

SECTION 7

CONTINGENCY PLAN

MIXED WASTE FACILITY
RCRA/TSCA PERMIT APPLICATION

RICHLAND, WASHINGTON

Permit Number: WA 000010355

Mixed Waste Facility

SECTION 7 CONTINGENCY PLAN

[WAC 173-303-806(4)(a)(vii), 340, 350, 360, 640(7), 650(5), 660(6)]

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Table 7-1 Emergency Response Contact Information*

COMPANY OFFICES

MWF Plant Site 2025 Battelle Boulevard; Richland, Washington 99354 (509) 375-5160

PERSONNEL ASSIGNED TO PLANT SITE

Emergency Coordinators	Name	Cell Phone	Home Telephone
PRIMARY:			
Emergency Coordinator/RSO	Curt Cannon	(509) 521-4740	(509) 588-6225
ALTERNATE:			
Assistant RSO/HP Manager	Scott Call	(509) 438-1225	(509) 627-4227
Regulatory Compliance Officer	Kevin McCallum	(509) 554-3338	(509) 543-2000
Vice President and General Manager	Richard Grondin	(509) 528-0492	(509) 628-0510
Plant Operations Manager	Chuck White	(509) 551-6004	(509) 943-6920

OFF-SITE RESPONDERS

Emergency Assistance	911	
Richland Fire Department	911	(509) 942-7550
Kadlec Medical Center		(509) 946-4611
Richland Police	911	(509) 942-7340
Washington State Patrol		(509) 734-7034

AGENCY NOTIFICATION TELEPHONE NUMBERS

Washington State Department of Health, Division of Radiation Protection	(206) 682-5327
Washington Military Department, Emergency Management Division	(800) 258-5990
Washington State Department of Ecology (Central Region)	(509) 575-2490
Benton County Emergency Management	(509) 628-2600
Chemtrec (Hazardous DOT)	(800) 424-9300
National Response Center	(800) 424-8802
Environmental Protection Agency, Region 10	(206) 553-1263
Local District Health Office	(509) 377-3869

Refer to Table 7-3 to identify incident termination criteria and Section 7.2.2 for ERG members.

*This is a typical Emergency Response Contact Information table. Other formats may be used at the Mixed Waste Facility.

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7.0 CONTINGENCY PLAN [G]

[WAC 173-303-806(4)(a)(vii), WAC 173-303-340, WAC 173-303-350, WAC 173-303-360, WAC 173-303-640(7), WAC 173-303-650(5), WAC 173-303-660(6), 40 CFR 270.14(b)(7), 40 CFR 264.50 through 264.56]

This section describes the actions that will be taken to respond to fires, explosions or releases of dangerous waste which presents a hazard to human health or the environment.

7.1 General Information [G-1]

7.1.1 Purpose

This Contingency Plan (Plan) is for the Perma-Fix Northwest Richland, Inc. (PFNW-R) Mixed Waste Facility (MWF) in Richland, Washington. The Contingency Plan covers areas where mixed waste is treated, stored, staged, inspected, loaded or unloaded. The Contingency Plan prescribes procedures and resources for MWF personnel to respond to unplanned sudden or non-sudden release of dangerous materials due to operator error, equipment failure, fires, explosions, natural disasters, and other potentially injurious or damaging events. It identifies an emergency response organization, provides procedures to be followed, establishes requirements for reporting and record-keeping, identifies on-site emergency equipment, describes coordination arrangements with off-site emergency response organizations, and lays out the site evacuation plan.

This Plan, and its associated procedures, applies to all personnel that are present on the MWF site. This includes, but is not limited to, MWF staff, temporary staff, contractors and subcontractors, visitors, emergency responders, auditors and inspectors.

7.1.2 Plan Availability

Copies of this Plan are retained in the offices at the MWF site. Copies should also be available at agencies listed in Section 7.7, Coordination Agreements, since PFW-R is required to submit its contingency plan to these agencies by WAC 173-303-350(4)(b).

7.1.3 Governing Regulations and Permits

This Plan was prepared to meet State and Federal requirements including those requirements outlined in the Washington Administrative Code (WAC) 173-303-806(4)(a)(vi) and (vii); WAC 173-303-340, -350, -360, -640(7), -650(5), and -660(6); and in Title 40 of the *Code of Federal Regulations*, Part 264 (40 CFR 264.56) and -196 and 40 CFR 761.120-187.

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Operation of the MWF is regulated under the Washington State Department of Ecology's (Ecology) Dangerous Waste Regulations (WAC 173-303), the Federal Resource Conservation and Recovery Act (RCRA) and the Toxic Substances Control Act (TSCA) regulations. Permits required include a Radioactive Materials License, issued by the Washington State Department of Health (WDOH), and a mixed waste and mixed-TSCA regulated polychlorinated biphenyl (PCB) waste permit issued by Ecology and/or EPA.

7.1.4 Stand-Alone Document

This document has been prepared as a "stand-alone" document for identifying, assessing, and responding to hazardous material releases and other emergency situations.

7.1.5 MWF Description

The MWF is located inside a 45-acre site at the southeast corner of Logston Boulevard and Battelle Boulevard in Richland, Washington. Within the 45-acre complex is a radioactive only waste operation as well. This radioactive only facility and its' processes are not addressed in this Contingency Plan. The entire site is near the Hanford Site in an industrial area in the City of Richland and is approximately 0.8 kilometer (0.5 mile) south of Horn Rapids Road and 1.0 kilometer (0.7 mile) west of Stevens Drive in the northwest quarter of Section 22, Township 10 North, Range 28 East, Willamette Meridian. The property is situated within the Horn Rapids Triangle in northern Richland. A facility General Location Map is included as Figure 1. The property is currently owned by Perma-Fix Northwest Richland, Inc.

The MWF facility is owned and operated by Perma-Fix Northwest Richland, Inc.

7.1.6 Dangerous Waste Categories and Quantities Managed

The MWF is a treatment and storage facility for radioactive Resource Conservation and Recovery Act (RCRA) waste and radioactive Toxic Substance Control Act (TSCA)-regulated Polychlorinated Biphenyls (PCBs) waste. Herein after, "mixed waste" will mean radioactive wastes regulated under RCRA and/or Washington Dangerous Waste Regulations, which are also regulated by the Nuclear Regulatory Commission/Washington Department of Health. Mixed TSCA regulated wastes are wastes that are regulated by TSCA and the Nuclear Regulatory Commission/Washington Department of Health. Mixed waste also refers to TSCA-regulated PCB wastes that may also be RCRA-regulated and regulated under the Washington Department of Health. Henceforth, the use of the word 'waste' may also include TSCA regulated PCB constituents and/or dangerous/hazardous constituents.

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7.1.7 Occupancy

Areas of the MWF staffed by employees and contractors include the Administration Building (Building 17) and Building 13. Building 13 contains waste treatment and waste storage areas. All process treatment takes place in Building 13. Treatment includes thermal and non-thermal processes. Currently, the operations in the MWF are staffed nine (9) to ten (10) hours per day, four (4) to five (5) days per week. Occasionally, the treatment operations may run 24 hours per day. Security personnel are maintained on-site 24 hours per day, 7 days per week.

7.1.8 Site Layout and Access

The site layout is shown in Figure 2, Facility Layout. During emergencies, all incoming vehicles will stop at the Guard Building, Building 19, at the main gate on the west side of the facility. Security at the main gate is notified of any emergency situation and no vehicles other than emergency response are permitted to enter the MWF during an emergency incident. A representative from the on-site emergency response team will direct off-site emergency responders to the appropriate location.

7.1.9 MWF Layout and Operations

Figure 2 shows the relative locations of the MWF Building 13, the Yard Area, the Truck Loading Area (TLA) the Radiological Control Area (RCA) and the Rail Loading Area (RLA). Building 13, the Yard Area and the TLA are located inside of the RCA. The arrangement of rooms housing the various process operations and storage in Building 13 is shown in Figure 3.

7.2 Emergency Coordinators [G-2]

[WAC 173-303-350(3)(d), WAC 173-303-360(1), 40 CFR 270.52(d), 40 CFR 264.55]

The EC serves as the ultimate authority in situations that require activating emergency procedures. The EC is responsible for the coordination of various on-site and off-site emergency responders. This group will be collectively known as the Emergency Response Group (ERG) and will vary depending on the type of emergency.

7.2.1 Emergency Coordinator

At all times, there will be at least one employee either on the facility premises or available to respond to an emergency by reaching the facility within a short period of time with the responsibility for coordinating all emergency response measures. The names, titles, home, office, or cell phone numbers of

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primary and alternate ECs are provided in Table 7-1. The primary EC is the first person on the list, and the alternate ECs are listed in the order in which they will assume responsibility as alternates. The EC is authorized to commit the necessary resources to carry out the Contingency Plan in the event of an emergency. See the Certification of Emergency Coordinator Authority included at the end of the Contingency Plan. A bachelor's degree in an environmental discipline, science or engineering is preferred, but this requirement may be waived for a candidate with sufficient related experience. All personnel acting as an EC will also be:

1. Familiar with this Contingency Plan,
2. Familiar with MWF operations and activities at the facility,
3. Familiar with the location and properties of the wastes handled at the facility,
4. Familiar with the locations of pertinent records within the facility, and
5. Familiar with the layout of the facility.

The minimum qualifications for personnel designated as ECs are a bachelor's degree in science, an environmental discipline or engineering and related experience in emergency response. However, the requirement for the degree may be waived with sufficient experience.

Information on contacting the EC is contained on Table 7-1 located in the front of this Plan. Emergency contacts and other data on this sheet will be revised as necessary.

The EC has full authority to commit the necessary resources to implement the response actions specified in this Plan and to carry them out until the incident ends satisfactorily. The primary EC or alternate will continue executing EC duties until either a higher authority EC arrives on the scene to assume the EC role, or the EC role is transferred to a more qualified outside emergency responder. In all cases, the EC on duty will promptly update any new EC on the status of an incident.

7.2.2 Emergency Response Groups

The on-site ERG provides support to the EC during an emergency response. The ERG consists of individuals ready to serve as required in the following functional areas (as appropriate) and can include the:

1. Emergency Coordinator (responsible for overall implementation of plan)
2. Radiation Safety Officer (RSO) or the assistant RSO/Health Physics Manager (assist the EC in matters relating to radiation protection)

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3. Regulatory Compliance Officer (providing guidance to the EC in matters relating to hazardous waste)
4. Vice President/General Manager (responsible for assisting the EC in contact with the public and interfacing with the corporate office)
5. Plant Engineering/Maintenance Manager (not required to be trained specifically for the ERG but may provide the EC with information on engineering issues associated with the incident.)

The complete list of job titles available for use as part of the ERG is provided in Table 7-2

Table 7-2 Job Titles for ERG Members

Compliance/QC Inspector
EHS & QA Manager / Radiation Safety Officer (Primary Emergency Coordinator)
Health Physics Manager/Assistant RSO (Emergency Coordinator)
Health Physics Supervisor
Health Physics Tech Lead, EHS&Q
Health Physics Tech, EHS&Q
Industrial Hygiene/Training Coordinator
LL Operations Supervisor
LL Ops Specialist
Maintenance Supervisor
MW Operations Supervisor
MW Ops Specialist/ Special Projects Lead
Plant Operations Manager (Emergency Coordinator)
Regulatory Compliance Officer (Emergency Coordinator)
MW Thermal Supervisor
Vice President and General Manager (Emergency Coordinator)

7.2.3 Offsite Emergency Responders

Table 7-1 lists the entities external to the MWF operations that may be called upon to respond to emergencies. A copy of this Plan has been distributed to the organizations listed in Section 7.7, Coordination Agreements. Special nuclear facilities and support services privately owned or in government-owned facilities, are available within the Hanford Area and the city of Richland. Section 7.7 of this Contingency Plan lists the various response agencies available to the MWF in an emergency response situation. Memoranda of Understanding describing arrangements with off-site facilities will be retained in the facility files.

7.2.4 Training

Emergency Response Group members and Emergency Coordinators receive general emergency response training (40 hour Hazardous Waste Operations and Emergency Response). In addition, they receive site-specific training in the courses "Personal Safety and Preparedness" and "Incident Command System for

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Emergency Coordinators.” In addition to initial training all ERG members and ECs receive annual refresher training. They also receive periodic on-the-job training in the following topics; 1) Task-Specific Radiation Safety, 2) Record Keeping and 3) Task-Specific Personal Protective Equipment.

7.3 Circumstances Prompting Implementation [G-3]

[WAC 173-303-350(1) and (2), WAC 173-303-360(2), 40 CFR 264.51, 40 CFR 264.52(a), 40 CFR 264.56(a), (b)]

The objectives of enacting emergency procedures are to protect employees, public health, and the environment. When possible, and without compromising the aforementioned objectives, actions are also taken to protect the integrity of the plant and its equipment.

As a rule, the first priority of response action is to prevent additional personnel injury. Recognizing that incidents that lead to personnel injuries during the early stages of an event are likely to pose additional threats to personnel on the scene, MWF staff are trained to recognize hazards and are familiar with incident reporting procedures and personnel evacuation procedures.

When a dangerous waste shipment, which is damaged or otherwise presents a hazard to the public health or the environment is received, the determination of the need to implement the Contingency Plan will be decided on a case-by-case basis by the EC. A container that does not pass the confirmation inspection process is labeled with a process hold and moved to an appropriate area when such a discrepancy is discovered. The held container will be kept there during the resolution process, which includes notifying the generator and attempting to resolve the discrepancy. If it becomes evident that the container cannot be processed by MWF, arrangements are made for re-containerizing the shipment, if received in damaged condition, and returning the container back to the generator or another MWF, as authorized by the generator.

The Contingency Plan will be implemented for fires, explosions, spills, and releases that could threaten either human health or the environment. However, the Contingency Plan will not be activated for a small spill that does not threaten human health or the environment. These spills will be cleaned up as part of the normal site operations.

