

HWMA/RCRA STORAGE and TREATMENT PERMIT
for the
MATERIALS AND FUELS COMPLEX (MFC)

ATTACHMENT 7

Section G – Contingency Plan

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G. CONTINGENCY PLAN [IDAPA 58.01.05.008 and 012; 40 CFR 264.52 through 264.56]

In accordance with the requirements of Idaho Administrative Procedures Act (IDAPA) 58.01.05.008 and 40 *Code of Federal Regulations* (CFR) 264.50 through 264.56, this section of the Materials and Fuels Complex (MFC) Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) Permit Application describes the contingency plans and emergency response actions that will be taken at an MFC HWMA unit in response to emergencies such as fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste (HW) mixed waste (MW) or HW/MW constituents to the air, soil, or surface water that could threaten human health or the environment. For reference, the locations of the MFC HWMA units discussed in this section are shown in Attachment 1, Section B, MFC Facility Description, Attachment B-2.

The information provided in this section is organized by subsection as follows:

- Subsection G-1, General Information
- Subsection G-2, Emergency Action Manager List
- Subsection G-3, Emergency Response Procedures
- Subsection G-4, Notifications and Reporting
- Subsection G-5, Emergency Equipment
- Subsection G-6, Coordination Agreements
- Subsection G-7, Evacuation Plan.

G-1 General Information [IDAPA 58.01.05.008; 40 CFR 264.51(a) and (b)]

G-1(a) Purpose, Implementation, and Content

The HWMA unit contingency plan applies to all HWMA units on the MFC site and is designed to minimize hazards to human health or the environment from fire, explosion, or any unplanned sudden or non-sudden release of HW, MW, or HW/MW constituents to the air, soil, or surface water that could threaten human health or the environment, and describes the actions the HWMA unit and support emergency response personnel must take in response. The provisions of the plan will be implemented whenever there is a fire, explosion, or release of HW/MW or

1 HW/MW constituents that could threaten human health or the environment. This
2 contingency plan is consistent with Idaho National Laboratory (INL) emergency
3 plans. The INL Emergency Plan/RCRA Contingency Plan (PLN-114) will be
4 used in conjunction with the HWMA unit contingency plan in the event of an
5 imminent or actual emergency.

6 In the event of an emergency at a HWMA unit, the HWMA unit contingency plan
7 will be implemented to:

- 8 • Coordinate HWMA unit and the INL emergency response personnel
9 during the emergency
- 10 • Coordinate MFC response with INL facilities and other emergency
11 response personnel that may potentially be affected by or required to
12 respond to the emergency.

13 The HWMA unit contingency plan provides a mechanism for alerting MFC or
14 INL facilities and other response agencies to an emergency at a HWMA unit that
15 would require MFC or the INL emergency response personnel to respond to the
16 emergency.

17 **G-1(b) Copies and Amendments [IDAPA 58.01.005.08; 40 CFR 264.53(a) and (b)**
18 **and 264.54(a) through (e)]**

19 Copies of this HWMA unit contingency plan will be maintained at the facility. In
20 addition, copies of the contingency plan will be submitted to key INL, local, and
21 state response agencies [such as the MFC Emergency Control Center (ECC), INL
22 Fire Department, INL Warning Communications Center (WCC) and INL
23 Emergency Operations Center (EOC)] so that emergency response personnel from
24 these organizations will be familiar with the HWMA unit contingency plan and
25 can refer to the plan in the event of an emergency at a HWMA unit that may
26 affect other facilities at MFC and/or the INL.

27 This HWMA unit contingency plan will be reviewed and amended/updated, as
28 necessary, if the:

- 29 • HWMA permit is revised
- 30 • HWMA unit contingency plan fails in an emergency

- 1 • HWMA unit changes its design, construction, operations, maintenance, or
2 other circumstances in a way that materially increases the potential for
3 fires, explosions, or releases of HW, MW, or HW/MW constituents, or
4 changes the response necessary in an emergency

- 5 • List of HWMA unit Emergency Action Manager (EAM) changes

- 6 • List of HWMA unit emergency equipment changes.

7 **G-2 Emergency Action Manager List [IDAPA 58.01.05.008; 40 CFR 264.52(d),**
8 **264.55, and 264.56]**

9 This subsection lists the titles and names of MFC personnel filling the HWMA
10 unit EAM position, a description of the specific duties, roles, and responsibilities
11 of these personnel, and a brief description of how the HWMA unit emergency
12 response personnel function.

13 Due to the shift-work structure and remoteness of MFC, it is not possible or
14 practical for one individual to assume “primary” responsibilities, rather,
15 responsibility is best assigned through “redundant primary” EAMs, without
16 alternates. The on-duty EAM is available to respond 24 hours a day when notified
17 of an emergency by pager or telephone.

18 The names, addresses, and phone numbers of the MFC personnel available to fill
19 the EAM position are provided in Attachment G-1. The EAM list will be
20 amended when necessary to reflect the identity of personnel available to serve as
21 the EAM. These changes to the EAM list will be made as Equivalent
22 Materials/Information changes in accordance with Permit Condition II.M. The
23 current list of EAMs is maintained in Appendix G of the INL Emergency
24 Plan/RCRA Contingency Plan (PLN-114). EAM candidates are to be available to
25 serve 24 hours a day, when notified of an emergency by pager or telephone. The
26 INL Fire Station No. 2 Captain fulfills the role of Incident Commander (IC).

27 **G-2(a) Emergency Action Manager Duties**

28 MFC EAM-trained personnel have been given the responsibility and authority for
29 coordinating all emergency response actions. How the EAM functions in response
30 to an emergency at a HWMA unit is based on the INL site-wide Incident
31 Command System (ICS) philosophy, consistent with the INL Emergency
32 Plan/RCRA Contingency Plan. As part of their training, the EAMs are familiar
33 with all aspects of the HWMA unit contingency plan and the operations and

1 activities of the HWMA units. If emergency response is required, the EAM will
2 ensure that the appropriate actions are taken to resolve the emergency.

3 The INL Fire Department Station No. 2 is a fully staffed, trained, and equipped
4 emergency response force that can respond in an expeditious manner to potential
5 and actual emergencies at the HWMA unit. The INL Fire Department Station
6 No. 2 is available 24 hours a day to provide fire suppression, rescue, medical, and
7 hazardous material response. For emergencies that exceed the response
8 capabilities of INL Fire Department No. 2, assistance is available from INL Fire
9 Department Fire Stations No. 1 and 3, and through implementation of off-Site
10 memoranda of understandings (MOUs). When responding to time-urgent
11 situations or operational emergencies at a HWMA unit, the Fire Captain maintains
12 command of Station 2 personnel and works in unified command with the EAM.
13 Fire Department Station No. 2 also supplies its own emergency response
14 equipment.

15 The MFC EAM performs the duties of the emergency coordinator (EC) as
16 specified in IDAPA 58.01.05.008 and 40 CFR 264.56 and as described below.

- 17 • Whenever there is an imminent or actual emergency situation, the EAM
18 must immediately:
 - 19 - Activate internal HWMA unit or facility alarms or communication
20 systems, where applicable, to notify all facility personnel, and
 - 21 - Notify appropriate local/state emergency response agencies with
22 designated response roles if their help is needed.
- 23 • Whenever there is a HW/MW release, fire, or explosion, the EAM must
24 immediately identify the character, exact source, amount, and areal extent
25 of any released HW/MW. The EAM may do this by observation or review
26 of facility records or manifests, and, if necessary, by chemical analysis.
- 27 • Concurrently, the EAM must assess possible hazards to human health or
28 the environment that may result from the release, fire, or explosion. This
29 assessment must consider both direct and indirect effects of the release,
30 fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating
31 gases that are generated, or the effects of any hazardous surface water
32 run-off from water or chemical agents used to control fire and
33 heat-induced explosions).

