment**

38 Emergency equipment will be available for use at the T Plant Operating Unit Group as required by  
39 [WAC 173-303-340\(1\)](#). A list of emergency equipment can be found in Addendum J, Contingency Plan.  
40 Addendum I, Inspection Requirements, details the inspections performed and the frequency of  
41 performance for emergency equipment.

42 **F.1.1.4 Water for Fire Control**

43 Water for fire protection will be supplied from a combination of the 200 West Area raw water and potable  
44 water system. The water distribution system is sized to provide adequate volume and pressure to supply

1 fire-fighting needs under normal and emergency conditions. In the event that water pressure is lost, the  
2 Hanford Fire Department will provide equipment as described in Permit Attachment 4, *Hanford*  
3 *Emergency Management Plan* (DOE/RL-94-02).

#### 4 **F.1.2 Aisle Space Requirement**

5 Aisle spacing in waste storage areas will be sufficient to allow the movement of personnel and fire  
6 protection equipment in and around the containers. This storage arrangement also meets the requirements  
7 of the International Fire Code for the protection of human health and the environment. A minimum  
8 30-inch aisle space will be maintained between rows of containers as required by  
9 [WAC 173-303-630\(5\)\(c\)](#) and [WAC 173-303-340\(3\)](#).

### 10 **F.2 PREVENTIVE PROCEDURES, STRUCTURES, AND EQUIPMENT**

11 The following sections describe preventive procedures, structures, and equipment.

#### 12 **F.2.1 Unloading Operations**

13 Methods are used to minimize the potential for puncturing or opening containers during waste unloading  
14 and are followed during packaging of the waste as well as during unloading. Qualified operators ensure  
15 that the following methods are carried out before waste is unloaded.

- 16 • Containers will be inspected for damage before being unloaded.
- 17 • Containers will be handled by appropriate equipment such as a forklift or crane during unloading.  
18 Waste will not be unloaded without the approval of operations supervision during inclement  
19 weather.
- 20 • Path to the storage area will be clear of obstructions.

#### 21 **F.2.2 Waste Transfer Lines**

22 The 2706-T Tank System is a standalone liquid waste management system described in Addendum C,  
23 Process Information. Liquid mixed waste generated in the 2706-T Building and in 2706-TA Building  
24 drains to the 2706-T and 2706-TA sumps. This waste will be pumped through stainless steel transfer  
25 lines via sump pumps to containers.

#### 26 **F.2.3 Runoff**

27 Addendum C, Process Information, contains information on run-off and run-on of liquids at the T Plant  
28 Operating Unit Group.

#### 29 **F.2.4 Water Supplies**

30 Raw water will be supplied to the T Plant Operating Unit Group from the Columbia River by way of  
31 underground (export) water lines. Sanitary (potable) water that is used at the T Plant Operating Unit  
32 Group will be derived from the Columbia River and is filtered and treated at a 200 Area water treatment  
33 facility before being distributed for use.

34 Potential contamination of the potable water supply at the T Plant Operating Unit Group will be prevented  
35 with reduced pressure backflow devices that are installed on all potable water lines.

#### 36 **F.2.5 Equipment and Power Failure**

37 A loss of electrical power could result in the loss of air balance affecting contamination control and the  
38 loss of alarms. The associated potential hazards are exposure to mixed and/or dangerous waste and  
39 isolation in areas of darkness. Although dangerous and mixed waste remains contained, measures will be  
40 taken to ensure that any affected buildings will be kept closed until ventilation is restored to control the  
41 potential for radiological contamination spread. Emergency lamps will be available to provide emergency  
42 lighting throughout various locations in the 221-T Building (galleries, stairwells, and canyon), and in the  
43 2706-T Building, 2706-TA Building, and 2706-TB Building. The public address system will be equipped

1 with an uninterruptable power supply, which allows for use during a power failure. Portable generator(s)  
2 will be available to power emergency lighting that could be set up as necessary. Loss of power could  
3 make it necessary for personnel to evacuate affected areas. Steps to place utilities in a safe and secure  
4 condition when an emergency has been declared and to deal with the loss of power are identified in  
5 Addendum E (Security).

6 In the event of a loss of electricity, waste treatment, storage, and movement activities will be stopped with  
7 waste containers and equipment placed in a safe condition. If transfer of liquid waste is in progress, the  
8 tank level gauges will be monitored to confirm that transfer operations will be halted unless personnel  
9 safety is jeopardized.