The EC will assess each incident to determine the response necessary to protect personnel, the facility, and the environment. Table 7-1 provides phone numbers for ECs and several off-site agencies that may

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need to be contacted. Figure 5, Activation of the Contingency Plan Flow Chart, may be used by the EC to facilitate his/her decision to implement the Contingency Plan or not.

As soon as possible, after stabilizing event conditions, the EC shall determine if notification to Ecology is needed to meet WAC-173-303-360 (2)(d) reporting requirements. Any release above the “reportable quantity” must also be reported to the National Response Center. If review of all available information does not yield a definitive assessment of the danger posed by the incident, a worst-case condition may be presumed and appropriate protective actions and notifications will be initiated. The EC is responsible for initiating any protective actions based on his or her best judgment of the incident.

7.4 Emergency Response Procedures [G-4]

[WAC 173-303-350(3)(a) and (b), WAC 173-303-360(2), 40 CFR 264.52(a), 40 CFR 264.56]

These procedures will be implemented to minimize the potential impact on human health and the environment in the event of an emergency incident. The first rule of any emergency response is to ensure the safety of the responding personnel. It is the facility’s policy that no workers or persons, including emergency responders, are expected to take unreasonable risk by entering into hazardous circumstances while responding to an emergency. The hierarchy of importance will be as follows: personnel safety, long-term environmental impact, plant/equipment integrity, short-term environmental impact.

It is within this framework that the emergency response organization is structured and that all response actions are carried out.

7.4.1 General Emergency Procedures

Actions to be taken to control hazards for specific situations are described in the following sections. Flow charts are provided as guidelines to assist in emergency response situations.

7.4.1.1 Management of Damaged Shipments

Receipt

Incoming trucks will enter the MWF through the Logston Blvd. access road and park outside the RCA gate. If the truck passes the inspection, the trailer will be allowed to enter the MWF Yard Area through the RCA gate. Incoming railcars will enter the MWF on the rail spur located on the southern side of the facility property. If the railcar passes the inspection, the containers will be allowed to be unloaded on the

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RLA concrete pad. The RLA is inside the property fence, but outside of the RCA. After unloading from the rail vehicle, the containers may enter the RCA.

Inspection

The containers in shipment are visually inspected for any evidence of damage, leakage, or loss of integrity. When a waste shipment arrives at the MWF, and visual inspection reveals that the shipment container is damaged or that there is a weight discrepancy or variance in piece count, this is noted as a discrepancy.

Dealing with Discrepancies

Leaking or failed containers are placed inside a salvage container or overpack using safe handling procedures. The contents of a leaking container may also be transferred to a container in good condition or tanks using safe handling procedures. Staff will assess the magnitude of the discrepancy or the potential or actual release and immediately notify the MWF EC. The EC or designee will determine if the Contingency Plan should be implemented and will direct emergency response actions, if necessary. Additional actions may be required depending on the specific situation. The generator (shipping originator) may be notified of the damaged shipment. Hazardous properties of the shipment content may be ascertained by consulting with the generator and by examining the information in the pre-shipment documents and on the shipment manifest. Any required emergency response operations may be aided by this information.

A container that does not pass the confirmation inspection process is labeled with a process hold and moved to an appropriate area when such a discrepancy is discovered. The held container will be kept there during the resolution process, which includes notifying the generator and attempting to resolve the discrepancy. If it becomes evident that the container cannot be processed by MWF, arrangements are made for re-containerizing the shipment, if received in damaged condition, and returning the container back to the generator or another MWF, as authorized by the generator.

Acceptance

If discrepancies are successfully resolved, the container is formally accepted and moved to designated storage areas. Similarly, when inspections reveal there are no discrepancies on a shipment, the waste is accepted into the MWF and moved to the appropriate storage or process areas.

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7.4.1.2 Fire/Explosion

Figure 6, Fire/Explosion Response Flow Chart, is provided as guidance in the event of a fire or explosion.

In this situation:

1. The first person on the scene should activate the fire alarm (which electronically notifies the fire department).
2. The Emergency Coordinator should be then be notified.
3. The person at the scene then uses portable fire extinguishers to control the fire if ALL of the following conditions are met:
 - a. the person is trained to use fire-suppression devices effectively,
 - b. the fire is assessed to be controllable with the fire extinguisher devices available to the person and is not threatening further danger by explosion or contact with toxic gases,
 - c. an escape path exists and is not likely to be blocked by advancing fire, and
 - d. the fire-fighting attempt does not expose the person to hazardous materials.
4. In any event, if the fire is not extinguished within a few minutes, the person will abandon the effort and ensure that non-emergency personnel evacuate the area, leaving building doors open.
5. The EC will contact the fire depart to confirm that they were notified by the alarm and provide updates of the following information to the responding fire department as requested:
 - a. caller's name,
 - b. company name/location,
 - c. type and intensity of fire,
 - d. exact location of the incident,
 - e. properties of materials involved,
 - f. potential for fire spreading to other dangerous materials,
 - g. extent of spread of released material to the air and surrounding areas,
 - h. potential exposure to hazardous vapors and/or radiation,
 - i. need for additional outside assistance and/or evacuation,
 - j. proper extinguishing agent (i.e., water, foam, dry chemical, etc.),
 - k. wind direction and recommended direction of approach,
 - l. meeting location, and
 - m. further means of communication.
6. The EC should notify and activate the emergency response group and assess the hazards of the materials involved in the fire/explosion. If the fire is large, spreading rapidly, or threatens further danger, facility personnel will be evacuated.

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7. Upon arrival of the fire department crew, the duties of the EC will be transferred to the fire department crew chief.
8. The ERG members will stay near the Incident Command Post and lend assistance to the EC (fire crew chief) as requested.
9. Only personnel and outside emergency responders who are issued radiation monitoring devices (i.e., pocket dosimeters) and who are wearing appropriate protection equipment shall be allowed in the vicinity of the fire-fighting operations.
10. Affected areas will be monitored for potential release of hazardous materials. Radiation in the form of external radiation levels and airborne concentrations of radionuclides will be monitored.
11. If an evacuation is necessary, the Evacuation Plan (Section 7.8) shall be implemented.

7.4.1.3 Vehicle Fires and Brush Fires:

Due to the likely presence of volatile, flammable, and possibly explosive gasoline or diesel fumes, workers are not expected to attempt to extinguish vehicle fires. Similarly, workers are not expected to fight brush fires. Site security is responsible for diverting any on-site traffic away from the accident area and securing all access control stations to eliminate additional traffic. A representative from the on-site emergency response team will direct all off-site emergency responders to the appropriate location.

7.4.1.4 Spills and Releases

In response to a spill and release, setting up down-wind evacuation distances are dependent on the nature and magnitude of the spill. For this Contingency Plan, small and large spills are defined according to the Emergency Response Guidebook. A small spill is typically less than 200 liters (approximately 52 gallons) and a large spill is typically greater than 200 liters (approximately 52 gallons).

Responses to spills, vapor releases and releases with potential or actual off-site impact are shown in Figure 15, Spill of PCB Containing Material Flow Chart, Figure 7, Spill Response Flow Chart for Non-TSCA Wastes, Figure 8, Vapor Release Response Flow Chart, and Figure 9, Off-Site Release Flow Chart. In general:

1. Standing liquids will be bermed to prevent run-off. If pumpable, liquids will be pumped out in containers and then sorbents will be applied as soon as possible.
2. Absorbents containing hazardous liquids will be placed in containers, which will be moved to safe storage.
3. Clean and/or decontaminate contaminated surfaces.

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4. Verification will be made that contaminated surfaces are appropriately cleaned and/or decontaminated.
5. Solids will be collected into containers, which will be moved to safe storage.
6. Incompatible wastes generated during an incident will be separated by means of a berm. No waste that might be incompatible with the released material will be treated or stored in impacted equipment or containment areas until cleanup is completed.

For spills of TSCA-regulated PCB-contaminated wastes of 50 parts per million (ppm) or greater, the notification, spill response procedures, and reporting will be done in accordance with and in compliance with 40 CFR Part 761, Subpart G.

The general response to prevent releases under extreme natural events is shown in Figure 10, Extreme Natural Event Response Flow Chart.

7.4.1.5 Shutdown of Operations

7.4.1.5.1 EC Directed Shutdown

If required, the EC will communicate the need to shut down operations, if evacuation is required and if potential downwind receptors need to be notified. If time allows, one of the following shutdown procedures will also be initiated as appropriate:

1. Proper isolation or containment of the emergency, which does not require shutdown of the operating unit or plant.
2. Normal operating unit or plant shutdown (30 minutes or less).
3. Rapid securing of the operating unit or plant shutdown (15 minutes or less).
4. Immediate securing of the operating unit or plant shutdown (less than 5 minutes)

7.4.1.5.2 Power Loss Shutdown

The procedures followed in the event of a power failure are shown in Figure 11, Power Failure Flow Chart. The response to a filter fan failure either from power loss or hardware failure is shown in Figure 12, Filter Fan Failure Flow Chart.

7.4.1.5.3 Thermal Desorber System Automatic Waste Feed Cut Off (AWFCO)

During emergencies involving the Thermal Desorber unit and/or its associated equipment, AWFCO will be activated from the control room and the waste feed to the unit will be stopped. Operator action is

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required to reinitiate feed flow to the system. The automatic interlock will shut down the feeding process as follows:

1. The control signal to the feed solenoid will be interrupted, closing the valve and preventing waste feeding.
2. The control signal to the feed auger will also be interrupted, stopping the auger and preventing waste feeding.
3. The control signal to the burner fuel solenoid will be interrupted, closing the burner valves and preventing fuel feeding to the burners.

7.4.1.6 Monitoring Under Emergency Shutdown Conditions

If the MWF stops operations in response to an emergency, the EC or designee will monitor valves, pipes, and other equipment for leaks, pressure buildup, gas generation, or ruptures, as appropriate under WAC 173-303-360(2)(g). Any areas that appear to have the potential for ignition of a fire or explosion will be isolated and the Richland Fire Department will be notified for appropriate action.

7.4.1.7 Tank System Releases [G-8b]

Leaking tank systems will be removed from service immediately. The system will be inspected to determine the cause of the release. Staff will remove the waste from the secondary containment system within 24 hours to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed. If the integrity of the tank system is compromised by the release, the tank system will be returned to service only when the major repairs are certified in accordance with WAC 173-303-640(7)(f).

7.4.1.8 Area Decontamination and Cleanup Levels

Immediately after a release is under control, cleanup actions will commence. The ERG will ensure that:

1. All cleanup personnel are issued the necessary respiratory and personal protective equipment, including personal radiation dosimeters,
2. The impacted area is monitored for dangerous vapors and radiation levels and the extent of release of hazardous materials is determined,
3. Corrosive spills are neutralized (pH adjustment),
4. Reactive materials are chemically treated,
5. Contents from leaking containers are transferred or the container and contents are overpacked,

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6. Solid surfaces impacted by released material are decontaminated, (e.g., exterior surfaces of intact containers, equipment, floors, containment systems, etc);
7. Contaminated soil and any contaminated porous materials that cannot be decontaminated are disposed,
8. Recovered materials are sampled and placed in containers for classification and determination of proper disposal technique,
9. Decontaminated surfaces are sampled to determine adequacy of cleanup, and
10. Cleanup is performed to meet background or non-detect levels or levels established based on standard risk assessment procedures and/or criteria (i.e., Model Toxics Control Act-Cleanup (MTCA), WAC 173-340-700 through 760).

7.4.1.9 Separation of Incompatible Wastes

Released material and contaminated debris resulting from the emergency response are managed in a manner similar to that for incoming wastes to the MWF. They are checked for compatibility before they are placed into containers, so that incompatible wastes are not stored in the same container. The containers are placed in storage areas appropriate for their compatibility class and in accordance with MWF operating procedures. They remain in storage until analyses provide the necessary information to guide their final treatment/disposal.

7.4.2 Incident Command and Notification [G-4a]

[WAC 173-303-360(2)(a), 40 CFR 264.56(a)]

7.4.2.1 Responding to an Incident Alert

Upon the discovery of any imminent or actual emergency, personnel will activate the emergency alarm and promptly notify their supervisor and the EC of the situation. If there is a fire, the fire alarm will also be activated either manually or automatically as a result of heat or smoke detection. Personnel responsibilities for incident alert are described in Table 7-3.

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Table 7-3 Personnel Responsibilities for Incident Alert

Stage	Person Responsible	Description
1	Person sounding alert	Sound Alarm - One rise and fall of the siren. Take corrective actions (if it can be done safely), before proceeding to the designated assembly area. Communicate to EC and supervisor the reason for the alarm.
2	All personnel	Stop all process work. Proceed to the designated assembly area.
3	EC or ERG Designee	Determine the cause of the alarm. If the cause of the emergency condition can not be determined, two persons may re-enter the area to determine the cause. If additional help is needed, additional personnel may re-enter the building. (All personnel must wear protective equipment and enter in pairs.)
4	EC or ERG Designee	Call any of the following as required by the situation: <ul style="list-style-type: none"> • Adjacent buildings • Plant supervision
5	EC or ERG Designee	Take head count using a personnel roster, sign in books and sign out boards.
6	EC or ERG Designee	Determine appropriate alert responses including: <ul style="list-style-type: none"> • Shutting off air intakes • Shutting down process(es) • Putting process(es) in safe operating mode • Monitoring the wind direction • Barricading streets • Evacuation • Use of alternate assembly area location
6	EC	Inform building personnel of reason for alert and response plan.
7	EC	Activate any emergency response procedures required by the emergency.

In the event of an emergency during a non-operational period, dialing the main facility phone number and following the prompts will connect the caller with the main gate security guard who will then contact the EC and if required, the appropriate off-site emergency services. An MWF map is available to the guard to assist in providing necessary details to the EC.