- 1 • If the EAM determines that the HWMA unit has had a release, fire, or
2 explosion that could threaten human health, or the environment outside the
3 HWMA unit, the EAM must verbally report these findings as follows:
- 4 - If the EAM’s assessment indicates that evacuation of local/regional
5 areas may be advisable, the EAM must immediately notify
6 appropriate emergency response authorities. The EAM must be
7 available to help appropriate officials decide whether any areas
8 should be evacuated, and
- 9 - The EAM must immediately notify the local/regional/state
10 government communications center(s) and/or the official designated
11 as the on-scene coordinator for that geographical area, or the National
12 Response Center (using their 24-hour toll free number
13 800-424-8802). The report must include:
- 14 ○ Name and telephone number of reporter
- 15 ○ Name and address of MFC HWMA facility
- 16 ○ Time and type of incident (e.g., release, fire)
- 17 ○ Name and quantity of HW/MW involved, to the extent known
- 18 ○ The extent of injuries, if any
- 19 ○ The possible hazards to human health or the environment outside
20 the HWMA unit.
- 21 • During an emergency, the EAM must take all reasonable measures
22 necessary to ensure that fires, explosions, and releases do not occur, recur,
23 or spread to other HW/MW at the HWMA unit. These measures must
24 include, where applicable, stopping processes and operations, collecting
25 and containing released HW/MW, and removing or isolating containers.
- 26 • If the HWMA unit stops operations in response to a fire, explosion, or
27 release, the EAM must monitor for leaks, pressure buildup, gas generation,
28 or ruptures in valves, pipes, or other equipment, as appropriate.
- 29 • Immediately after an emergency, the EAM must provide for treating,
30 storing, or disposing of recovered HW/MW, contaminated soil or surface

- 1 • water, or any other material that results from a release, fire, or explosion at
2 the HWMA unit.

- 3 • The EAM must ensure that, in the affected area(s) of the HWMA unit:
 - 4 - No HW/MW that may be incompatible with the released HW/MW is
5 treated, sorted, or disposed until cleanup procedures are completed
 - 6 - All HWMA unit emergency equipment listed in the contingency plan
7 (see attachment G-2) is cleaned and fit for its intended use before
8 operations are resumed.

9 **G-3 Emergency Response Procedures [IDAPA 58.01.05.008; 40 CFR 264.52(b)**
10 **and 264.56]**

11 The following subsections describe the HWMA unit emergency response
12 procedures that will be implemented in response to emergencies at a HWMA unit,
13 such as fire, explosion, or any unplanned sudden or non-sudden release of HW,
14 MW, or HW/MW constituents to air, soil, or surface water that could threaten
15 human health or the environment.

16 **G-3(a) Contingency Plan Implementation [IDAPA 58.01.05.008; 40 CFR 264.51(b)**
17 **and 264.56(a), (c), (d)]**

18 The HWMA unit contingency plan is designed to minimize hazards to human
19 health and the environment and will be implemented whenever there is a fire,
20 explosion, or any unplanned sudden or non-sudden release of HW/MW or
21 HW/MW constituents to air, soil or surface water that could threaten human
22 health or the environment.

23 Table G-1 Provides examples of situations at an MFC HWMA unit that would
24 cause the HWMA unit contingency plan to be implemented.

1 Table G- 1. Situations that Could Activate the HWMA Unit Contingency Plan.

Fire and/or Explosion	
<ul style="list-style-type: none"> • Fire that results in any of the following: <ul style="list-style-type: none"> – Fire that may cause the release of toxic fumes – Fire that could spread HW/MW and contamination – Fire that could spread, possibly igniting materials in other locations on-site, or could cause heat-induced leaks or explosions – Fire that could endanger human health for any other reason. • Explosion that could result in danger from flying fragments or shock waves • Explosion that could ignite other HW/MW at the HWMA unit • Explosion that could release toxic and/or radioactive materials. 	
HW/MW Release	
<ul style="list-style-type: none"> • Release that results in any of the following: <ul style="list-style-type: none"> – Toxic or flammable liquids or vapors, causing a fire or gas explosion hazard – Soil contamination – Endangerment of human health or the environment for any other reason. 	

2 The HWMA units are continuously staffed when receiving HW/MW and when
 3 operating. If there is a fire, explosion, or release of a HW/MW in a HWMA unit
 4 as described above, the HWMA unit personnel will initiate an emergency
 5 response by using the dial 911 emergency telephone system, or by pulling a
 6 manual fire-alarm pullbox.

7 Personnel shall stand clear and upwind of the HWMA unit, keeping others clear
 8 and upwind of the area, but not putting themselves in danger. HWMA unit
 9 personnel are only concerned with proper notification, and being available until
 10 the MFC EAM arrives. The HWMA unit personnel will then turn over incident
 11 information to the EAM.

12 In response to an emergency that originates at a HWMA unit, the EAM has the
 13 authority and is required to:

- 14 • Recognize that an emergency condition exists and provide initial
 15 classification and assessment
- 16 • Take immediate corrective actions and provide recommendations for the
 17 protection of health and safety of MFC personnel, emergency response
 18 personnel, the INL population, and the public, and for the protection of
 19 property and environment

- 1 • Notify members of appropriate INL, DOE, state, local, and tribal
- 2 organizations (as appropriate)

- 3 • Stabilize the emergency.

4 Three classifications of imminent or actual emergencies (as defined in DOE Order
5 5500.2a) could occur at the HWMA unit that may require support from the INL
6 emergency response personnel. The classifications of Alert, Site Area Emergency,
7 and General Emergency are briefly described in the following subsections.

8 **G-3(b) Alert**

9 An Alert is an emergency that is in progress or has occurred, and involves an
10 actual or potential substantial reduction of the level of safety of a facility or the
11 Site. Limited off-Site releases of hazardous materials may occur, but are not
12 expected to exceed applicable permissible limits.

13 **G-3(c) Site Area Emergency**

14 A Site Area Emergency is an emergency that is in progress or has occurred, and
15 which involves actual or likely major failures of facility functions needed for the
16 protection of on-Site personnel, the public health and safety, and/or the
17 environment. Releases of HW/MW are likely or are occurring, but are not
18 expected to exceed applicable permissible limits beyond the INL administrative
19 boundary.

20 **G-3(d) General Emergency**

21 A General Emergency is an emergency that is in progress or has occurred and
22 involves actual or imminent substantial reduction of facility safety systems.
23 Releases of HW/MW off of the INL site are occurring or are expected to occur
24 and will exceed applicable permissible limits.

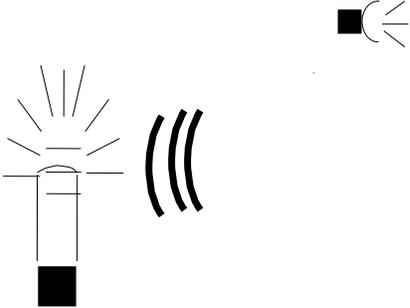
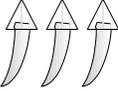
25 **G-3(e) Emergency Signals**

26 Several emergency signals have been defined and are used to notify HWMA unit
27 personnel that site-wide or HWMA unit specific emergencies exist. HWMA unit
28 personnel are trained to respond appropriately to these signals. In addition,
29 HWMA unit personnel may be notified of an evacuation by use of the paging
30 system. Information regarding the different signals, their meaning, and the action
31 to be taken when they are activated is summarized in Table G-2. The siren signals
32 are site-wide, while slow whoops and radiation alarms are facility-specific. In

1 addition, emergency messages may be sent over the paging system. Sirens are of
2 sufficient volume to be heard by personnel working at all HWMA units.

3 The EAM will determine whether or not the HWMA unit will be evacuated as a
4 result of a HW/MW incident. During a HWMA unit evacuation, personnel in the
5 area are to assemble upwind at a safe distance from the HWMA unit. Personnel
6 will report pertinent situation information to the EAM and then evacuate to a
7 predetermined assembly area. All HWMA unit personnel shall remain at the
8 assembly area and follow directions as provided by the EAM. A map indicating
9 emergency routes out of the HWMA unit, and the main and alternate evacuation
10 routes leading away from HWMA unit and exiting the MFC protective property
11 area, is provided in Attachment G-3.

