

RCRA PART B PERMIT
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 the instrument room of each Bin Set (except Bin Set 7 as
2 there is no waste present). Extinguishers are inspected monthly, to ensure that they are charged, sealed,
3 and accessible.

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

5 Two insulated fire water supply tanks with maximum capacities of 800,000 gal each supply the
6 INTEC fire water system. These tanks are maintained between 400,000 and 600,000 gallons of water for
7 fire suppression. Diesel powered pumps move water from wells to maintain these levels. Electric jockey
8 pumps are located on the outlet lines that keep the fire water lines pressurized. Electric pumps are located
9 on the outlets of these tanks to supply water for hose streams and automatic sprinklers at adequate volume
10 and pressure.

F-4. Preventive Procedures, Structures, and Equipment

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

11 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)]

12 The units addressed in this permit are located within fully enclosed vaults. The area surrounding
13 each vault slopes away from the vault, carrying any storm water toward the streets, where the water is
14 collected and diverted away from the vault as demonstrated by Appendix 1 to Section B of the permit
15 application. The CSSF are outside of the 100-year floodplain boundary as postulated in the Big Lost
16 River Flood Hazard Study, November 2005 (see the current revision of the Volume 3 of the INL Permit
17 Application). Additionally, there is very little threat of contact between storm water and waste that could
18 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)]

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

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

21 Power failure requirements are applicable, but not of a concern, since there are no power-operated
22 activities at the Bin Sets. Battery-powered emergency lights are located in buildings that support Bin

1 Sets 4, 5, 6, and 7 to provide lighting for personnel during a power failure. Buildings that support Bin
2 Sets 1, 2, and 3 are too small to need emergency lighting. The CAMs in Bin Sets 1, 2, and 3 are not on
3 standby power. After a power failure, radiological control technicians (RCTs) ensure the CAMs are
4 operating and no failures have occurred. The CAMs in bin sets 4, 5, 6, and 7 are on a standby power
5 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)]

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

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

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

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

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

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