7.4.2.2 Activating the Incident Command System

After being notified an incident has occurred, the EC will establish an Incident Command. The EC will assess the situation and arrive at a course-of-action based on the answers to the following questions:

1. What is the location of the incident? What personnel injury, if any, has occurred?

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2. What is the likelihood that the situation will continue to threaten personnel safety and to cause additional personnel injury?
3. What are the consequences, in terms of personnel safety, long-term environmental impact, equipment integrity, and short-term environmental impact, if there is no intervention?
4. What does it take to rescue and protect the injured from further harm? Does it pose unreasonable risk to responder's safety?
5. What does it take to stabilize the emergency condition, in terms of human resource and equipment? How much time would be required before these human resources and equipment can be deployed?
6. What is the end-result of a "successful" response, as measured by personnel safety, long-term environmental impact, equipment integrity, and short-term environmental impact, assuming a best-case scenario?

The EC assesses the situation and initiates the alert. Table 7-4 is provided as guidance to assess the impact of an incident.

Table 7-4 Procedures to be Used for Assessment of Direct and Indirect Impact of Material Release to Human Health and the Environment

Human Health Impact	Environmental Impact
1. Identify origin, type (e.g., spill, fire, explosion etc) and characteristics of released material (e.g., constituents, concentrations and released quantity) from operating logs and records, waste manifests, waste analyses, the waste profile in the facility's computer database, and other sources.	1. Identify origin, type (e.g., spill, fire, explosion etc) and characteristics of released material (e.g., constituents, concentrations and released quantity) from operating logs and records, waste manifests, waste analyses, the waste profile in the facility's computer database, and other sources.
2. Determine source and areal extent of released materials based on Emergency Coordinator observations and employee observations.	2. Determine source and areal extent of released materials based on Emergency Coordinator observations and employee observations.
3. Establish critical health based parameters and impacts for the material and/or its constituents from Immediately Dangerous to Life or Health (IDLH) and Material Safety Data Sheet (MSDS) data.	3. Establish critical environmental parameters relative to interaction with air, soils and water for the material and/or its constituents from the following references: <ol style="list-style-type: none"> 1. Solubility in water 2. Compatibility with wash down fluids 3. Soil Absorption 4. Volatility

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Human Health Impact	Environmental Impact
4. Establish exposure pathways, short and long-term health impacts and personal protective measures. <ol style="list-style-type: none"> 1. For Worker 2. For Public 	4. Establish release pathways, short and long-term environmental impacts and environmental protective measures. <ol style="list-style-type: none"> 1. On-Site Impact 2. Off-Site Impact
5. If volatiles are released, monitor air concentrations of critical constituents based on the findings in (1) for threshold health based conditions for emergency response.	5. If material has been released outside of the containment area, sample and analyze concentrations of critical constituents based on the findings in (1) to facilitate emergency response.
6. Perform assessment and identify response procedures.	6. Perform assessment and identify response procedures.

7.4.2.3 Initial Notifications

7.4.2.3.1 MWF and Company Personnel

The EC or designee will activate the alarm or other communication systems to notify MWF personnel. The EC will contact available supervisors and indicate that an emergency is in progress. The site radio will be cleared and may be used to contact all employees with radios to advise them of the emergency condition.

7.4.2.3.2 Federal, State, and Local Agencies

In addition, the EC or designee will ensure that the appropriate federal, state, or local authorities are contacted if their assistance is needed (see Contact Information in Table 7-1 at the front of this document). Notifications shall be at the earliest time consistent with the emergency response effort, but will not be later than 24 hours from the onset of the incident.

The EC or designee will immediately report to Ecology, but in no case longer than 24 hours, spills and/or leaks to the environment of hazardous materials. A written report will be submitted within 15 days, if required.

The National Response Center will be notified if the emergency response involves a release of more than a reportable quantity to the environment greater than the minimum reportable quantities of release listed in 40 CFR § 302. The notification number provided from the National Response Center will be recorded and a written report submitted as required by 40 CFR § 264.56(i).

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7.4.2.3.2 Off-Site Emergency Response Providers [G-8a]

If necessary, the EC, or designee, will contact outside emergency service providers. The EC, or designee, will evaluate the severity and nature of the incident, and the character, source, quantity, and areal extent of the released materials. Contact information for outside emergency response providers to be notified in the event of a fire, release, or explosion with the potential to threaten human health or the environment is provided in Table 7-1.

7.4.3 Identification of Dangerous Materials [G-4b]

[WAC 173-303-360(2)(b), 40 CFR 264.56(b)]

For liquid spills and releases, the EC (or designee), with the ERG, will attempt to identify the character, source, quantity, and extent of the released materials through some or all of the following methods and sources of information, as required:

1. Eyewitness accounts.
2. Visual inspection of areal extent, fumes, odors, or reactions.
3. Origin of release including equipment involved (e.g., specific tank or container), type of waste stored or treated.
4. In-plant records, including container labels information, inspection of containers, waste tracking data or other inventory records, manifests, and generator waste profiles.

7.4.3.1 Sampling and Analysis

If the proper identification cannot be made using available information, it can be obtained by sampling. Procedures and equipment used in the sampling and identification of dangerous materials are described in the Waste Analysis Plan. Samples will be taken for chemical analysis by the on-site laboratory or by a certified off-site laboratory in the unlikely event that the chemicals of concern and their concentrations cannot be identified from existing records.

7.4.4 Hazard Assessment and Report [G-4c]

[WAC 173-303-360(2)(c), (d) and (e), 40 CFR 264.56(c) and (d)]

The EC shall assess possible hazards to human health and the environment and select appropriate response actions. This may depend on the consideration of the following factors:

1. The severity and nature of the incident (i.e., fire, explosion, or material release).
2. The potential for severe consequences.
3. The location of the incident.
4. The potential for other areas becoming involved.

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5. The potential to place persons off-site in danger.
6. The potential for surrounding property to be damaged or contaminated.
7. The severity of a threat to surface or ground water.
8. The current weather conditions (temperature, wind direction, and velocity) and how these parameters will affect response activities.

Hazard assessment criteria and a hazard category for an incident allow effective communication between persons involved in the incident (person-on-the-scene, ERG members, and outside emergency response agencies). The criteria also provide a basis for an assessment of the hazards to human health and the environment.

If the EC determines that the incident could threaten human health and the environment, he must report his findings as follows:

1. If evacuation of the local area is advisable, he/she must immediately notify appropriate local authorities and help them decide whether local areas should be evacuated; and,
2. He/she must immediately notify the Department of Ecology and the National Response Center.

7.4.5 Prevention of Recurrence or Spread of Fires, Explosions, or Releases [G-4d]

[WAC 173-303-360(2)(f) and (g), WAC 173-303-630(2), WAC 173-303-640(7), 40 CFR 264.56(e) and (f), 40 CFR 264.171, 40 CFR 264.196]

The EC will take all reasonable measures necessary to ensure that fires, explosions, spills, and releases do not occur, recur, or spread to other dangerous waste at the facility. These measures may include, if applicable, stopping processes or operations, collecting and containing released waste, and removing or isolating containers.

The possibility of release of wastes is minimized through personnel training, record keeping, routine inspections, and incorporating engineering design and operational controls. Secondary containment in the buildings decreases the potential for any liquid and solid release from reaching navigable or ground water. Gas releases are generally contained and treated by the MWF's ventilation and HEPA/carbon filtration systems.

7.4.5.1 Recordkeeping [G-8a]

The EC designates a member of the ERG to record events during an incident. These records are kept and retained by the EC and placed in the operating record. Records vital to operations and rebuilding shall be

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adequately secured from loss. Key records are protected and kept safe by various means including but not limited to duplication and electronic scanning.

To assist in the understanding of the cause of an incident and therefore minimize its reoccurrence, any incident that results in the activation of the Incident Command System (ICS) will be investigated and the results of the investigation documented in an incident report. The report shall be forwarded within 15 days of the incident to Ecology, and copies of the report shall be maintained at the MWF by the EC.

The report shall contain, at a minimum, the time and date of the incident, the probable cause, estimates of the release of dangerous and/or radioactive material, personnel involved in emergency response operations, whether there are any injuries, decontamination operations, and corrective actions initiated as a result of the incident investigation.

7.4.5.2 Drills and Exercises

Drills and exercises to improve emergency preparedness are discussed during safety meetings. These meetings are attended by plant operators, emergency responders and the ERG team members. Representatives of outside emergency response organizations may be invited to participate in these meetings.

The purpose of these drills and exercises is to ensure that:

1. evacuation of personnel, when necessary, will be conducted in an orderly manner,
2. emergency response actions are functional, and
3. coordination with outside emergency responders is effective.

All exercises, as well as actual emergencies, are critiqued for response and learning opportunities. A copy of the exercise critique is sent to the EC. Exercises may be “table top”, drill, or field exercises. A summary of these exercises follows:

Table Top Exercise:

The table top is an exercise that takes place in a control room or meeting room setting. The table top exercise is designed to generate a discussion of the emergency plans, procedures, policies, and resources, and reviews what actions are taken in certain situations. This exercise may be a set of questions asked to an operator, engineer, or management personnel regarding their duties during gas releases, fires, bomb threats, or other unplanned events.

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Drill Exercise:

This exercise usually follows a few weeks or months after a table top exercise. The drill is a supervised activity that tests, develops, or maintains skills in a single emergency response function (i.e., communications, gas release, evacuation, medical emergencies). The drill normally involves actual field response. A drill exercise may be announced or unannounced.

Field Exercise:

This exercise practices all or most of the basic functions of the response system simultaneously. This exercise requires personnel to go through the motions of what they would do if there were an emergency. Field exercises take time to plan and conduct. Field exercises can be announced. If they are announced, the learning phase is done at the critique after the drill.

7.4.5.3 Operational Procedures

7.4.5.3.1 Tank and Container Failures

Releases from tanks will be contained and, if repairs cannot be made immediately (within 24 hours) and there is a risk of further releases that could impact human health or the environment, the tank will be taken out of service and emptied. Failed containers will be overpacked and placed in the reject container storage area for return to the generator or for reprocessing, otherwise, contents of the failed container will be transferred into another container in good condition.

7.4.5.3.2 Responding to Various Treatment System Equipment Failures

The following is a generic summary of actions to be implemented by operators to prevent the development of a hazardous situation in the event of failure of equipment in treatment processes.

Response:

1. Shut down process.
2. Stop adding any reagents as applicable.
3. Disconnect power if applicable.
4. Continue ventilation system operation.
5. Review for any adverse reactions that are occurring.
6. Remove waste materials and store in applicable containers.
7. Evaluate incompatibles for any removed wastes materials.
8. Assess issues related to treatment system operations.

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9. Ensure operability prior to beginning operations again.

7.4.5.3.3 [RESERVED]

7.4.5.4 Operational Controls in Response to Abnormal Conditions

When abnormal environmental conditions threaten to trigger an emergency response situation, all non-essential process operations will be shut down and the MWF will be secured for the duration of the event. The types of extreme natural events and operational controls are as follows:

Strong Winds

While strong winds are not expected to damage the MWF, they can present significant difficulties to certain waste handling and process operations. Also, strong winds will increase the chance of dust release and other fugitive emissions. Hence, during strong wind conditions (sustained wind speed greater than 40 miles per hour); all outdoor operations will need to be suspended. If the building air purification and exhaust system is adversely impacted, only essential operations indoors protected from the strong winds can continue, unless the EC declares that such operations are hazardous and are to be stopped.

Electrical Storms/Power Disruption

The MWF is equipped with back-up emergency electrical generators with the capacity to support the short-term operation of “essential” and “critical” process units. The back-up emergency generators will generally come on line within ten (10) seconds after loss of electrical power supply. The emergency generators will not support sustained operation of the entire plant. Therefore, if supply of electrical power is interrupted, non-essential processes will be halted so that the back-up generators’ capacity can be reserved for the orderly shut-down of essential processes. Upon the shut-down of essential processes, the MWF will be limited to operating critical processes. Essential processes include processing “in progress.” Critical processing includes lighting, ventilation, security, and environmental protection systems. Normal operations may resume when commercial electrical power is restored.

Flooding

The MWF is not located within the 100-year flood plain. Nonetheless, should the MWF be subjected to flooding, the following actions will be taken:

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1. All processes will be shut down in an orderly manner.
2. Receiving of new waste shipments will be suspended.
3. If possible, outgoing shipments will be accelerated.
4. Openings to all process vessels and piping will be closed.
5. Non-emergency responders will be evacuated.

Freezing

If freezing of critical process streams has occurred, the potentially affected processes may be shut down. The procedure described below will be enacted.

1. Identify which valves should be open, including those for safety showers and eye baths.
2. Open the lines enough to allow a flow of only about 1/2 to 1 gallon per minute (GPM)
3. Continue flush until good flow is established.
4. Note that flushes have been started in the log book and the safety shower checklist.
5. Close all flush valves and return to normal operations.
6. Note in the log book when the freeze alert is dropped.

7.4.6 Post-Emergency Actions [G-4e]

[WAC 173-303-360(2)(h),(i),(j), and (k), WAC 173-303-640(7), 40 CFR 264.56(g) and (h)]

7.4.6.1 Area Decontamination and Cleanup Levels

Immediately after an emergency is under control, cleanup actions will commence. The ERG will ensure that:

1. all cleanup personnel are issued necessary respiratory and personal protective equipment, including pocket radiation dosimeters.
2. the impacted area is monitored for dangerous vapors and radiation levels and the extent of release of hazardous materials is determined.
3. corrosive spills are neutralized (pH adjustment);
4. reactive materials are chemically treated;
5. contents from leaking containers are transferred or the container and contents are overpacked;
6. solid surfaces impacted by released material are decontaminated (e.g., exterior surfaces of intact containers, equipment, floors, containment systems, etc.);
7. contaminated soil and any contaminated porous materials that cannot be decontaminated are disposed;

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8. recovered materials are placed in containers for classification and determination of proper disposal technique and are sampled if appropriate;
9. decontaminated surfaces are sampled to determine adequacy of cleanup.
10. cleanup is to background or non-detect levels or levels established based on standard risk assessment procedures and/or criteria.