1 Table G-2. MFC Emergency Signals.

Signals Used	Type of Emergency	Required Action(s)
 Steady siren	Take Cover	<i>All Personnel</i> —Immediately seek shelter in nearest building with All-Call PA system, avoiding buildings with flashing blue lights. Prepare to evacuate.
Steady siren followed by an All-Call PA stating: This is a Security Take Cover 	Security Take Cover	<i>All Personnel</i> —Immediately go indoors. Stay indoors and await further instructions over All-Call PA system.
Flashing blue light(s)/three horn blasts followed by All-Call PA  Blue Light Three - Horn Blasts PA Announcement	Criticality	<i>Personnel in Affected Facility</i> —Immediately evacuate affected facility and assemble in designated assembly area. <i>Personnel Who Normally Work in Affected Facility</i> —Report to designated assembly area. <i>All Other Personnel</i> —Stay clear of affected facility.
Alternating siren 	Evacuation	<i>All Personnel</i> —Proceed immediately to bus loading area and board buses.
Radiation alarm (normally fast ringing bell) 	High Radiation or Contamination	<i>Personnel in Affected Area</i> —Vacate immediate vicinity. Contact Health Physics Technician.
Slow-whoop followed by All-Call PA 	Fire	<i>Personnel in Affected Facility</i> —Evacuate affected facility. <i>All Other Personnel</i> —Stay clear of affected facility.
All-Call PA 	Any Emergency	<i>All Personnel/Personnel in Affected Facility</i> —Follow verbal instruction(s).

1 For a major incident such as a fire, explosion, or any unplanned sudden or
2 non-sudden release of HW/MW or HW/MW constituents to air, soil or surface
3 water that could threaten human health or the environment (or have the potential
4 for such to occur), evacuation of the MFC site may be necessary. Evacuation
5 activities will be coordinated between the EAM, on-Site personnel and off-Site
6 agencies, as necessary.

7 **G-4 Notifications and Reporting [IDAPA 58.01.05.008; 40 CFR 264.56(a),(d),(i),**
8 **264.196(d) and 270.30(l)(6)]**

9 **G-4(a) Notification and Reporting—General (264.56(a),(d),(i))**

10 Whenever there is an imminent or actual emergency situation, the EAM must
11 immediately:

- 12 • Activate internal HWMA unit alarms or communication systems, where
13 applicable, to notify all HWMA unit personnel, and notify appropriate
14 state or local emergency response agencies with designated response roles
15 if their help is needed.
- 16 • If the EAM determines that the HWMA unit has had a release, fire, or
17 explosion that could threaten human health or the environment outside the
18 HWMA unit, the EAM must verbally report these findings as follows:
 - 19 - If the EAM's assessment indicates that evacuation of local/regional
20 areas may be advisable, the EAM must immediately notify
21 appropriate emergency response authorities. The EAM must be
22 available to help emergency response officials decide whether any
23 areas should be evacuated.
 - 24 - The EAM must immediately notify the local/regional/state
25 government communications center(s) and/or official designated as
26 the State on-scene coordinator for that geographical area (in the
27 applicable regional contingency plan under part 1510 of this title), or
28 the National Response Center (using their 24-hour toll free number
29 800-424-8802). In addition, the EAM must notify the State
30 Communications Center at 800-632-8000. The report must include
31 the following:
 - 32 ○ Name and telephone number of reporter;

- 1 ○ Name and address of MFC HWMA facility
- 2 ○ Time and type of incident (e.g. release, fire);
- 3 ○ Name and quantity of material(s) involved, to the extent known;
- 4 ○ The extent of injuries, if any; and
- 5 ○ The possible hazards to human health, or the environment,
- 6 outside the HWMA unit.

- 7 ● The HWMA unit owner or operator must note in the operating record the
- 8 time, date, and details of any incident that requires implementing the
- 9 contingency plan if the EAM determines that the HWMA unit has had a
- 10 release, fire, or explosion that could threaten human health or the
- 11 environment outside the HWMA unit. Within 15 days after the incident,
- 12 the HWMA unit owner/operator must submit a written report of the
- 13 incident to the DEQ Director.

- 14 ● The report must include:
- 15 - Name, address, and telephone number of the owner or operator;
- 16 - Name, address, and telephone number of the MFC HWMA facility;
- 17 - Date, time, and type of incident (e.g., fire, explosion);
- 18 - Name and quantity of material(s) involved;
- 19 - The extent of injuries, if any
- 20 - An assessment of actual or potential hazards to human health or the
- 21 environment, where this is applicable; and
- 22 - Estimated quantity and disposition of recovered material that resulted
- 23 from the incident.

1 Reports will be sent to:

2 Director—Idaho Department of Environmental Quality

3 1410 North Hilton

4 Boise, ID 83706-1225

5 **G-4(b) Notifications and Reports—Non-Compliance (270.30(l)(6))**

6 The following protocol will be implemented by the HWMA unit owner or
7 operator if an event of non-compliance with the contingency plan occurs:

- 8 • The HWMA unit owner or operator will verbally report to the DEQ
9 Director, within 24 hours from the time the permittee becomes aware of
10 the circumstances, any noncompliance with the HWMA unit contingency
11 plan that may endanger health or the environment. The verbal report must
12 include:
- 13 - Information concerning release of any HW/MW that may cause an
14 endangerment to public drinking water supplies
 - 15 - Any information of a release or discharge of HW/MW or of a fire or
16 explosion from the HWMA unit that could threaten the environment
17 or human health outside the HWMA unit.
 - 18 - The description of the occurrence and its cause shall include:
 - 19 ○ Name, address, and telephone number of the HWMA unit
 - 20 ○ Date, time, and type of incident
 - 21 ○ Name and quantity of material(s) involved
 - 22 ○ The extent of injuries, if any
 - 23 ○ An assessment of actual or potential hazards to the environment
24 and human health outside the HWMA unit, where this is
25 applicable
 - 26 ○ Estimated quantity and disposition of recovered material that
27 resulted from the incident.

- A written report shall also be provided to the DEQ Director within 5 days of the time that the HWMA unit owner or operator becomes aware of the circumstances. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The DEQ Director may waive the 5 day written notice requirement in favor of a written report within 15 days.

G-4(c) Notifications and Reports—Tank Systems (264.196(d))

Whenever there is a release to the environment from a tank or tank system, the HWMA unit owner or operator will:

- Verbally report to the DEQ Director, within 24 hours of its detection, any release to the environment, except as described below. If the release has been reported pursuant to 40 CFR Part 302, that report will satisfy this requirement. A leak or spill of hazardous waste is exempted from this report if it is:
 - Less than or equal to a quantity of one (1) pound, and
 - Immediately contained and cleaned up.
- Within 30 days of detection of a release to the environment, the HWMA unit owner or operator must submit a written report containing the following information to the DEQ Director:
 - Likely route of migration of the release;
 - Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);
 - Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within 30 days, the data must be submitted to the Regional Administrator as soon as they become available;
 - Proximity to downgradient drinking water, surface water, and populated areas; and

1 - Description of response actions taken or planned.

2 **G-4(d) Identification of Hazardous Materials [IDAPA 58.01.05.008; 40 CFR**
3 **265.56(b)]**

4 Immediately, the EAM will identify the character, exact source, amount, and areal
5 extent of any released HW/MW. The primary sources of information about the
6 HW/MW at the HWMA units include:

- 7 • HWMA unit and/or MFC personnel familiar with the HWMA unit and/or
8 working in the HWMA unit at the time the imminent or actual emergency
9 was first recognized
- 10 • Various records that document HW/MW quantities and conditions at
11 various stages in the process stream at the HWMA unit
- 12 • Records that document quantities/conditions of nonprocess stream
13 HW/MW that should be taken into consideration when planning
14 emergency response actions.

15 **G-4(e) Assessment [IDAPA 58.01.05.008; 40 CFR 264.56(c) and (d)]**

16 Concurrently, the EAM, will assess any possible threat to human health or the
17 environment that may result from the release, fire, or explosion. The EAM will
18 assess the hazards posed by each emergency by evaluating the:

- 19 • Origin of the HW/MW release, fire, or explosion
- 20 • Conditions of the source
- 21 • HW/MW involved
- 22 • Radiological conditions
- 23 • Physical state of the HW/MW release
- 24 • Noticeable reactions
- 25 • Knowledge of the HW/MW being treated and stored at the HWMA unit.

26 Based on this assessment, the EAM will determine the appropriate types of
27 notifications, reports, and level of response action. The EAM will then perform

1 the necessary notifications and take the appropriate protective actions. This is in
2 accordance with Subsection G-4(a), Notification and Reporting.

3 **G-4(f) Control Procedures [IDAPA 58.01.05.008; 40 CFR 264.52(a)]**

4 Procedures for responding to various emergency conditions are described below.
5 Natural disasters such as tornadoes may also occur. For natural disasters, the
6 MFC will be secured and personnel will be evacuated, as appropriate.