10 As described in Section F.1.1.2, emergency communication equipment will be available to summon  
11 emergency assistance in the event of a power loss.

## 12 **F.2.6 Personnel Protection Equipment**

13 Refer to Addendum J, Contingency Plan for information regarding required personnel protection  
14 equipment at the T-Plant Operating Unit Group.

## 15 **F.3 PREVENTION OF REACTION OF IGNITABLE, REACTIVE, AND/OR INCOMPATIBLE** 16 **WASTE**

17 The following section describes prevention of reaction of ignitable, reactive, and/or incompatible waste.

### 18 **F.3.1 Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Waste**

19 Based on the waste characteristics identified by the onsite generating unit or offsite generator, specific  
20 packaging instructions will be provided by the T-Plant operating organization. Liquids are transferred to  
21 the CWC Operating Unit Group for storage until treatment is available at the T-Plant Operating Unit  
22 Group. Incompatible waste will not be packaged within the same container.

23 The following general precautions will be taken at the T-Plant Operating Unit Group for handling  
24 ignitable or reactive waste and mixing of incompatible waste.

- 25 • No smoking will be allowed in the T-Plant Operating Unit Group dangerous waste management  
26 units.
- 27 • No open flames, sparking devices, cutting or welding, hot surfaces, or heat sparks are allowed  
28 while ignitable or reactive waste is present, unless a hot work permit has been approved.
- 29 • Compatibility testing will be conducted before mixing any two wastes (refer to, Addendum B,  
30 Waste Analysis Plan for details).
- 31 • Incompatible waste will be segregated by dikes, walls, berms or other Ecology approved device.  
32 (refer to Addendum B, Waste Analysis Plan and Addendum C, Process Information).
- 33 • At least yearly, the areas where ignitable or reactive waste is stored shall be inspected in  
34 accordance with [WAC 173-303-395\(1\)\(d\)](#) by facility personnel in the presence of a professional  
35 person who is familiar with the International Fire Code or in the presence of the Hanford Fire  
36 Marshal.
- 37 • Containers with ignitable or reactive waste will be stored in covered dangerous waste  
38 management units.

### 39 **F.3.2 Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible** 40 **Waste**

41 The T Plant receives waste containers that contain ignitable, reactive, and incompatible wastes that  
42 require treatment and/or repackaging. Ignitable or reactive waste and incompatible waste will be  
43 managed pursuant to [WAC 173-303-395\(1\)](#). At the T-Plant, waste will be managed to prevent the  
44 reaction of ignitable or reactive waste in the following ways:

1 For ignitable and reactive waste the requirements of [WAC 173-303-640\(9\)](#) will be met.

- 2 • The fire protection system will be designed to prevent or detect the occurrence of fires and  
3 explosions and to minimize their effect.
- 4 • Structures, systems, and components will be protected to ensure that emergency response  
5 activities are not hindered during a credible fire or explosion.
- 6 • In all cases, noncombustible or fire-resistant materials will be used throughout T-Plant wherever  
7 practicable.
- 8 • Fire detection, alarm, and suppression systems (e.g., extinguishers) will be compatible with the  
9 radiation, chemical, and temperature environments in which the systems are used.

10 It is possible to accidentally mix certain reagents together, either before use or during application that might  
11 react with each other to produce toxic or noxious fumes. The hazards presented to the operator by these  
12 fumes will be mitigated by various means that include engineered ventilation systems, the use of T-Plant  
13 operations/management requirements, and /or protective equipment. The possibility of inadvertent  
14 mixing will be minimized by requiring that all containers or tanks used to mix or store these reagents be  
15 flushed before reusing and by only using one mixture at a time when decontaminating equipment.

16 At the T-Plant, incompatible waste will be managed pursuant to [WAC 173-303-630\(9\)](#) in that:

- 17 • Waste will be packaged in containers in accordance with the overpack container requirements of  
18 [WAC 173-303-161](#). Incompatible waste, as defined in [WAC 173-303-040](#), will not be placed  
19 within the same outer container.
- 20 • Containers of incompatible wastes will be segregated within the building or otherwise separated  
21 by the use of devices meeting the requirements of [WAC 173-303-630\(9\)](#).

22 No smoking is permitted in these storage areas and "NO SMOKING" signs are posted.

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