7.4.6.2 Separation of Incompatible Wastes

Released material and contaminated debris generated from the emergency response will be managed in a manner similar to that for incoming wastes to the MWF. These are checked for compatibility before they are placed into containers, so that incompatible wastes are not in the same container. The containers are placed in storage areas appropriate for their compatibility class and in accordance with the MWF operating procedures. They remain in storage until their final treatment/disposal.

7.4.6.3 Personnel Decontamination

The injury response chart is shown as Figure 13. Emergency showers/eye bath equipment are placed in various locations throughout the facility as shown in Figure 14.

The steps taken to decontaminate personnel impacted by a chemical release are as follows:

1. Any personnel exposed to chemicals shall have the area affected subjected to an immediate water flush for 15 minutes in a safety shower or sink or eye wash, as appropriate. Personnel may need to remove contaminated clothing.
2. Clothing considered contaminated by chemicals must be treated or disposed of in accordance with applicable RCRA or TSCA requirements. If immediate transportation to an outside medical facility is necessary, the medical staff will remove contaminated clothing from the individual(s). No employee is to remove clothing from the process or change room that is considered contaminated without approval from both health physics staff and compliance department staff.

7.4.6.4 Emergency Equipment Decontamination and Replacement

Emergency equipment decontamination and replacement facilitates the return to normal operations and enables the ERG to be ready to respond in the event of another incident. To establish readiness, the EC ensures the following actions are taken:

1. All equipment used during an emergency response is decontaminated, or if not practical to do so, disposed of and replaced.

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2. Methods of decontamination include, but are not limited to, steam cleaning, air purge, and chemical neutralization.
3. Decontaminated equipment is checked for proper operation before storage.
4. Depleted consumable materials such as neutralizing and absorbent materials will be restocked.
5. Fire extinguishers will be recharged or replaced.
6. Self-contained breathing apparatuses will be cleaned and breathing air cylinders will be refilled.
7. Protective clothing will be cleaned or disposed of and restocked.

The MWF is ready to resume process operations only when all emergency equipment has been restored.

7.4.6.5 Incident Termination

The objective of response actions is to terminate an incident quickly with minimal adverse effects to human health, environment, and plant equipment. Table 7-5 lists the criteria for terminating each type of incident for which this Contingency Plan was activated. Response operations are also intended to prevent a secondary incident. When an incident has been brought under control and its threat to human health or the environment has been removed, the EC initiates the procedures described in this section to return the MWF to normal operation.

These procedures include inspecting for:

1. the absence of leaks, cracks, or other damage to the containment system,
2. absence of toxic vapor generation,
3. proper isolation and containment of residual waste materials and debris,
4. adequate cleanup of residual waste materials, and
5. affected areas and process equipment functioning.

Table 7-5 Emergency Conditions and Corresponding Incident Termination Criteria

Category	Incident	Incident Termination Criteria/Remarks	Typical Primary Responders
Releases	Storage units	Spill/leak stopped. Contaminated materials contained. Contaminated surfaces cleaned/removed.	Process Operations Group
	Process units	Spill/leak stopped. Contaminated materials contained. Contaminated surfaces cleaned/removed. Process unit repaired or removed from service.	Process Operations Group

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Category	Incident	Incident Termination Criteria/Remarks	Typical Primary Responders
	Transportation units, including damaged shipments (e.g., trucks, train, etc.) inside the MWF facility	Spill/leak stopped. Contaminated materials contained. Contaminated surfaces cleaned/removed. Transportation unit repaired or removed from service.	Process Operations Group
Fire/Explosion	Structure/Wild /Bush	Fire suppressed. Structure integrity stabilized or occupancy terminated.	Richland Fire Department
	Vehicular	Fire suppressed. Vehicle transported to safe storage.	Richland Fire Department
	Storage/ Warehouse	Fire suppressed. Spill/leak stopped. Contaminated materials contained. Contaminated surfaces cleaned/removed. Structure integrity stabilized or occupancy terminated.	Richland Fire Department ERG
	Process units	Fire suppressed. Spill/leak stopped. Contaminated materials contained. Contaminated surfaces cleaned/removed. Process unit returned to proper functioning or taken out of service.	Richland Fire Department/ ERG/Process Operations Group
	Building housing process units	Fire suppressed. Spill/leak stopped. Contaminated materials contained. Contaminated surfaces cleaned/removed. Process unit returned to proper functioning or taken out of service.	Richland Fire Department ERG/ Process Operations Group
Natural Disasters	Strong winds/ Electrical storms	All hazardous materials secured in closed storage containers. All sources of fugitive emissions from non-thermal treatment area secured. Back-up generator operation established. Non-essential process operations orderly shut down.	Process Operations Group and Maintenance Group
	Freezing (e.g., rupture of piping and vessels, upset to processes)	Spill/leak stopped. Contaminated materials contained. Contaminated surfaces cleaned/removed. Process unit repaired or removed from service.	ERG, Maintenance Group, and Process Operations Group
Personnel Injured	Personnel Injured	Affected personnel transported to an appropriate medical facility for treatment. Cause of injury removed to prevent recurrence.	Staff/ Ambulance

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Category	Incident	Incident Termination Criteria/Remarks	Typical Primary Responders
Personnel Exposed to Hazardous Materials	Personnel Exposed to Hazardous Materials	Affected personnel delivered to appropriate medical facility for treatment. Source of hazardous materials secured to prevent recurrence.	Staff/ Ambulance

One of the more important operations during incident termination is monitoring personnel and equipment for hazardous material contamination. Individual pocket dosimeters are read frequently during the emergency response, and dosimeter readings are documented before the individual leaves the affected area. Film or thermo-luminescent dosimeter (TLD) badges will be analyzed promptly. Whole body scans, and/or bioassays are performed if necessitated by information concerning the released material or the results of air samples.

A final release survey is conducted on all involved equipment and the affected area. Monitoring may include area survey of external radiation, direct frisk of the affected area, and analyses of vegetation samples and soil samples within the affected area and downwind.

Restarting process operations after an incident will be in accordance with established procedures for recovery from off-normal events. A recovery plan may be required if further risk would be posed to personnel, the environment, or the MWF, or if physical evidence needs to be preserved. If a recovery plan is required, it must be approved by EC. Restart of operations must follow the approved recovery plan. Specific steps to treat and/or store the released material and contaminated debris are decided jointly by the EC and RSO.

For emergencies that do not activate the Contingency Plan, the EC is responsible for ensuring that adequate conditions are restored before operations are resumed. If emergency response procedures were undertaken, and the emergency phase is complete, a special recovery organization may be appointed, at the discretion of the EC, to restore conditions to normal. The makeup of this organization depends upon the experience of the individuals involved as well as extent of the damage and its effects.

7.4.6.6 Plan Review and Amendment

This Plan is subject to review and amendment if:

1. Execution of actions specified in the Plan fail to protect personnel and the environment in an emergency,

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2. The MWF permit or the applicable regulations are revised,
3. The MWF design, construction, operation, or maintenance procedures change; or if other circumstances develop that materially increases the potential for fires, explosions, or releases of dangerous waste or dangerous waste constituents, or change the responses necessary in an emergency,
4. The list of ECs changes, or
5. The list of emergency equipment changes.

The amended section of the Contingency Plan is reviewed by the affected regulatory agencies. Changes in the list of ECs or emergency equipment are considered to be permit modifications.

Copies of the current and approved Contingency Plan will be distributed to local, state, and federal agencies; outside emergency response organizations; and selected MWF personnel responsible for the Plan's implementation.

7.4.7 Final Notification to Authorities [G-8 and G-8a and G-8b]

For any incident that requires implementing the Contingency Plan, the time, date, and details will be recorded in the operating record. In addition, depending on the nature of the incident, the following reports must be made:

1. Telephone call to Ecology: Report to Ecology immediately, but in no case longer than within 24 hours of knowledge, of any spill and leak to the environment of hazardous materials.
2. Telephone call to the National Response Center: Notify the National Response Center if the emergency response involves a release to the environment greater than the reportable quantities of release listed in 40 CFR § 302. The notification number provided from the National Response Center will be recorded.
3. Written report to Ecology. Submit written report within 15 days that contains the information described below.
4. Written report to the National Response Center. Submit written report within 15 days that contains the information described below.

Each written report includes the following:

1. Name, address, and telephone number of the owner or operator;
2. Name, address, and telephone number of the MWF;
3. Date, time, details and type of incident (e.g., fire, explosion);

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4. Name and quantity of material(s) involved;
5. The extent of injuries, if any;
6. An assessment of actual or potential hazards to human health or the environment, as applicable;
7. Estimated quantity and disposition of recovered material that resulted from the incident;
8. Cause of incident; and
9. Description of corrective action taken to prevent reoccurrence of the incident.

For incidents involving releases to the environment from the tank systems, an immediate notification to Ecology in situations listed in WAC 173-303-145; and a report will be submitted within 30 days of detection of such release with the following elements, in accordance with WAC 173-303-640(7)(d) (ii) and 40 CFR 264.196(d)(3):

1. Likely route of migration of the release;
2. Characteristics of the surrounding soil (soil composition, geology, hydrogeology, and climate);
3. Results of any monitoring or sampling conducted in connection with the release (if available);
4. Proximity to down-gradient drinking water, surface water, and populated areas; and
5. Description of response actions taken or planned.

If the release into the environment from a tank system is considered an emergency by the EC (i.e. threat to human health or the environment), additional information as required by WAC 173-303-360(e) will be provided to Ecology and local authorities. For emergencies involving the denial of a shipment and the inability to return the shipment to the generator, Ecology will be notified and a report filed within 30 days.

7.5 Emergency Equipment [G-5]

[WAC 173-303-350(3)(e), 40 CFR 264.52(e)]

Repositories of emergency response equipment are located throughout the MWF and also in the southwest conference room of the Administration Building. Locations of safety and emergency equipment are shown on Figures 14 and 16 and the locations of fire extinguishers, fire alarms and fire detection equipment are shown on Figure 17. Additional equipment details are as follows.

7.5.1 Personnel Protective Clothing

PPE is generally stored in the Non-Thermal Area of Building 13; however, emergency response clothing is also stored in the Administration Building.

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7.5.2 Respiratory Protection Equipment

Air-purifying full-face respirators with appropriate cartridges and/or canisters and three sets of self-contained breathing apparatuses (which will only be used by trained personnel) are stored in Building 13 near the Analytical Laboratory ready for deployment.

7.5.3 Fire Extinguishers

Figure 17 shows the locations of fire extinguishers. Typically, a fire extinguisher is accessible within 50 feet from all points in the waste storage and processing areas of the plant. Table 7-6 provides a description of the various fire suppressants and usage.

Table 7-6 Fire Suppressants and Usage

Suppressant Name	Fire Type	Fire Class	Description
Ansul® Brand FORAY® dry chemical fire extinguishers or equivalent	For Ordinary and Mixed Combustible Fires	A	A free-flowing, water repellant, non-abrasive yellow-colored monoammonium phosphate based dry chemical. May be used to combat fires in ordinary combustible materials such as wood, cloth, paper, rubber and many plastics as well as fires in flammable liquids, gases and greases and fires involving energized electrical equipment. Particularly of value on combination fires.
Ansul® Brand PURPLE-K® dry chemical fire extinguishers or equivalent	For Flammable Liquids, Gases, and Greases	B	A free-flowing, water repellant, non-abrasive violet-colored potassium bicarbonate based dry chemical. May be used to combat fires in flammable liquids, gases and greases including such fires when involved with energized electrical equipment.
Ansul® Brand SENTRY® HALON 1211 fire extinguishers or equivalent	For Electrical Equipment Fires	C	A colorless, odorless, electrically non-conductive "clean" agent (halon) which discharges as a liquid and flashes to a gas, providing an increased effective fire fighting range. May be used to combat fires in ordinary combustible materials such as wood, cloth, paper, rubber and many plastics as well as fires in flammable liquids, gases and greases and fires involving energized electrical equipment. Particularly of value on fires involved with energized electrical equipment.

Mixed Waste Facility

Suppressant Name	Fire Type	Fire Class	Description
Ansul® Brand MET-L-X® dry powder fire extinguishers or equivalent	For Fires Involving Reactive and Flammable Solids	D	A dry powder composed of a salt base plus a polymer for sealing, and other additives to render it free-flowing and cause heat caking (or crusting) that denies burning material oxygen. May be used on sodium, potassium, sodium-potassium alloy, and magnesium fires. In addition, it will control and sometimes extinguish small fires on zirconium and titanium.

7.5.5 Air Survey Instrumentation

Typical air survey equipment available at the MWF may include:

1. Carbon monoxide (CO) monitors,
2. Oxygen (O₂) monitors,
3. Hydrogen (H₂) monitors,
4. Radiation survey equipment, and
5. Photo-ionization detectors/flame ionization detectors.

7.5.6 Communications Equipment

Telephones are installed in all buildings housing process operations. Hand-held, two-way radios or cell phones are carried by the EC, the EC alternates, and unit supervisors. Hand-held, two-way radios or cell phones will be available at the Incident Command Post.

7.5.7 Equipment Maintenance

ERG personnel are trained to use, maintain, repair and replace respirators, Scott air packs, gloves, goggles, boots, hard hats, and similar emergency equipment. ERG personnel are also trained in first aid.

The tables below provide the following information:

- Table 7-7 lists safety and spill response supplies maintained at the site.
- Table 7-8 lists the absorbent and chemicals employed for containment and clean-up.
- Table 7-9 lists general purpose decontamination solutions and minimum quantities of decontamination reagents maintained on site.