7 **G-4(f)(1) Fire Response**

8 The following actions will be taken at the HWMA unit in response to a fire:

- 9 • The INL Fire Department Station 2 personnel and appropriate safety
10 personnel will be notified
- 11 • Personnel in the immediate vicinity will be evacuated as appropriate
- 12 • If water reactive HW/MW is present in the HWMA unit, Class D fire
13 suppression media will be used to extinguish the fire
- 14 • Response personnel will wear appropriate personal protective equipment
15 (PPE)
- 16 • Qualified emergency response personnel will administer medical
17 treatment to the injured
- 18 • The EAM will take additional emergency response actions as necessary.

19 The INL Fire Station No. 2 is fully trained and equipped to handle all types of
20 fires that may occur and are knowledgeable regarding the reactive nature and
21 associated hazards of HW/MW being treated at the HWMA unit.

22 **G-4(f)(2) HW/MW Release Response**

23 The initial response to any HW/MW release will be oriented toward protecting
24 human health and the environment. Identification, containment, decontamination,
25 and disposal of the HW/MW will be the secondary responses. All release
26 responses will be well planned and conducted while wearing all appropriate safety
27 equipment and PPE.

1 The affected area will be defined using wind direction and velocity, appropriate
2 sampling and monitoring techniques, and available emergency reference
3 materials.

4 **G-4(f)(2)(a) HW/MW Release Cleanup and Decontamination Verification**

5 When the EAM determines that the release is contained and the cleanup and
6 decontamination activities can be performed without jeopardizing personnel
7 safety, such activities will be conducted under the supervision of qualified
8 personnel following termination of the emergency. The target cleanup level,
9 decontamination, and HW/MW disposal procedures will be developed and
10 approved by an industrial hygienist, safety engineer, and waste engineer based on
11 the nature of the release. Cleanup, decontamination, and verification activities
12 will be recorded in the HWMA unit's operating record.

13 HW/MW releases will be cleaned up, decontaminated, and verified to ensure that
14 hazardous constituents have been removed as specified in the previous
15 subsections.

16 **G-4(g) Prevention of Recurrence or Spread of Fires, Explosions, or Releases**
17 **[IDAPA 58.01.05.008; 40 CFR 264.56(e) and (f)]**

18 In an emergency, the EAM will initiate response actions that prevent the
19 recurrence or spread of fires, explosions, and released HW/MW. Operations in the
20 vicinity of, or affected by, the incident will cease, emergency response will be
21 initiated, and unnecessary personnel evacuated.

22 If INL operations are placed in standby or shut down as a result of an emergency,
23 the EAM can direct the reentry planning group to send a team to monitor for
24 leaks; pressure buildup; gas generation; or ruptures in valves, pipes, or other
25 equipment, depending on the facility.

26 Response measures for a HW/MW release include identifying its source and
27 either repairing or replacing the container/containment. For example, a breached
28 or leaking container can be placed into a second container.

29 These control procedures will be applied as appropriate during incident response
30 and cleanup. No routine operations will resume until affected systems have been
31 repaired and inspected to ensure their safe operation.

1 **G-4(h) Storage and Treatment of Released Material [IDAPA 58.01.05.008; 40 CFR**
2 **264.56(g) and (h)(1)]**

3 Small-volume releases and the residuals from larger release cleanup will be
4 covered with an appropriate release control material, collected and placed into
5 appropriate containers. Releases of solids will be returned to the original
6 container, if it is secure. All collected HW/MW will be handled, stored,
7 transported, treated, or disposed in accordance with State of Idaho HW/MW
8 management regulations.

9 Precautions will be taken to preclude mixing of incompatible HW/MW in
10 accordance with IDAPA 58.01.05.008; 40 CFR 264.56(h)(1). Specifically, some
11 HW/MW are extremely reactive with water [such as sodium
12 (Na)/sodium-potassium alloy (NaK)], halogenated hydrocarbons, and many other
13 organic materials. Except for reactive components being purposefully mixed in
14 the process vessel and tanks, all HW/MW treatment and handling areas outside of
15 HWMA unit treatment vessels, container and/or tank containments will be free of
16 other HW/MW that might react with released reactive HW/MW. Liquid corrosive
17 HW/MW will be segregated while in storage and/or during treatment.

18 Containers of HW/MW will not be accepted or located in an area where a
19 HW/MW release has occurred until cleanup is complete, an inspection is
20 performed in accordance with the inspection schedule, and the HWMA unit
21 manager approves the area as suitable for use.

22 **G-4(i) Post-Emergency Equipment Maintenance [IDAPA 58.01.05.008; 40 CFR**
23 **264.56(h)(2)]**

24 HWMA unit personnel will ensure that each piece of HWMA unit emergency
25 equipment in the HWMA unit used in response to an emergency is cleaned
26 (decontaminated), in operating condition for future emergency response, and/or
27 replaced, if necessary. HWMA unit personnel will report completion of these
28 activities to the EAM. Any equipment contaminated during emergency response
29 that cannot be cleaned (such as PPE) will be disposed of appropriately and
30 replaced. An overall HWMA unit inspection will be conducted prior to approval
31 to resume operations in the affected area.

1 **G-4(j) Container Releases and Leakage [IDAPA 58.01.05.008; 40 CFR 264.52 and**
2 **264.171]**

3 Container-related HW/MW releases may occur during container receiving and
4 HW/MW handling and storage at the HWMA unit. Procedures for responding to
5 these incidents are described in Subsection G-4(e).

6 **G-4(k) Tank Releases and Leakage [IDAPA 58.01.05.008; 40 CFR 264.52 and**
7 **264.196]**

8 Tank releases and leakage may occur at the Sodium Components Maintenance
9 Shop (SCMS) HWMA unit.

10 In the event of a SCMS tank system breach, response measures will first be
11 oriented toward protecting human health and safety. Cessation of use, removal of
12 HW/MW from the affected systems, and protection of the environment will be
13 secondary responses. Cleanup, decontamination, and tank repair will be tertiary
14 responses. Within 24 hours, or if this is not possible, at the earliest practicable
15 time after detection of the release, HWMA unit personnel will remove as much of
16 the HW/MW from the tank system (including tank secondary containment) as
17 necessary to prevent further release and harm to human health and the
18 environment, and to allow for inspection and repair of the tank system. However,
19 because of the highly reactive nature of HW/MW to be treated at SCMS,
20 removing HW/MW from breached tanks requires transfer to another form of
21 containment with particular attention to the control of reactive conditions. Proper
22 implementation of the safest and most environmentally protective methods of
23 removing HW/MW from a breached SCMS tank will require careful
24 implementation. The cessation of use and removal of tank contents will be
25 performed as described in the following subsections.

26 Secondary containment for the tanks in SCMS consists of an epoxy coated
27 concrete floor and/or epoxy coated sump. Cracks or other defects in the epoxy
28 coated floor are temporarily covered until repairs are made. Repairs to the epoxy
29 coating are done at least weekly. Cracks or gaps identified in the epoxy coated
30 sump pit are repaired through the work control process, due to confined space
31 entry and radiological work permit requirements to enter sump pit.

