

RCRA PART B PERMIT REAPPLICATION

FOR THE

IDAHO NATIONAL LABORATORY

Volume 22

Idaho Nuclear Technology and Engineering Center

Calcined Solids Storage Facility

Attachment 6 - Sections F-3, F-4, and F-5
Procedures to Prevent Hazards

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F-3. Documentation of Preparedness and Prevention Requirements

F-3a. Equipment Requirements [IDAPA 58.01.05.012 and 58.01.05.008; 264.32]

F-3a(1) Internal Communications [IDAPA 58.01.05.008; 40 CFR 264.32(a) and 264.34]

In any event (fire, explosion or release), the person involved/discovering can activate the nearest manual alarms and use communication devices (e.g., two-way radio, alarm system, etc.) to summon assistance, and make notifications to the plant shift supervisor/Emergency Action Manager (EAM) and/or the INL Fire Department. The INTEC EAM will ensure that all facility personnel are being, or have been, notified of the imminent or actual emergency situation, including a confirmation call to the Warning Communications Center (WCC), to verify the INL Fire Department is responding.

The CSSF buildings are equipped with communication devices (e.g., two-way radios, etc.) capable of summoning emergency assistance. The personnel involved in the operation have immediate access to emergency communication devices. If there is ever just one employee at the TSD while the unit is operating, that employee will be provided immediate access to a communication device for summoning emergency assistance.

F-3a(2) External Communications [IDAPA 58.01.05.008; 40 CFR 264.32(b)]

The CSSF buildings are equipped with communication devices (e.g., two-way radios, etc.) capable of summoning emergency assistance. The INTEC EAM and the WCC use communication devices that provide direct access to external emergency response agencies.

F-3a(3) Emergency Equipment [IDAPA 58.01.05.008; 40 CFR 264.32(c)]

The emergency/safety equipment located in the buildings associated with the CSSF includes the following:

- Portable fire extinguishers
- Emergency lighting.

1 Portable fire extinguishers are located in/near the instrument room of each Bin Set (except Bin
2 Set 7 as there is no waste present). Extinguishers are inspected monthly, to ensure that they are charged,
3 sealed, and accessible.

4 **F-3a(4) Water for Fire Control [IDAPA 58.01.05.008; 40 CFR 264.32(d)]**

5 The INTEC fire water distribution system is designed with redundant components. Water is
6 supplied to the underground fire water distribution piping by two identical above-ground storage tanks
7 (VES-UTI-111 and VES-UTI-112) each with a nominal capacity of 623,925 gal. The tanks are kept
8 continually full by two deep wells (WEL-UTI-501 and WEL-UTI-502) located in CPP-611 and CPP-612,
9 each equipped with electric motors. Pressure is maintained on the fire water distribution piping with two
10 electric jockey pumps located in CPP-606. The jockey pumps are not designed to supply fire water to the
11 building suppression systems if there is significant demand for water. Fire water is supplied by one of two
12 diesel-driven fire pumps located in CPP-1642 and CPP-1643.

F-4. Preventive Procedures, Structures, and Equipment

F-4a. Unloading Operations [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(i)]

13 There are no unloading operations associated with the CSSF.

F-4b. Run-off [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(ii)]

14 The units addressed in this permit reapplication are located within fully enclosed vaults. The area
15 surrounding each vault slopes away from the vault, carrying any storm water toward the streets, where the
16 water is collected and diverted away from the vault as demonstrated by Appendix 1 to Section B of this
17 permit reapplication. The CSSF are outside of the 100-year floodplain boundary as postulated in the Big
18 Lost River Flood Hazard Study, November 2005 (see the current revision of the Volume 3 of the INL
19 Permit Application). Additionally, there is no threat of contact between storm water and waste that could
20 contaminate other areas, since all wastes are contained inside stainless steel bins within vaults.

F-4c. Water Supplies [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(iii)]

21 Building features such as high-density concrete base and leak detection prevents contamination of
22 water supplies by calcine spills.

F-4d. Equipment and Power Failure [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(iv)]

1 Power failure requirements are applicable, but not of a concern, since there are no power-operated
2 waste management activities at the Bin Sets. Battery-powered emergency lights are located in buildings
3 that support Bin Sets 4, 5, 6, and 7 to provide lighting for personnel during a power failure. Buildings
4 that support Bin Sets 1, 2, and 3 are too small to need emergency lighting. The CAMs in Bin Sets 1, 2,
5 and 3 are not on standby power. After a power failure, radiological control technicians (RCTs) ensure the
6 CAMs are operating and no failures have occurred. The CAMs in bin sets 4, 5, 6, and 7 are on a standby
7 power circuit to allow monitoring during a power outage.

F-4e. Personnel Protection Equipment [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(v)]

8 The buildings are designed with various features that prevent undue exposure of personnel to
9 mixed waste. CAMs and surveys performed by RCTs are used to monitor all areas and aid in the
10 detection of contamination. Operations are conducted according to written procedures. See Section F-
11 3a(3) of this permit reapplication for a list of equipment available for emergency use, and see Section G,
12 the contingency plan of this permit reapplication, for a description of the locations of this equipment.

13 Pre-job briefings are held, as necessary, to ensure understanding of procedures, safety hazards,
14 and radiological concerns.

F-4f. Releases to the Atmosphere [IDAPA 58.01.05.012; 40 CFR 270.14(b)(8)(vi)]

15 All of the vaults cooling air inlet dampers and outlet dampers have been physically disabled in the
16 closed position to prevent operation or have been blind flanged. These actions have isolated the vaults
17 from the atmosphere. In the event of an airborne release from a bin, the vault will contain any airborne
18 material.

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

19 No ignitable or reactive wastes are stored in the CSSF. Waste compatibility was verified prior to
20 treatment in the calciners. No additional compatibility testing was performed for wastes stored in the
21 CSSF.