Mixed Waste Facility

Table 7-7 Typical MWF Emergency Response Equipment Inventory

Group	Item	Description of Items	No. of Item Groups	Building Location
Alarms, Communications & Power	Emergency alarms	Manual pull box located in each building linked to main alarm system in Building 17.	1	Non-Thermal-Bldg 13
			1	Storage Rooms-Bldg 13
			1	Thermal-Bldg 13
			1	Administrative-Bldg 17
	Audible horn	Gas release air horn located outside Building 16 to provide site wide emergency notification system.	1	Activation point is a portable 2-way radio
	Smoke detector/alarms	Smoke or heat detector/alarms located in all process areas and each building	9 8 7 5	Non-Thermal-Bldg 13 Storage Rooms-Bldg 13 Thermal-Bldg 13 Administrative-Bldg 17
Internal communication equipment	Two-way radios	2 2 2	Varies	
Mobile phone	The EC will carry or have access to a portable/mobile cellular phone	1	Varies	
Emergency generators	Emergency generators supply necessary back-up power to the MWF buildings.	2 1	Building 13 Building 13 Utility Bldg	
Spill Control & Assessment	Non-thermal spill control equipment	Typical spill control equipment is stored with PPE in a dedicated cabinet in each process or storage building. Equipment includes: <ol style="list-style-type: none"> 1. a 55 gallon drum, 2. a 3 gallon bucket, 3. 55 gallon and 3 gallon plastic bags, 4. 100 feet of portable berms, 5. 2x0.5 HP sump pumps and connected discharge tube, 6. sampling tools, 7. roll 16-mil. plastic, 8. roll duct tape, 9. 5x20 lb bags of clay absorbent and vermiculite earth or other absorbent materials, 10. 2 pairs of gloves, 11. a hammer, 12. screwdriver, 13. a bung wrench, 14. over-pack drum, 15. a shovel, 16. a brush and 17. a broom 	1 1 1	Non-Thermal-Bldg 13 Storage Rooms-Bldg 13 Thermal-Bldg 13
Sampling equipment	Sampling equipment	Typical sampling equipment is stored in the lab and includes: <ol style="list-style-type: none"> 1. 8-oz glass sampling jars, 2. 6-inch brass or stainless-steel soil sampling tubes (2.5-inch diameter), 	1	Lab-Bld 13

Mixed Waste Facility

Group	Item	Description of Items	No. of Item Groups	Building Location
		3. 3-inch wide Teflon tape, 4. plastic end caps (2 per sample tube), 5. self-bonding silicone rubber tape, 6. self-sealing plastic bags (pint and quart sizes), 7. coolers, 8. trash bags, 9. Kim wipes, 10. frozen ice packs, 11. soil auger and extensions, 12. stainless-steel spoons, 13. shovel, 14. composite liquid waste sampler, 15. survey stakes, 16. flashlight, 17. plastic sheeting, 18. tools, 19. tape, 20. PID/FID, 21. measuring tape, 22. field notebook, 23. sample labels, 24. chain-of-custody records, 25. chain-of-custody seals, 26. task-specific forms, and 27. waterproof pen.		

In addition, empty containers of various sizes as appropriate for the types of wastes scheduled for storage and treatment at the MWF will be on site and available to contain spilled or leaking materials

Table 7-8 Typical Material and Equipment for Release Containment and Cleanup

Material	Purpose
Diatomaceous earth	To absorb small spills of oils, solvents, aqueous materials. Not used for acids or caustics unless they are first neutralized.
Vermiculite	To absorb small spills of oils, solvents, and aqueous materials. Not used for acids or caustics unless first neutralized.
Absorbent pillows	To dike or dam and absorb spilled materials.
Acid- and base-specific solvent absorbents or neutralizers	Neutralization of identified chemicals.
Calcium hypochlorite	To absorb small spills of pesticides, fungicides, chlorinated phenols, cyanides
Tri-sodium phosphate	To absorb small spills of solvents
Citric acid	To neutralize alkaline spills.
Sodium bicarbonate	To neutralize acid spills.
Performance-based organic decontamination fluid (PODF), such as diesel	To decontaminate areas affected by a PCB spill

Mixed Waste Facility

Table 7-9 Typical General Purpose Decontamination Solutions

Waste Type	Solution	Directions for Preparation
1. Inorganic acids, metal processing wastes 2. Heavy metals: mercury, lead cadmium etc.	A	To 10 gallons of water, add 4 pounds of sodium carbonate and 4 pounds of trisodium phosphate. Stir until evenly mixed.
3. Pesticides, fungicides, chlorinated phenols, and dioxins 4. Cyanides, ammonia and other non-acidic inorganic wastes 5. Polybrominated biphenyls (PBBs)	B	To 10 gallons of water, add 8 pounds of calcium hypochlorite. Stir with plastic stirrer until evenly mixed.
6. Solvents and organic compounds such as trichloroethylene, chloroform and toluene 7. Oily, greasy unspecified wastes	C	To 10 gallons of water, add 4 pounds of trisodium phosphate. Stir until evenly mixed.
8. Inorganic bases, alkali and caustic waste	D	To 10 gallons of water, add 1 pint of concentrated hydrochloric acid. Stir with a plastic stirrer.
9. PCBs	E	55 gallons of approved performance-based organic decontamination fluid (PODF), such as diesel or kerosene.

Typical neutralization solutions will be available for use in the Hazmat cabinets located in Room WSB-04 and Room SB-02.

7.6 Coordination Agreements [G-6]

[WAC 173-303-350(3)(c), WAC 173-303-340(4), 40 CFR 264.52(c), 40 CFR 264.37]

A complete complement of off-site emergency response support services is available within the Hanford Area and the City of Richland. Memoranda of Understanding describing arrangements with off-site facilities are retained in the facility files. Medical service arrangements have been made with Kadlec Medical Center in Richland. As a back-up, Kennewick General Hospital in Kennewick may be used. Police support will be provided by Richland Police Department, and off-site fire fighting support will be provided by the Richland Fire Department.

The following response agencies receive of copies of the Plan:

Mixed Waste Facility

7.6.1 Local

1. Richland Fire Department
2. Kadlec Medical Center
3. Richland Police Department
4. Benton County Emergency Management

7.6.2 State

1. Washington Department of Health
2. Washington Department of Ecology

7.6.3 Federal

1. Environmental Protection Agency, Region 10

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7.7 Evacuation Plan [G-7]

[WAC 173-303-350(3)(f), WAC 173-303-350, 40 CFR 264.52(f)]

The purpose of evacuation is to remove unprotected persons from the affected area so that these persons are not exposed to injurious situations. An evacuation order does not have to be issued before personnel can leave a threatened area. All persons are required to evacuate a threatened area based on his/her judgment of the situation. Where time and the situation allow, a person may attempt to secure the operations within his/her control in order to prevent the development of secondary hazards (e.g. chemical spill due to a running pump, or fire from an open reagent drum).

7.7.1 Introduction

Whenever an evacuation is necessary, the Emergency Coordinator (EC) will activate the Incident Command System (ICS) from the Incident Command Post and will direct all evacuation operations. Based on the circumstance, the EC may order one of three evacuation protocols:

1. Abandon facility
2. General evacuation, or
3. Selective evacuation.

7.7.2 Abandon Facility

In the absence of situation-specific directions, the following evacuation actions are followed.

1. Under the most extreme circumstance, the EC may judge that the facility poses serious and imminent danger to the personnel present. In this case, he/she issues an order for all personnel including those responsible for emergency response to immediately abandon the facility. Such order will be given by activating a siren.
2. If such an order is issued and depending upon wind direction, all personnel shall quickly proceed to the either the West or East Evacuation Assembly Area, depending upon their location at the facility at the time the evacuation order is issued. If prevailing winds render one Evacuation Assembly Area unsafe, all personnel shall assemble at the other Evacuation Assembly Area (see Figure 18). Personnel shall prepare to drive away in an orderly fashion. The EC will designate a traffic control officer. All personnel shall obey the directions of the traffic control officer.

All personnel shall proceed to a location far removed from the MWF and identified by the EC where a head-count will be conducted.

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7.7.3 General Evacuation

For General Evacuation, the EC or his/her delegate will announce specific instructions for evacuation.

1. All facility personnel will follow the evacuation order and immediately proceed to the designated assembly area. Unless otherwise instructed, the assembly area for non-emergency-response MWF personnel is the facility's West Evacuation Assembly Area, adjacent to the Administration Building. The assembly area for emergency responders is the Incident Command Post.
2. The RSO, or designee, will conduct a head-count of facility personnel, visitors, and contractors who have assembled at the assembly area. A list of unaccounted persons will be reported to the EC.
3. Upon completion of the head-count of non-emergency-response personnel, these personnel remain in the Evacuation Assembly Area until further directions. Personnel will refrain from loitering on any roadways.
4. The EC will determine whether the situation warrants that non-emergency-response personnel depart the facility. If instructed, these non-emergency-response personnel will depart from the facility in an orderly fashion. The EC or designee provides traffic control. Roadways remain open to emergency vehicle traffic at all times during the emergency.
5. If the EC or designee determines that certain facility areas are safe for re-entry, the RSO will be notified. Re-entry into the facility is permitted after clearance is given.
6. An evacuation is considered terminated if:
 - all non-emergency-response personnel and their vehicles have left the facility, or,
 - accessibility to all areas have been restored to pre-incident conditions.

7.7.4 Selective Evacuation

Execution of a selective evacuation will follow these steps:

1. The EC or designee will direct that audible and visual alarms be sounded.
2. The EC or designee will announce specific instructions for evacuation.
3. Entrances to the evacuated areas will be barricaded to prevent unauthorized re-entry.

7.7.5 Adjacent Area Evacuation

If the EC determines that the incident may threaten human health or the environment outside of the facility, the EC will:

Mixed Waste Facility

1. Report his findings to the appropriate local authorities. The local officials are responsible for determining whether the adjacent areas need to be evacuated. If evacuation is ordered, it will be executed by the local authorities.
2. Notify the National Response Center (1-800-424-8802)

These communications may contain, as a minimum, the following information:

1. Caller's name and telephone number (if MWF is notified by off-site personnel);
2. Name and address of facility;
3. Nature of incident (fire, explosion, etc.);
4. Time and location of incident;
5. Name and quantity of material involved, if known;
6. Extent of injuries, if any;
7. Possible hazards to human health or the environment outside of the facility.

7.7.6 Access and Evacuation Routes

Evacuation routes are shown on Figure 18. Staff should evacuate at right angles to the wind direction following the preplanned route and destination. Figure 19 also shows a wind rose for the region.

The EC will be notified when the group reaches the preplanned destination.

7.7.7 Emergency Lighting

Within a building, emergency lighting illuminates exits if the power fails. Hallways and office areas are lit well enough to permit one to navigate to the nearest exit. Outside emergency lighting allows for safe movement within the plant.

7.7.8 Area and Personnel Surveys

Air sampler(s) will be deployed and run at the assembly areas. The air samplers will allow for monitoring of individual exposures to airborne contaminants.

1. If the circumstances allow for an orderly exit from the restricted area, a radiation protection technician equipped with appropriate radioactivity survey instruments will be stationed at the exit of restricted area (e.g., the access control point in the Administrative Building). He will assist in the radioactivity survey of all personnel.
2. If the circumstances do not allow for an orderly exit, radioactivity survey of personnel will be performed at the assembly areas.

Mixed Waste Facility

3. Pocket dosimeters of individuals who have been in the affected areas during the incident shall be monitored for radiation exposure.
4. Search and rescue of unaccounted persons will be conducted, under the direction of the EC.

7.7.9 Search for Missing Personnel

If there are personnel unaccounted for during an emergency, it may be necessary to initiate a search. The following should be considered prior to initiating the search:

1. Nature of the emergency.
2. Availability of back-up personnel.
3. Availability of emergency response / PPE equipment.

The guidance below should be followed for locating missing persons.

1. Sweep searches will ONLY be done by two person teams (buddy system)
2. Both members of the team must stay within contact of each other. This contact may be by hand signals, verbal (non-radio), or any means that allow them to recognize and assist their partner if they are disabled
3. Sweep search teams must consider wearing/carrying a self-contained breathing apparatus (SCBA) which will be dependent on the type of emergency.
4. Sweep search teams must carry a two-way radio.
5. Sweep search teams must create and communicate a search plan of the Area with the EC.
6. Sweep search teams must:
 - a. Look in areas where missing person(s) were last seen.
 - b. Look in areas known to be affected by the emergency.
 - c. Survey structures/block perimeters (general grounds search).

7.7.10 Directions to the Hospital

The Kadlec Medical Center Emergency Department has provisions for treatment of radiologically contaminated patients. The directions to the hospital from the MWF are as follows:

Starting at 2025 Battelle Boulevard

1. Go west to Kingsgate Drive.
2. Turn left on Kingsgate Drive.
3. Go south for 1.3 miles.
4. Turn left on State Route 240.

Mixed Waste Facility

5. Go east for 2 miles.
6. Turn right on Jadwin/Stevens
7. Go south for 1.4 miles.
8. Turn right on Williams Boulevard.
9. Go west.
10. Turn left on Goethals Drive.
11. Go south for 0.4 miles.
12. Turn right on Swift Boulevard
13. Head west for 0.1 mile.

Total travel time is approximately 15 minutes

7.8 EC Authority Certification Statement

CERTIFICATION OF EMERGENCY COORDINATOR AUTHORITY

This certification fulfills the emergency coordinator requirements of WAC 173-303-360(1) for Perma-Fix Northwest Richland, Inc.'s Part B permit for the Mixed Waste Facility in Richland. As the Vice President and General Manager, I have the authority to certify on behalf of the corporation.

"I certify that the Primary Emergency Coordinator or alternate is authorized to commit the necessary resources to carry out the contingency plan in the event of an emergency."