1 **G-4(k)(1) Cessation of Use and Removal of Contents from SCMS Tanks**

2 **G-4(k)(1)(a) Na/NaK or Hydroxide Release/Leak From 90-Gal Water Wash Vessel**
3 **(WWV)**

4 Although ignitable and reactive HW/MW is processed in the WWV, operation of
5 the WWV limits the amount of HW/MW allowed in the WWV at any one time.
6 The WWV burn pan is administratively controlled to contain a maximum amount
7 of ignitable and reactive HW/MW at any one time, but is never to exceed 156
8 gallons/day. A detailed engineering evaluation is written and maintained in the
9 facility operating record to document the maximum amount of ignitable and
10 reactive HW/MW that can be treated in the WWV at any one time, and to
11 determine needed safety and administrative limits. These limits are implemented
12 through operating procedures to prevent over-pressurization of the WWV. This
13 small amount of HW/MW is processed in the burn pan, which sits directly above
14 a 50 to 90-gal reservoir of water. When the HW/MW drains to the burn pan into
15 the water, it produces a caustic HW/MW. This controlled reaction is safely
16 contained in the WWV. As a result, the cessation of use and removal of tank
17 contents from the WWV will typically involve a corrosive solution, and the
18 actions listed below will be performed for ignitable, reactive, and corrosive
19 HW/MW leaks. The cessation of use and removal of contents from the WWV will
20 be performed as follows:

- 21 • Emergency response activities will be initiated in accordance with
22 Subsection G-4(e)
- 23 • If safe to do so, personnel will immediately secure the system to prevent
24 continued inflow of HW/MW into the WWV (eliminate vacuum or
25 pressure on tank) and reduce mobility of tank contents (turn tank heaters
26 off)
- 27 • Conditions will be evaluated to gain needed information to implement the
28 most appropriate method of cessation of use and removal of contents
- 29 • Continued processing is used as a method to remove the solution,
30 produced as a result of deactivating the ignitable, reactive HW/MW from
31 the WWV. This is appropriate as the solution in the WWV gravity-drains
32 to the scrubber water tank during processing

- 1 • If the WWV cannot be emptied via continued processing (gravity drained
2 to the scrubber-water tank), it will be emptied by transferring any
3 ignitable, reactive, or corrosive HW/MW to compatible containers

- 4 • Once the breach has ceased leaking, the following actions will be taken:
 - 5 - Ignitable, reactive, or corrosive HW/MW will be collected from the
6 secondary containment (High Bay Floor or floor drain piping and
7 Low Bay Pit). The ignitable, reactive, or corrosive HW/MW will then
8 be transferred to compatible containers or into an SCMS tank system
9 for continued processing

 - 10 - The release area will be cleaned and decontaminated in accordance
11 with Subsection G-4(e)

 - 12 - The WWV will be repaired at the point of the leak.

13 **G-4(k)(1)(b) Hydroxide Release/Leak From 30-Gal Carbonation Vessel**

14 The carbonation vessel is designed to be a flow-through tank and, therefore, is not
15 likely to have a tank release or breach. In the event a leak or breach, the cessation
16 of use and removal of contents from the carbonation vessel will be performed as
17 follows:

- 18 • Emergency response activities will be initiated in accordance with
19 Subsection G-4(e)

- 20 • Personnel will immediately secure the system to prevent continued inflow
21 of caustic solution into the carbonation vessel

- 22 • The corrosive HW/MW in the vessel at the time of the leak or breach will
23 be allowed to gravity drain back to the scrubber water tank

- 24 • If the carbonation vessel cannot be emptied via gravity draining to the
25 scrubber water tank, it will be emptied by transferring any corrosive
26 HW/MW to a compatible container

- 1 • Once the breach has ceased leaking, the following actions will be taken:
 - 2 - Removal of the contents of the carbonation vessel will be verified.
 - 3 - Any HW/MW will be collected from secondary containment (High
4 Bay Floor, floor drain piping, or Low Bay Pit) and transferred to
5 compatible containers or into the scrubber water tank for continued
6 processing
 - 7 - The area will be cleaned and decontaminated, neutralizing and
8 removing residual corrosive HW/MW in accordance with
9 Subsection G-4(e)
 - 10 - The carbonation vessel will be repaired at the point of the leak

11 **G-4(k)(1)(c) Hydroxide Release/Leak From 300-Gal Scrubber Water Tank**

12 The cessation of use and removal of contents from the scrubber-water tank will be
13 performed as follows:

- 14 • Emergency response activities will be initiated in accordance with
15 Subsection G-4(e)
- 16 • Personnel will immediately secure the system to prevent continued inflow
17 of HW/MW into the scrubber-water tank
- 18 • The contents of the scrubber-water tank will be transferred to compatible
19 containers
- 20 • Once the breach has ceased leaking, the following actions will be taken:
 - 21 - Removal of the contents will be verified
 - 22 - Any HW/MW will be collected from secondary containment (Low
23 Bay Pit vault) and transferred to compatible containers
 - 24 - The release area will be cleaned and decontaminated, neutralizing and
25 removing residual corrosive HW/MW in accordance with
26 Subsection G-4(e)
 - 27 - The scrubber water tank will be repaired at the point of leak.

1 **G-4(k)(2) Containment of Visible Releases to the Environment**

2 All processing of HW/MW at a HWMA unit occurs indoors. All major processing
3 tanks, areas, and most process piping are bounded by secondary containment
4 basins of sufficient capacity to contain the collective volumes of all tanks. As
5 such, the conventional type of release to the environment (i.e., a large puddle of
6 hazardous substance on the ground) is not likely even in the event of a large leak
7 from a tank. However, the open air reaction of released HW/MW could produce
8 noxious fumes that could escape the confines of the HWMA unit and be released
9 to the atmosphere.

10 In the event of any type of environmental and/or atmospheric release from a
11 HWMA unit, response measures will first be oriented toward protecting human
12 health and safety, and then toward containing and recovering the released
13 HW/MW and restoring the affected environment.

14 **G-4(k)(3) Certification of Major Repairs**

15 As required by IDAPA 58.01.05.008 and 40 CFR 264.196(f), any extensive repair
16 to a tank system will be reviewed and certified by a qualified professional
17 engineer. This certification must be placed in the operating record and maintained
18 until closure of the facility.

19 **G-5 Emergency Equipment [IDAPA 58.01.05.008; 40 CFR 264.52(e)]**

20 Emergency equipment such as fire extinguishers and spill/release control
21 equipment is staged at each HWMA unit as appropriate for the HW/MW stored
22 and/or treated in the HWMA unit.

23 A list of the equipment staged in each HWMA unit is provided in
24 Attachment G-2. A map of the MFC site, showing the emergency equipment
25 locations and access routes, is provided in Attachment G-3. Inspection of the
26 equipment is described in Attachment 4, Section F, Inspections. The exact
27 quantities and locations of the equipment are listed on the HWMA unit inspection
28 logs.

29 MFC HWMA units rely primarily on the INL Fire Department Station No. 2 to
30 provide emergency response personnel, equipment, and materials to respond to an
31 emergency at an HWMA unit. Maintenance and inspection of this equipment is
32 the responsibility of the INL Fire Department Station No. 2.

1 **G-6 Coordination Agreements [IDAPA 58.01.05.008; 40 CFR 264.52(c), 264.37]**

2 In the event of a HW/MW emergency at a HWMA unit that requires emergency
3 response beyond the capabilities of the HWMA unit, INL and local and state
4 emergency response assistance can be summoned. As required by IDAPA
5 58.01.05.008; 40 CFR 264.52(c), 264.37, arrangements have been made with
6 local hospitals, police departments, fire departments and state and local
7 emergency response teams for support (if requested) in the event of an
8 emergency. A listing of existing MOUs/memorandum of agreement (MOAs) with
9 local and state emergency response agencies is contained in the INL Emergency
10 Plan/RCRA Contingency Plan (appendix C). If a state or local authority declines
11 to enter into such agreements the refusal will be included in the operating record.

12 **G-7 Evacuation Plan [IDAPA 58.01.05.008; 40 CFR 264.52(f)]**

13 HWMA unit evacuation plans will be implemented where there is a possibility
14 that evacuation of the HWMA unit could be necessary. In the event that an
15 evacuation is necessary, the EAM will coordinate with other emergency response
16 organizations. In the event an emergency originating on the INL has the potential
17 to impact a HWMA unit, and evacuation is or may be necessary, the EAM will be
18 so advised by the Warning Communications Center (WCC) and will in turn notify
19 HWMA unit personnel. Standard INL procedures will be followed during such an
20 evacuation. MFC and HWMA unit building/area evacuation routes are provided
21 in Attachment G-3.

Attachment G 1

MFC HWMA Unit Emergency Personnel Contact List

MATERIALS AND FUELS COMPLEX EMERGENCY PERSONNEL CONTACT LIST			
Name	Address	Work Phone	Home Phone/Cell
Emergency Action Managers (EAM)			
Mary Anne Willmore	3953 E 600 N, Rigby, ID 83442	208-533-7737	208-589-8338
James Mayer	6118 Fox Run Drive, Idaho Falls, ID 83402	208-533-7999	208-520-6023
Robert Belcher	1190 Alayssa Dr., Idaho Falls, ID 83402	208-533-7715	208-313-1844
Pamela Crane	4700 E. Sagewood Drive, Idaho Falls, ID 83406	208-533-7179	208-681-7274
Jeff Riedesel	228 Stone Run Lane, Idaho Falls, ID 83404	208-533-7322	208-521-7036
Doug Crawford	1415 Whitewater Dr. #3210, Idaho Falls, ID 83402	208-533-7942	208-520-6324
Incident Commander			
INL Fire Station No. 2	MFC Complex	208-533-7233 208-533-7968	NA

Attachment G 2

MFC HWMA Unit Emergency Equipment List

MFC HMWA UNIT EMERGENCY EQUIPMENT LIST¹

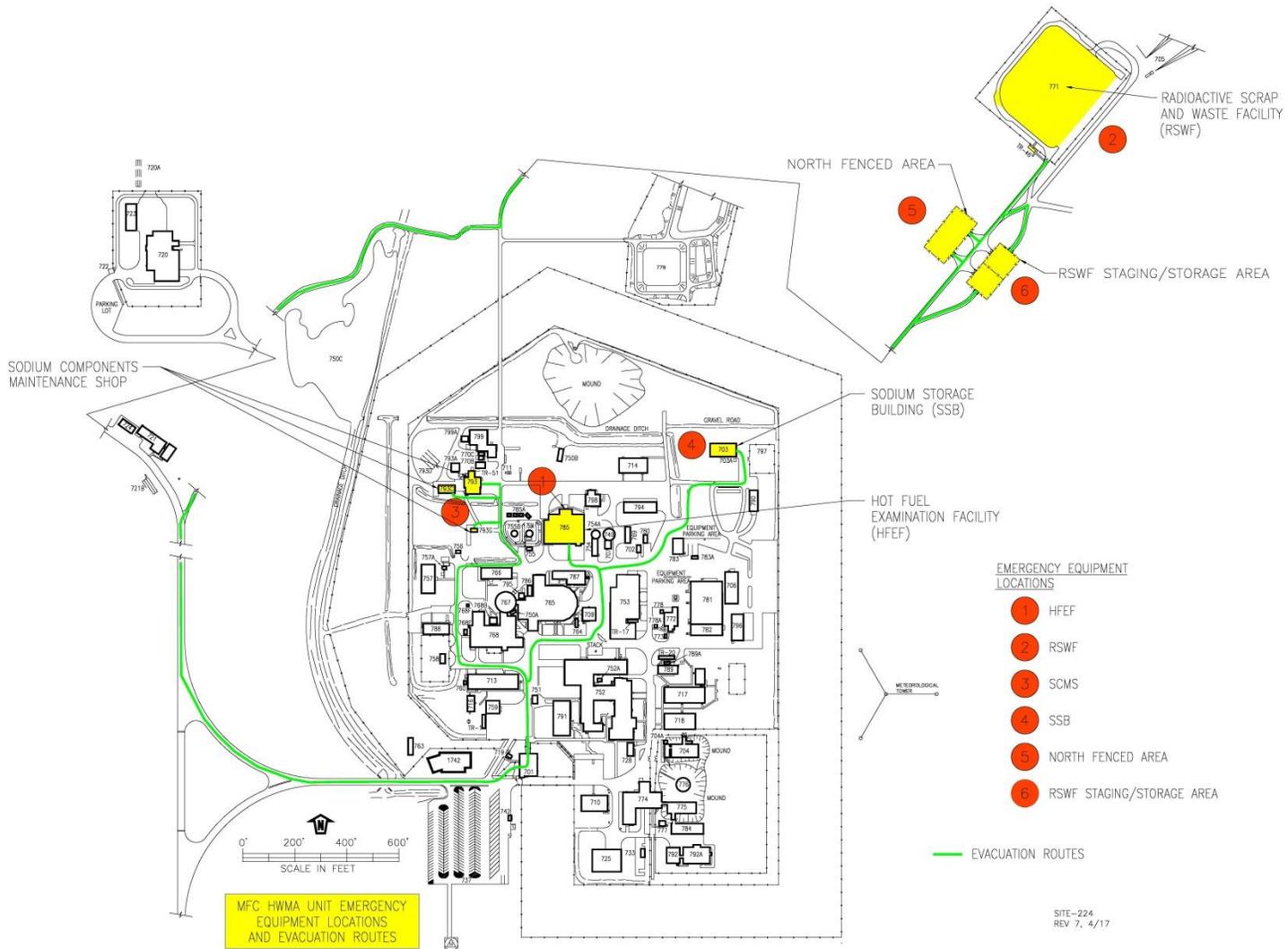
Equipment Available	HFEF	RSWF	SCMS	SSB	RSWF Staging/Storage Area	NFA
	785	771	793/793C	703	—	—
Fire Extinguisher	X	—	X	X	—	—
Fire Pullbox	X	—	X	X	—	—
Telephone/Radio/Cell phone	X	X	X	X	X	X
Spill Control Cabinet/Material	X	—	X	X	—	—
Eye Wash Station	X	—	X	—	—	—
Emergency Shower	—	—	X	—	—	—

1. The type of equipment, exact quantities and locations of the HMWA unit emergency equipment are listed on the facility-specific HMWA unit inspection logs. The schedule for inspecting the emergency equipment is provided in , Attachment 4, Section F.

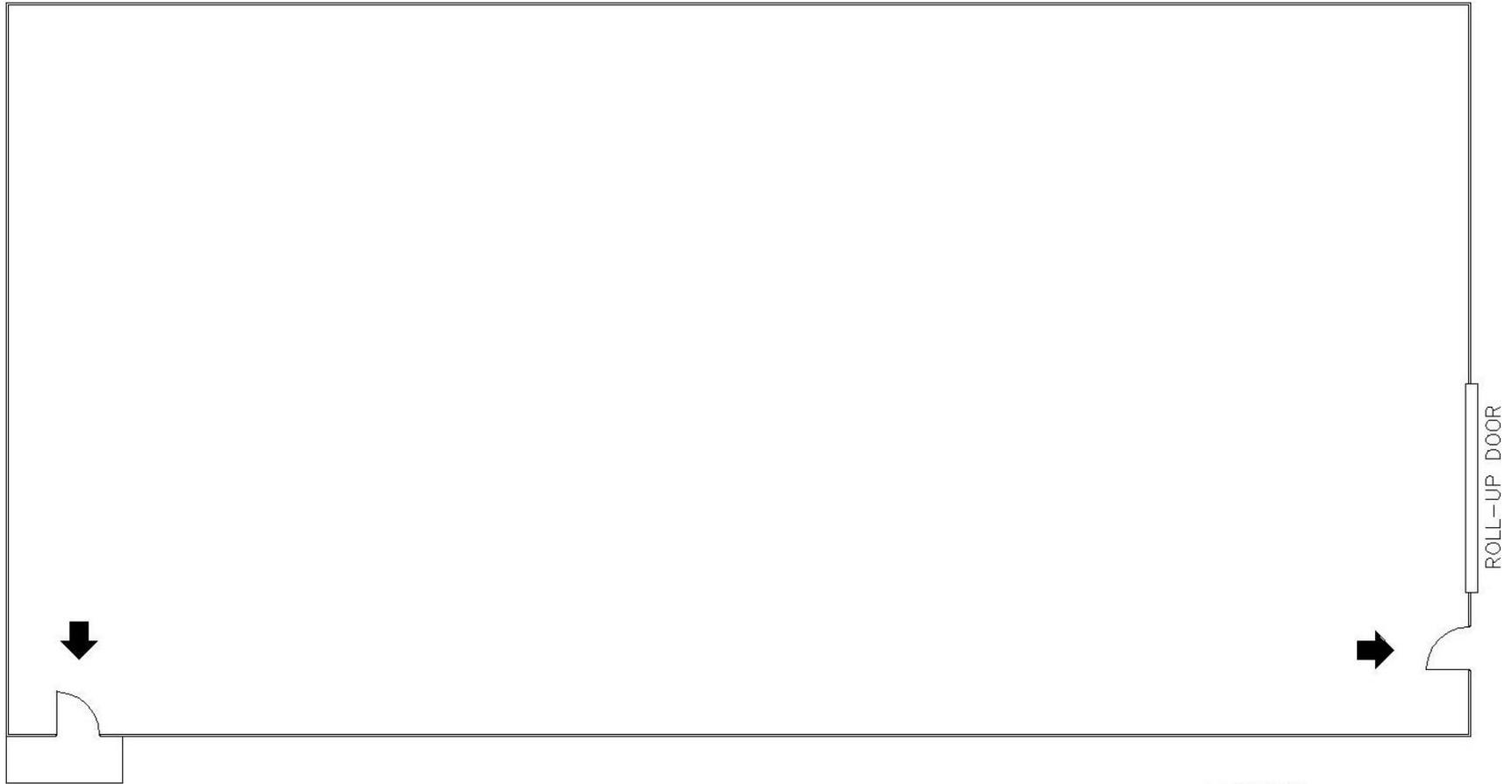
Attachment G 3

MFC Plot Plan Showing Location of HWMA Unit Emergency Equipment, Access Routes, and Site Evacuation Routes