Perma-Fix Northwest Richland, Inc.



Richard Grondin
Vice President and General Manager

5/10/11
Date

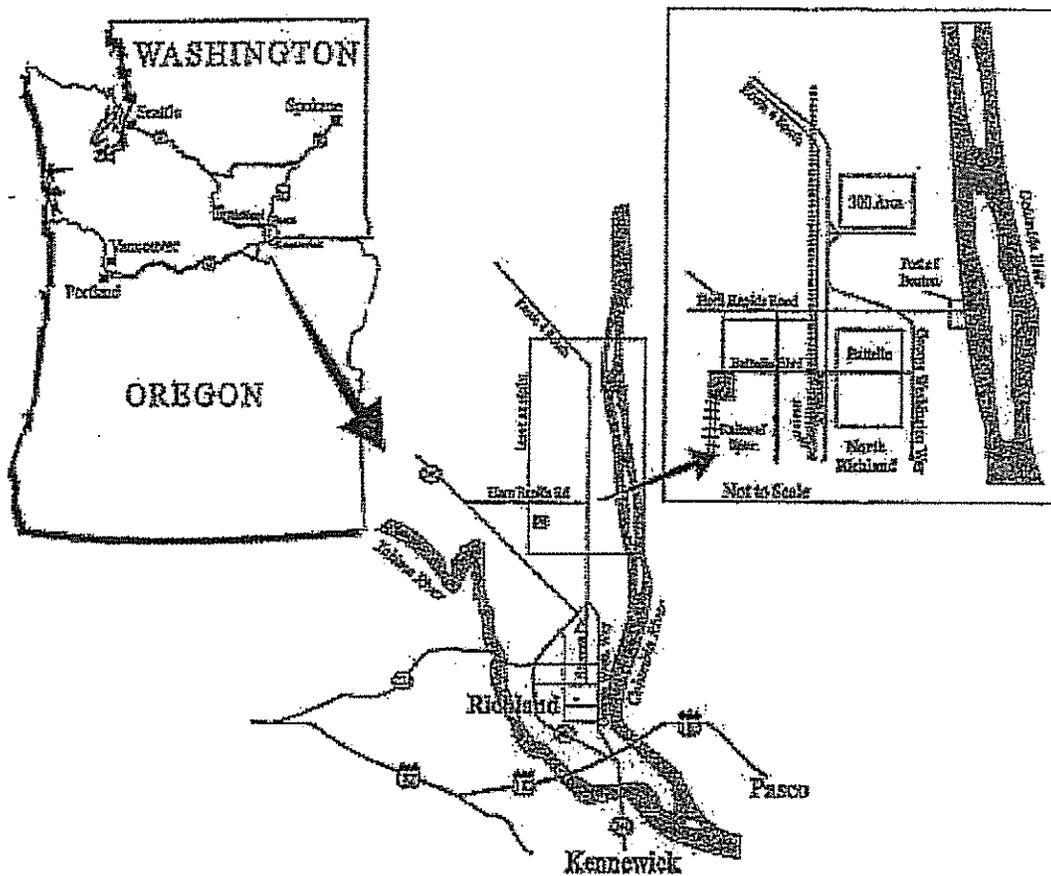
Mixed Waste Facility

FIGURES

Mixed Waste Facility

Figure 1.

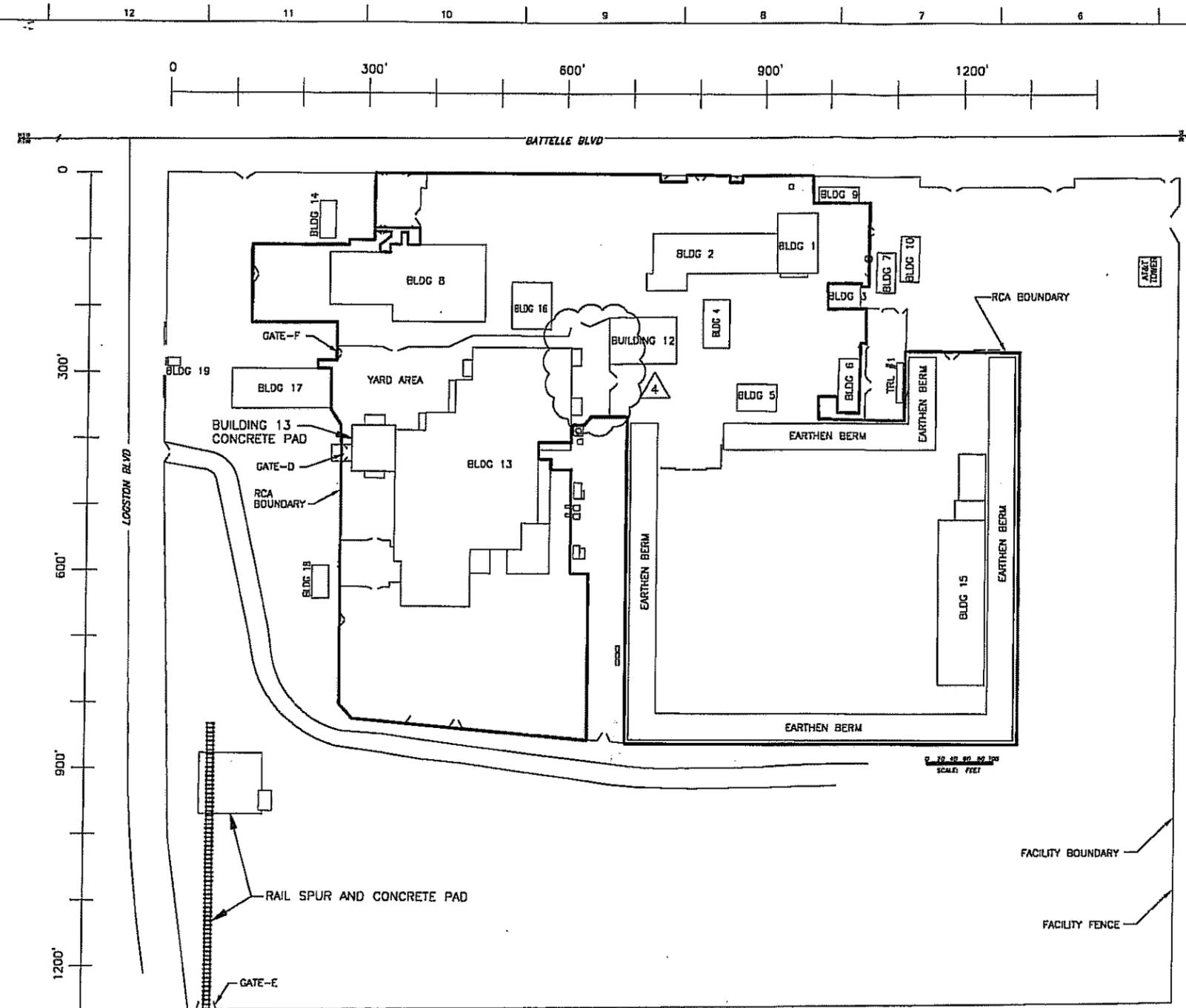
GENERAL LOCATION MAP



Mixed Waste Facility

Figure 2.

FACILITY LAYOUT MAP [DWG-SITE-CIVIL-001]



BUILDING LEGEND

BLDG 1	LOW LEVEL NON THERMAL (LLNT)
BLDG 2	LOW LEVEL NON THERMAL (LLNT)
BLDG 3	WAREHOUSE AND MACHINE SHOP
BLDG 4	RAD STORAGE
BLDG 5	MAINTENANCE SHOP
BLDG 6	CLEAN RELEASE
BLDG 7	OFFICE
BLDG 8	LOW LEVEL THERMAL (LLT)
BLDG 9	OFFICE
BLDG 10	OFFICE
BLDG 12	RAD STORAGE
BLDG 13	MIXED WASTE (MW)
BLDG 14	OFFICE
BLDG 15	RAD STORAGE
BLDG 16	LOW LEVEL THERMAL (LLTH)
BLDG 17	ADMINISTRATION
BLDG 18	AIR AND NITROGEN COMPRESSORS
TRL #1	WHOLE BODY COUNTER
BLDG 19	GUARD SHACK
RCA	RADIOLOGICAL CONTROL AREA

REV	DATE	DESCRIPTION	REFERENCES
4	02-22-11	REVISED FENCELINE BY BUILDING #12	
3	02-21-11	ADDED RAIL SPUR AND CONCRETE PAD AND GATE "E". ADDED BUILDING 13 YARD PAD. REVISED FENCELINE FROM BUILDING 17 TO GATE "D".	
2	11-08-10	ADDED GATE DESIGNATION 'D' & 'F' AND REVISED FENCELINE @ GATE 'F' REMOVED BLDG 11 & TRLR #2	
1	01/06/09	PERMIT RENEWAL	
0	10/24/08	INITIAL AS-BUILT	60001-C-001 REV 0



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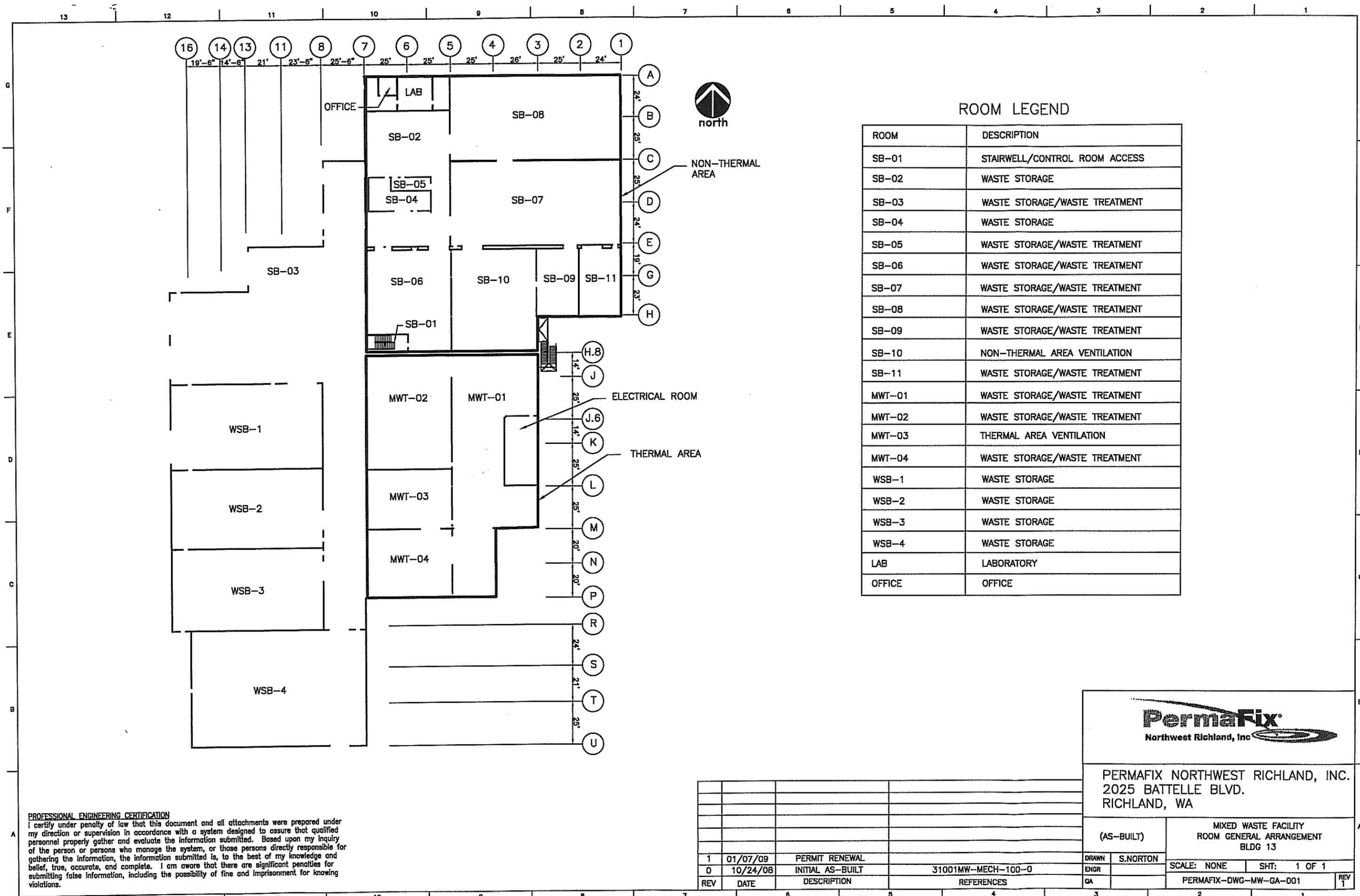
PERMAFIX NORTHWEST SITE FACILITY LAYOUT	
SCALE: AS SHOWN	SHT: 1 OF 1
PERMAFIX-DWG-SITE-CIVIL-001	REV 4

PROFESSIONAL ENGINEERING CERTIFICATION
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Figure 3.