HWMA Unit Building/Area Evacuation Routes



SITE-224
REV 7, 4/17



LEGEND

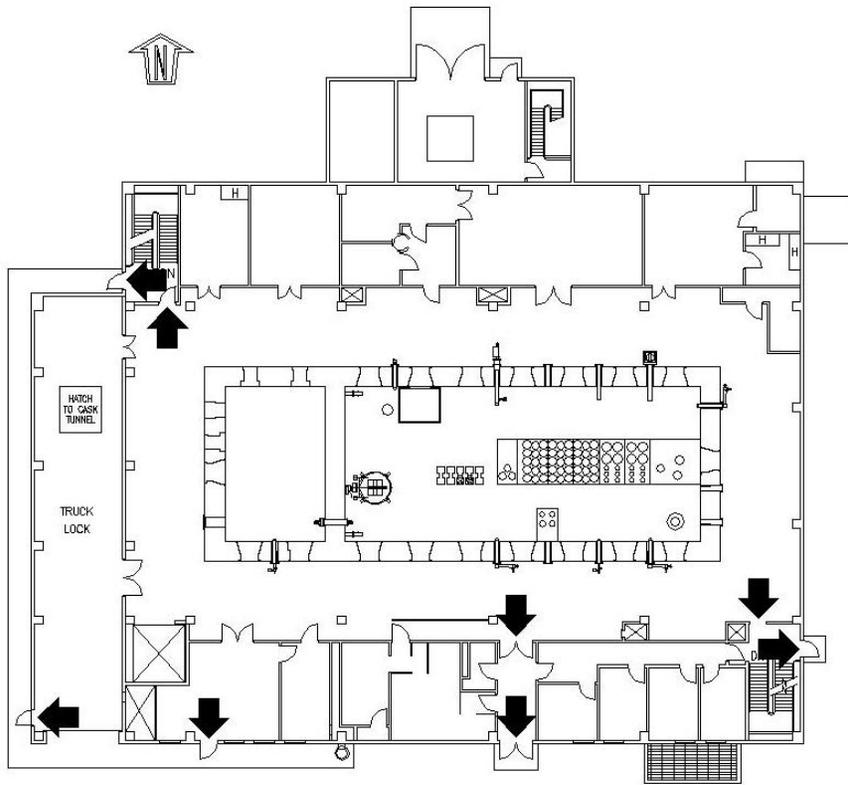
➡ EVACUATION ROUTE

SODIUM STORAGE BUILDING MFC-703
EVACUATION ROUTES

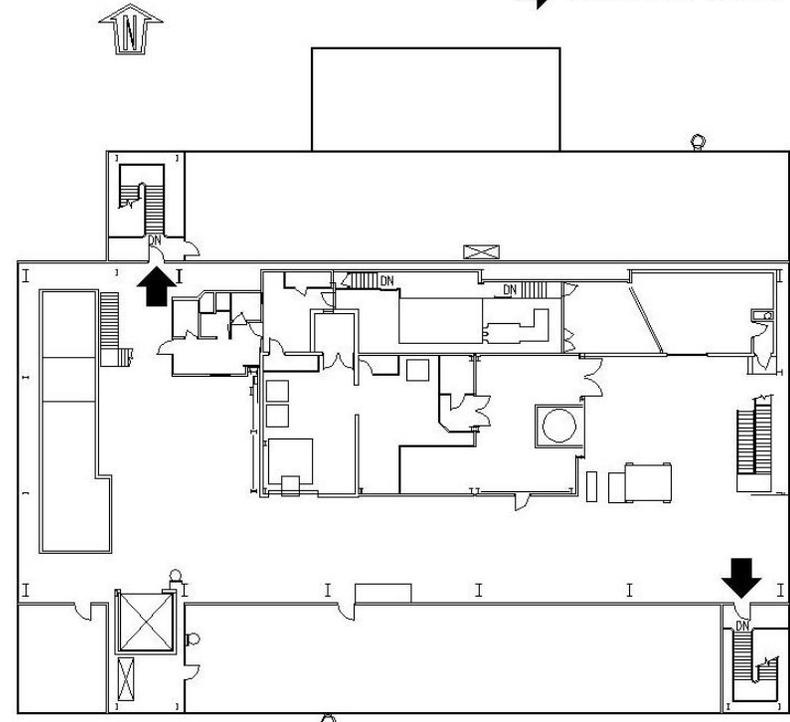
703-011
REV 0, 2/15

LEGEND

➡ EVACUATION ROUTE



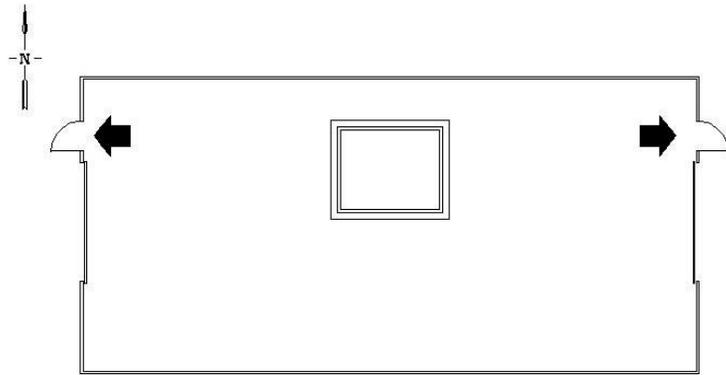
1ST FLOOR



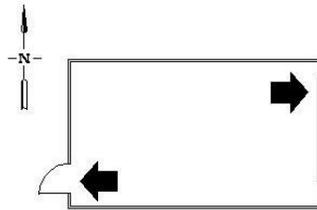
HIGH BAY FLOOR

785-369
REV 0, 2/15

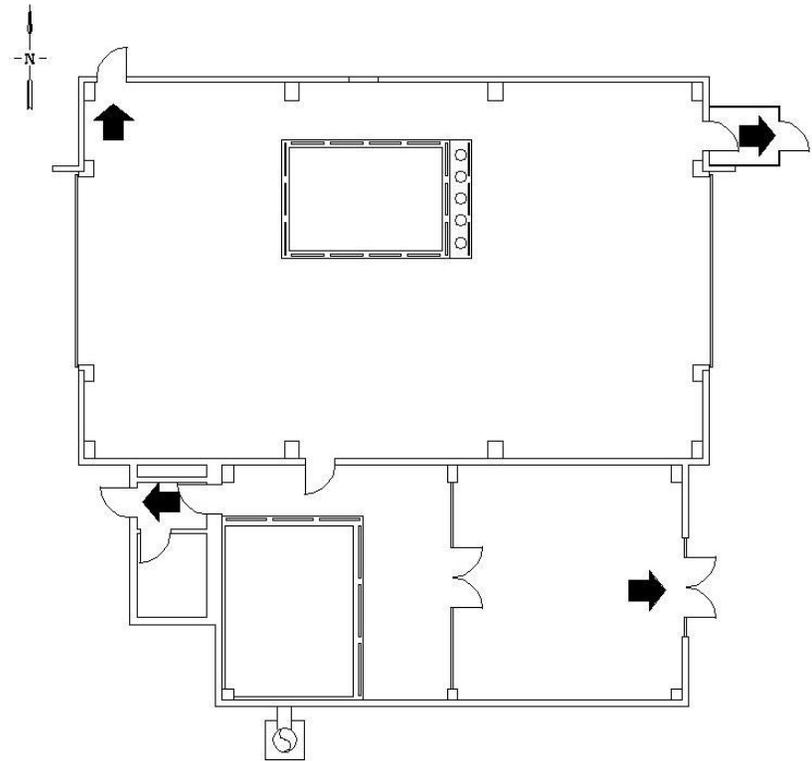
HFEF BUILDING MFC-785 1ST FLOOR AND HIGH BAY FLOOR
EVACUATION ROUTES



MFC-793C



MFC-793G



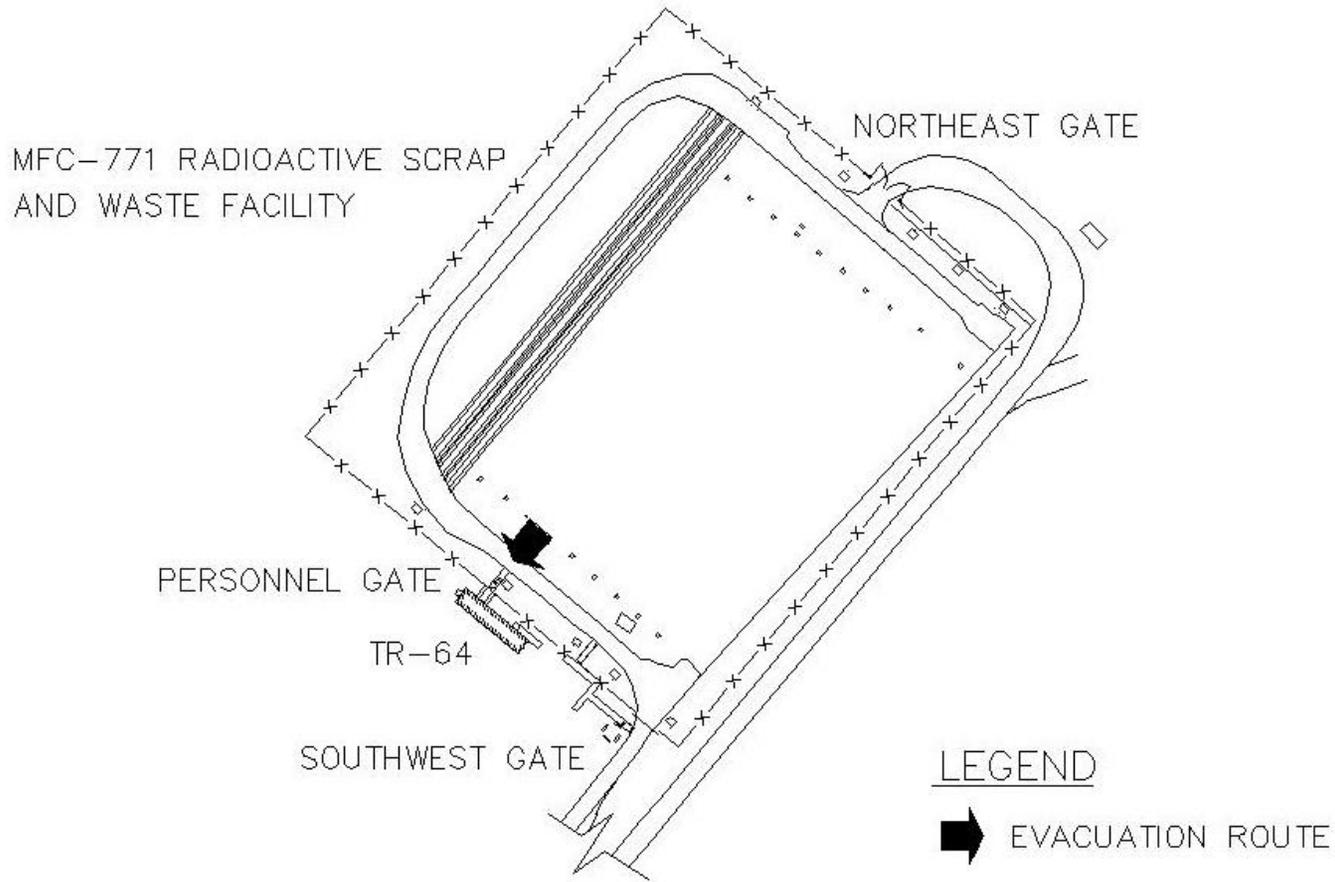
MFC-793

LEGEND

 EVACUATION ROUTE

SCMS BUILDINGS MFC-793, 793C, 793G
EVACUATION ROUTES

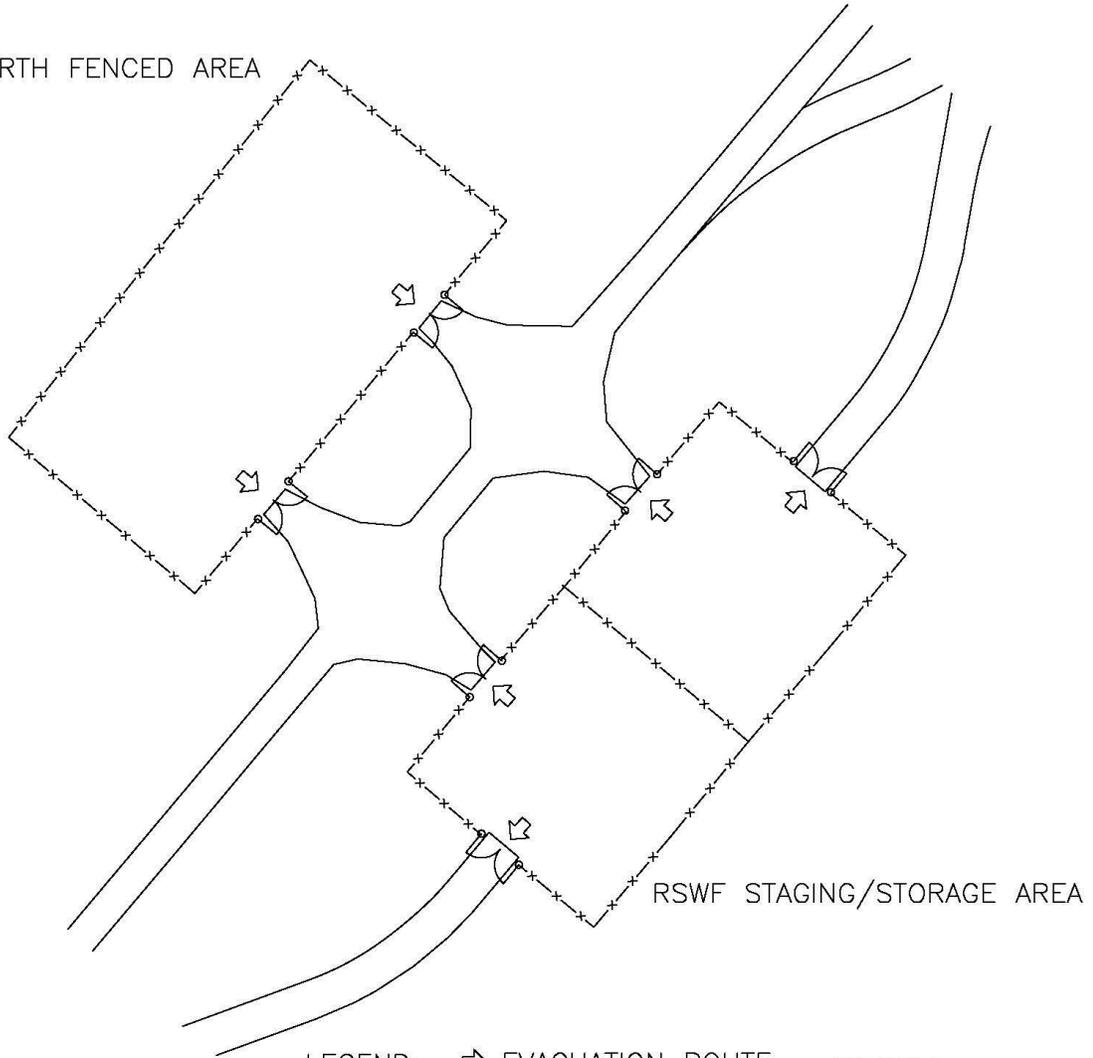
793-050r0
REV 0, 2/15



SITE-260
REV 0, 2/15

RSWF EVACUATION ROUTES

NORTH FENCED AREA



LEGEND: ⇨ EVACUATION ROUTE

SITE-NEW 1
REV 0, 3/17

RSWF STAGING/STORAGE AREA AND
NORTH FENCED AREA
EVACUATION ROUTES