BUILDING 13 GENERAL ARRANGEMENT [DWG-MW-GA-001]



ROOM LEGEND

ROOM	DESCRIPTION
SB-01	STAIRWELL/CONTROL ROOM ACCESS
SB-02	WASTE STORAGE
SB-03	WASTE STORAGE/WASTE TREATMENT
SB-04	WASTE STORAGE
SB-05	WASTE STORAGE/WASTE TREATMENT
SB-06	WASTE STORAGE/WASTE TREATMENT
SB-07	WASTE STORAGE/WASTE TREATMENT
SB-08	WASTE STORAGE/WASTE TREATMENT
SB-09	WASTE STORAGE/WASTE TREATMENT
SB-10	NON-THERMAL AREA VENTILATION
SB-11	WASTE STORAGE/WASTE TREATMENT
MWT-01	WASTE STORAGE/WASTE TREATMENT
MWT-02	WASTE STORAGE/WASTE TREATMENT
MWT-03	THERMAL AREA VENTILATION
MWT-04	WASTE STORAGE/WASTE TREATMENT
WSB-1	WASTE STORAGE
WSB-2	WASTE STORAGE
WSB-3	WASTE STORAGE
WSB-4	WASTE STORAGE
LAB	LABORATORY
OFFICE	OFFICE

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1	01/07/09	PERMIT RENEWAL			
0	10/24/08	INITIAL AS-BUILT	31001MW-MECH-100-0		
REV	DATE	DESCRIPTION	REFERENCES	QA	REV

DRAWN S.NORTON		SCALE: NONE		SHT: 1 OF 1	
ENGR		PERMAFIX-DWG-MW-GA-001		REV 1	



PERMAFIX NORTHWEST RICHLAND, INC.
 2025 BATTELLE BLVD.
 RICHLAND, WA

(AS-BUILT) MIXED WASTE FACILITY
 ROOM GENERAL ARRANGEMENT
 BLDG 13

Mixed Waste Facility

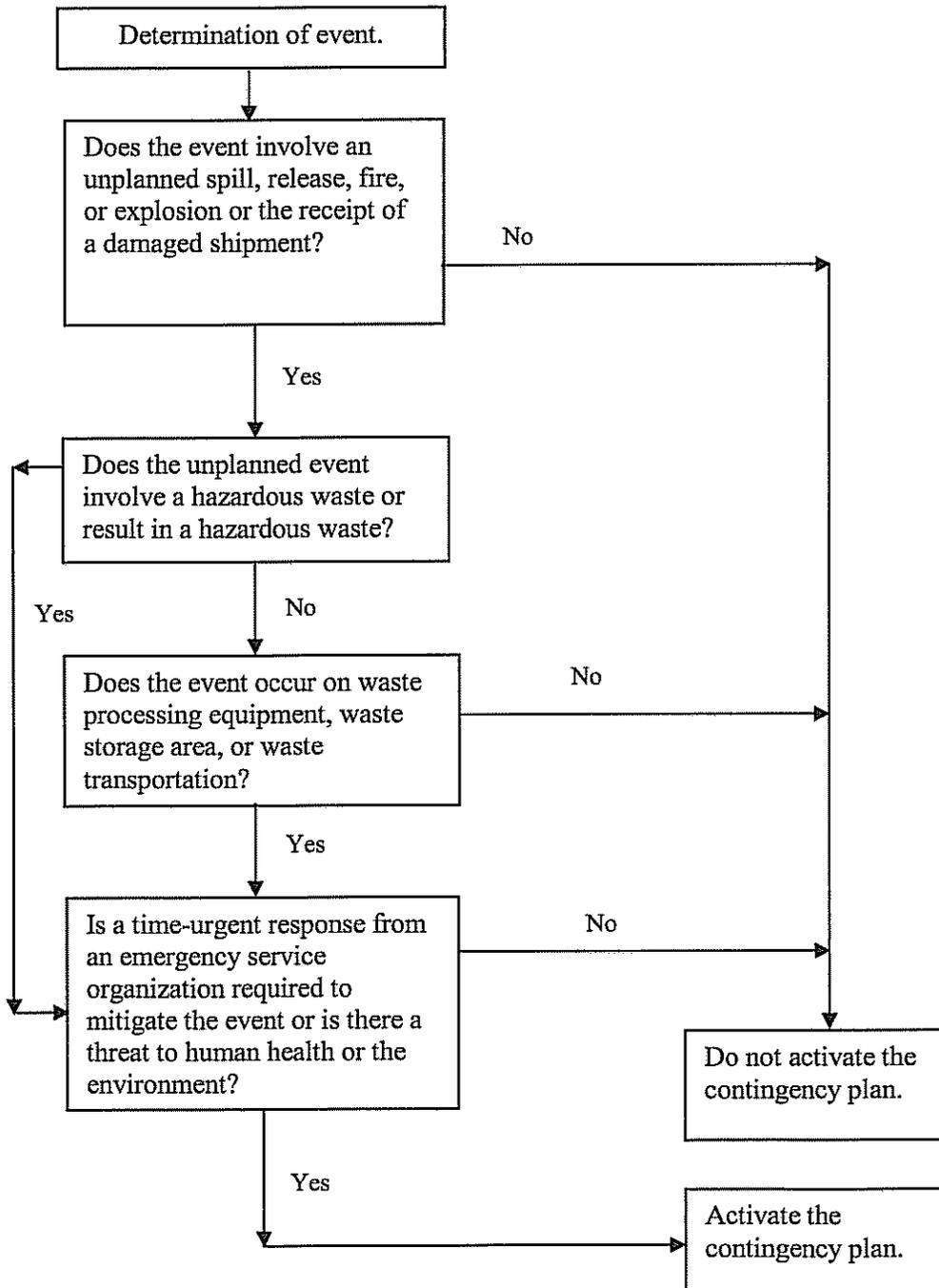
Figure 4.

[RESERVED]

Mixed Waste Facility

Figure 5.

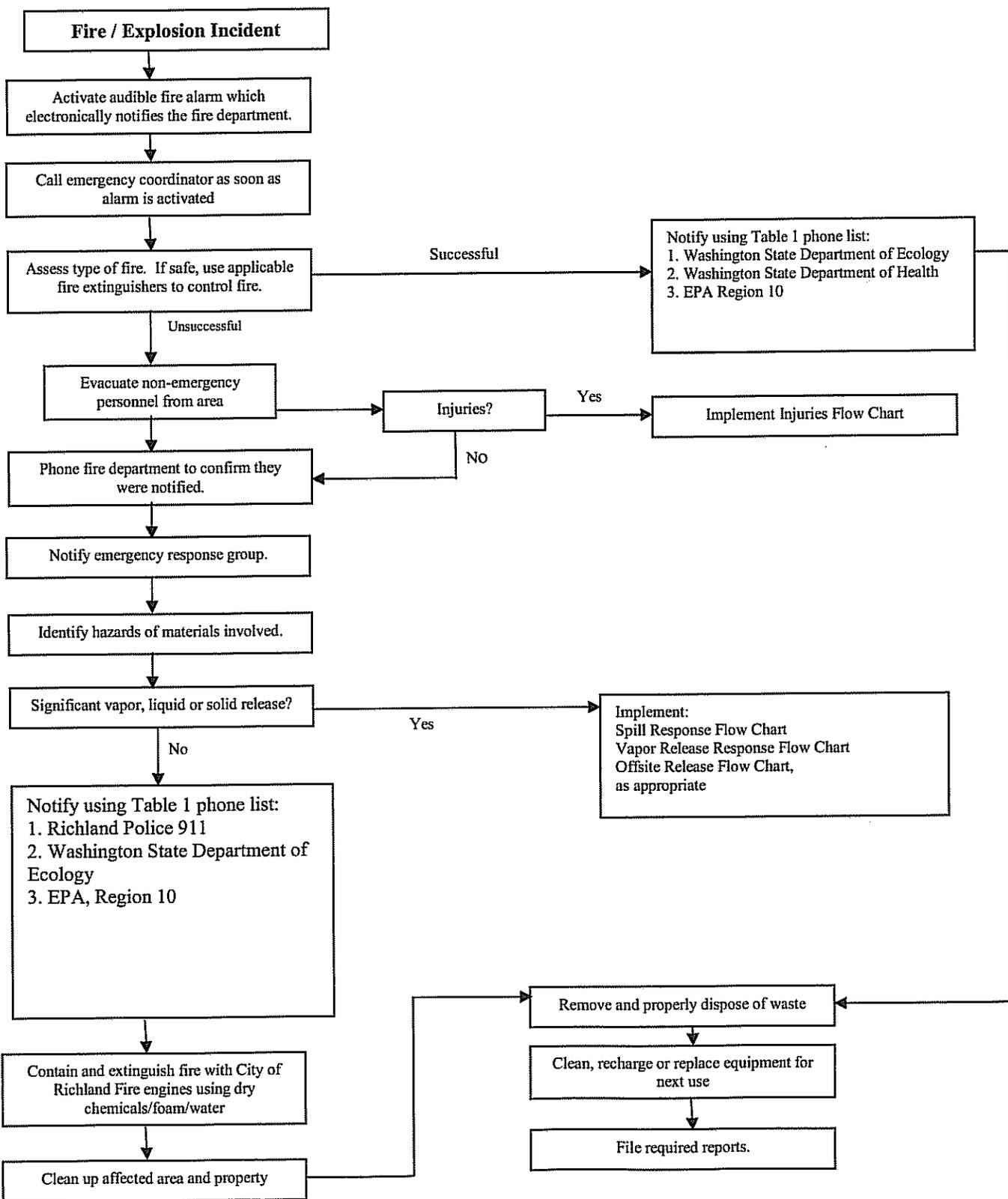
ACTIVATION OF THE CONTINGENCY PLAN



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Figure 6.

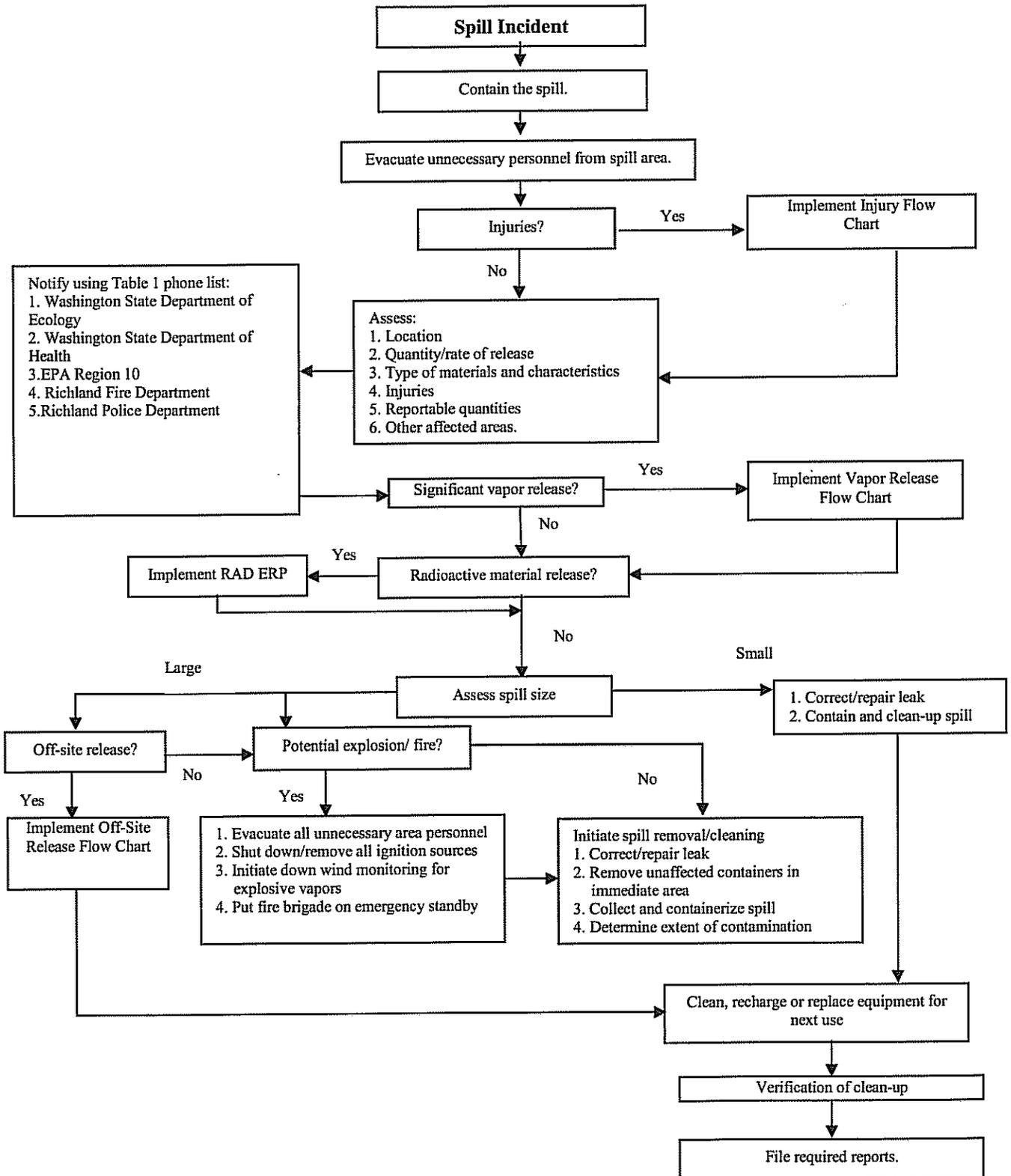
FIRE / EXPLOSION RESPONSE FLOW CHART



Mixed Waste Facility

Figure 7.

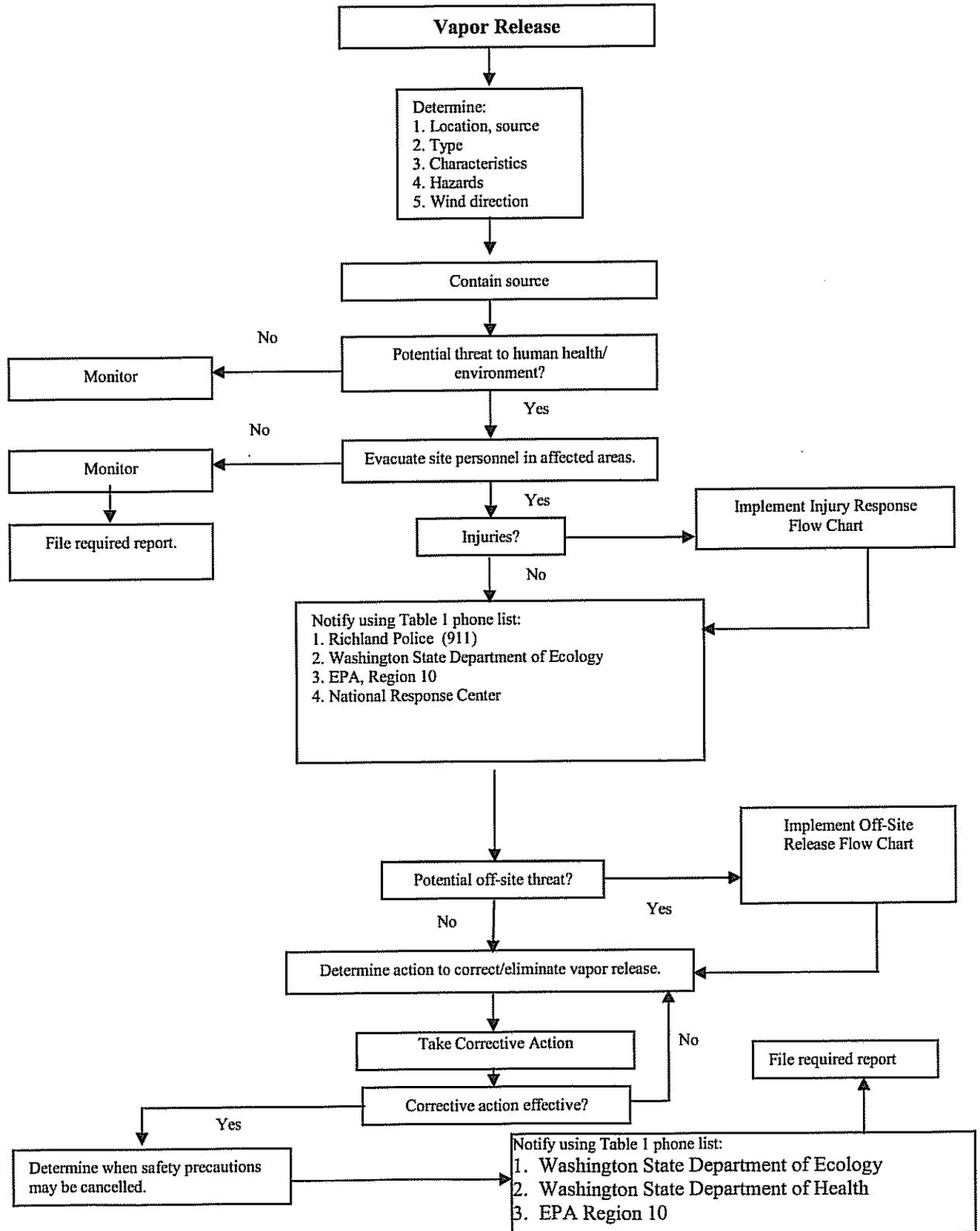
SPILL RESPONSE FLOW CHART FOR NON-TSCA WASTES



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Figure 8.

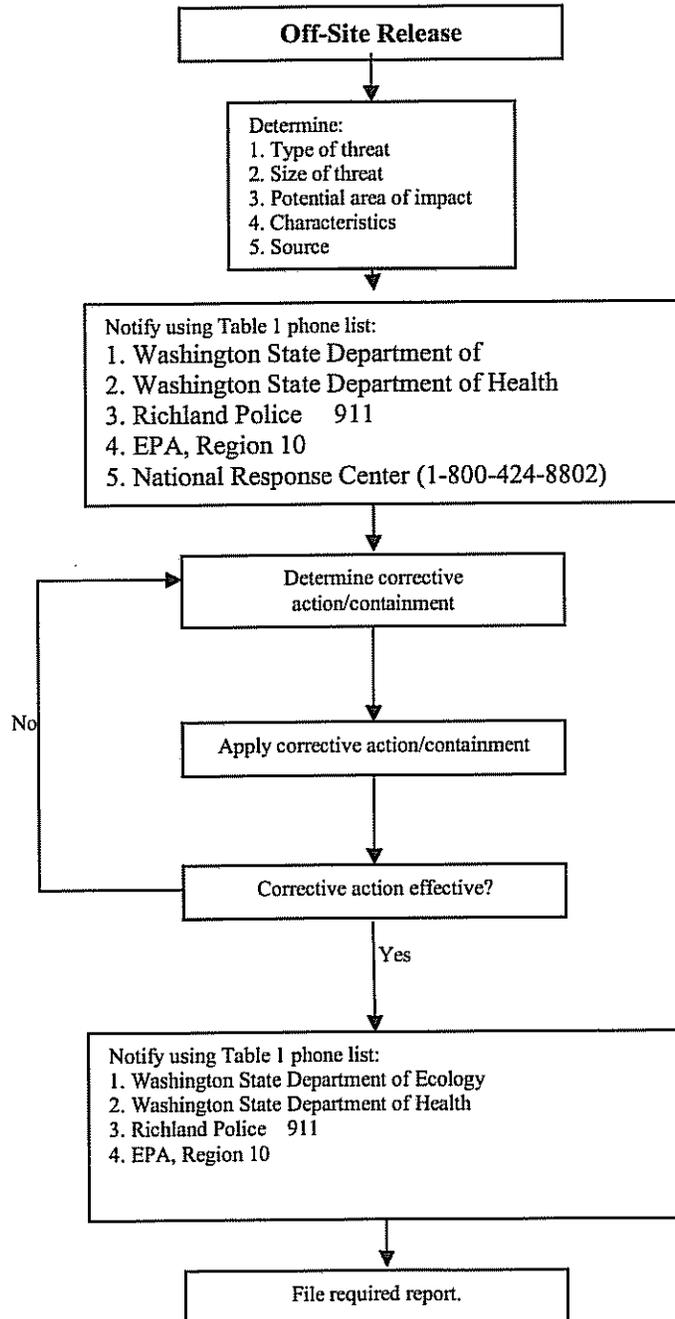
VAPOR RELEASE RESPONSE FLOW CHART



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Figure 9.

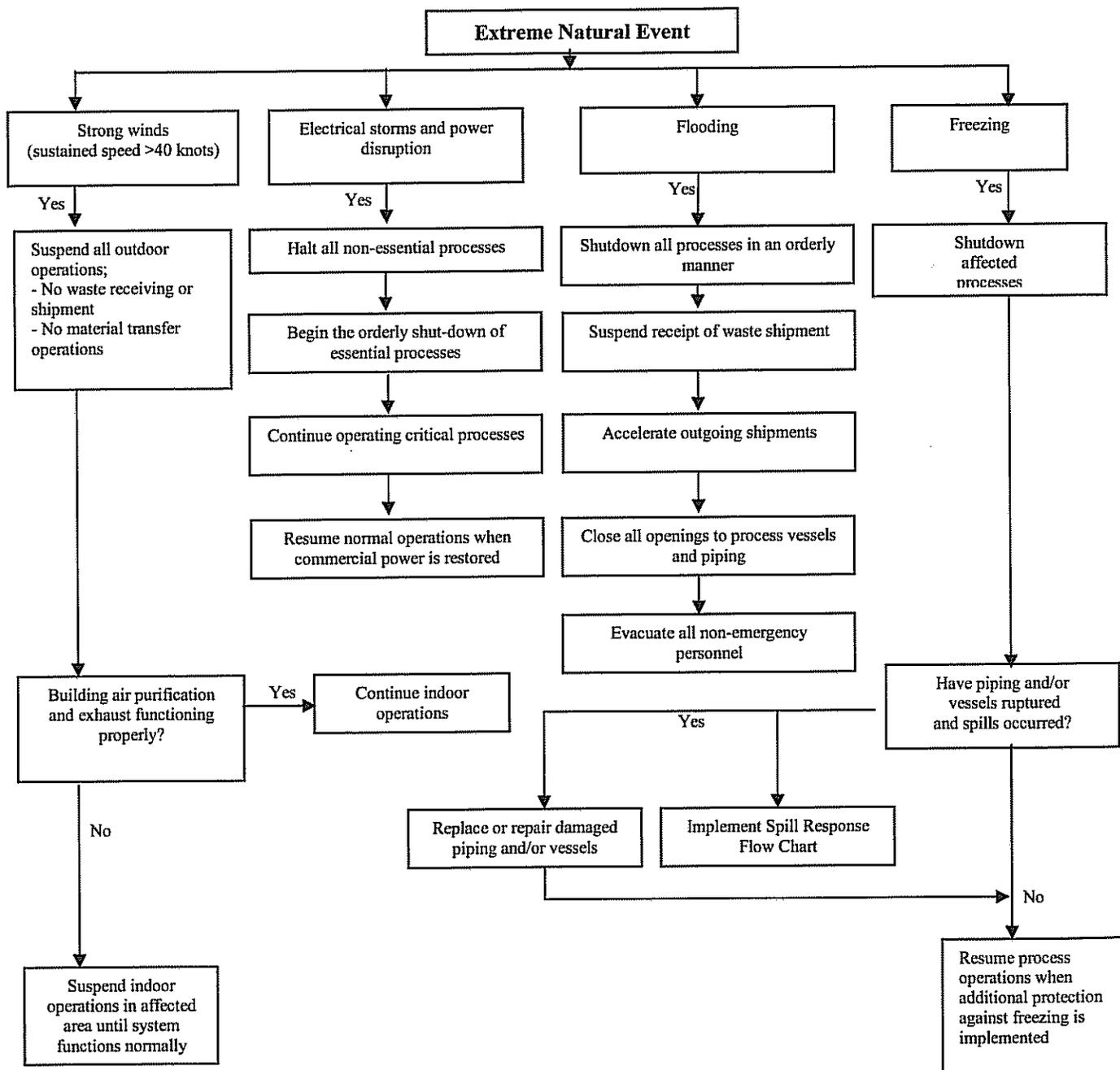
OFF-SITE RELEASE FLOW CHART



Mixed Waste Facility

Figure 10.

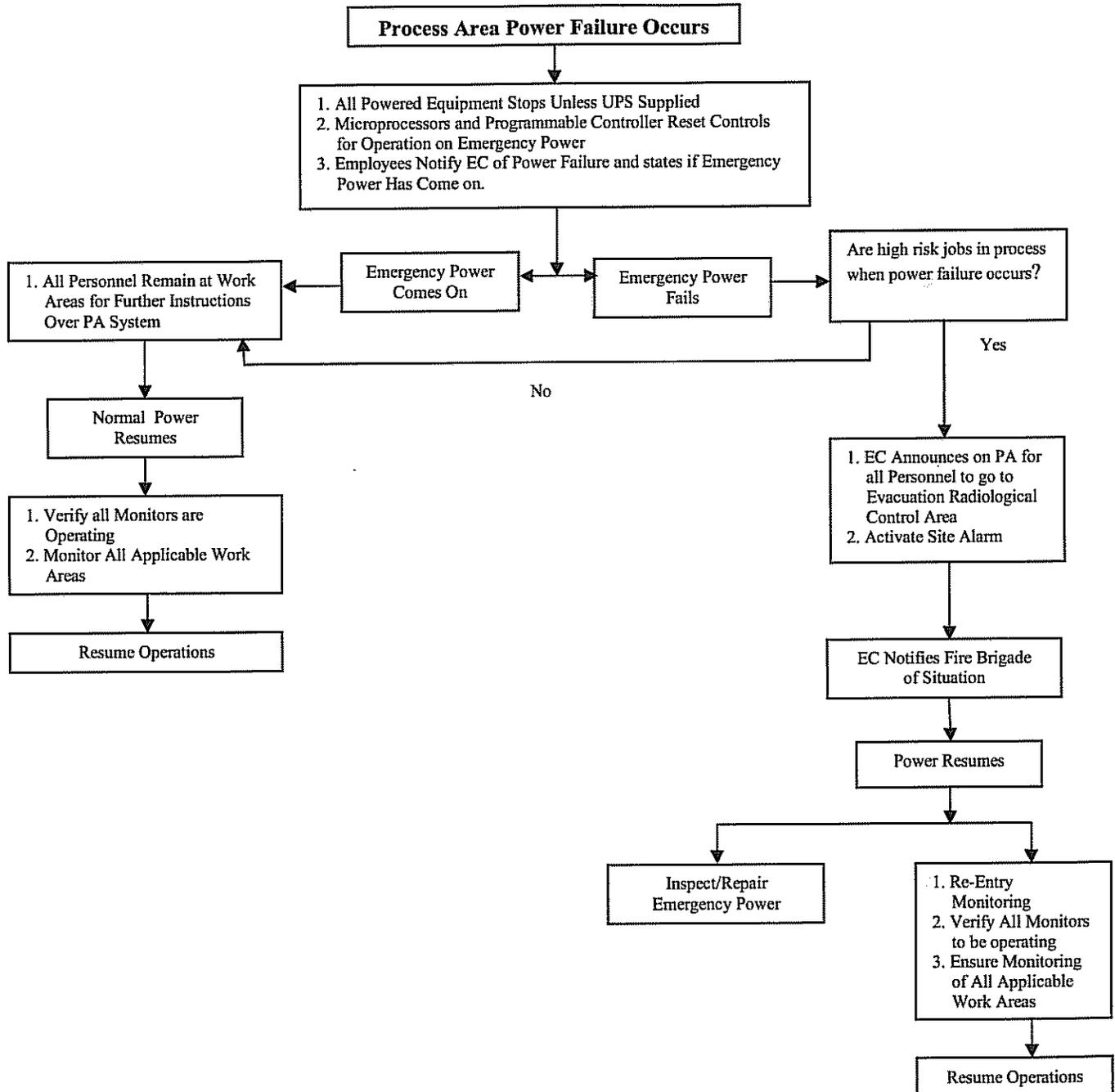
EXTREME NATURAL EVENT RESPONSE FLOW CHART



Mixed Waste Facility

Figure 11.

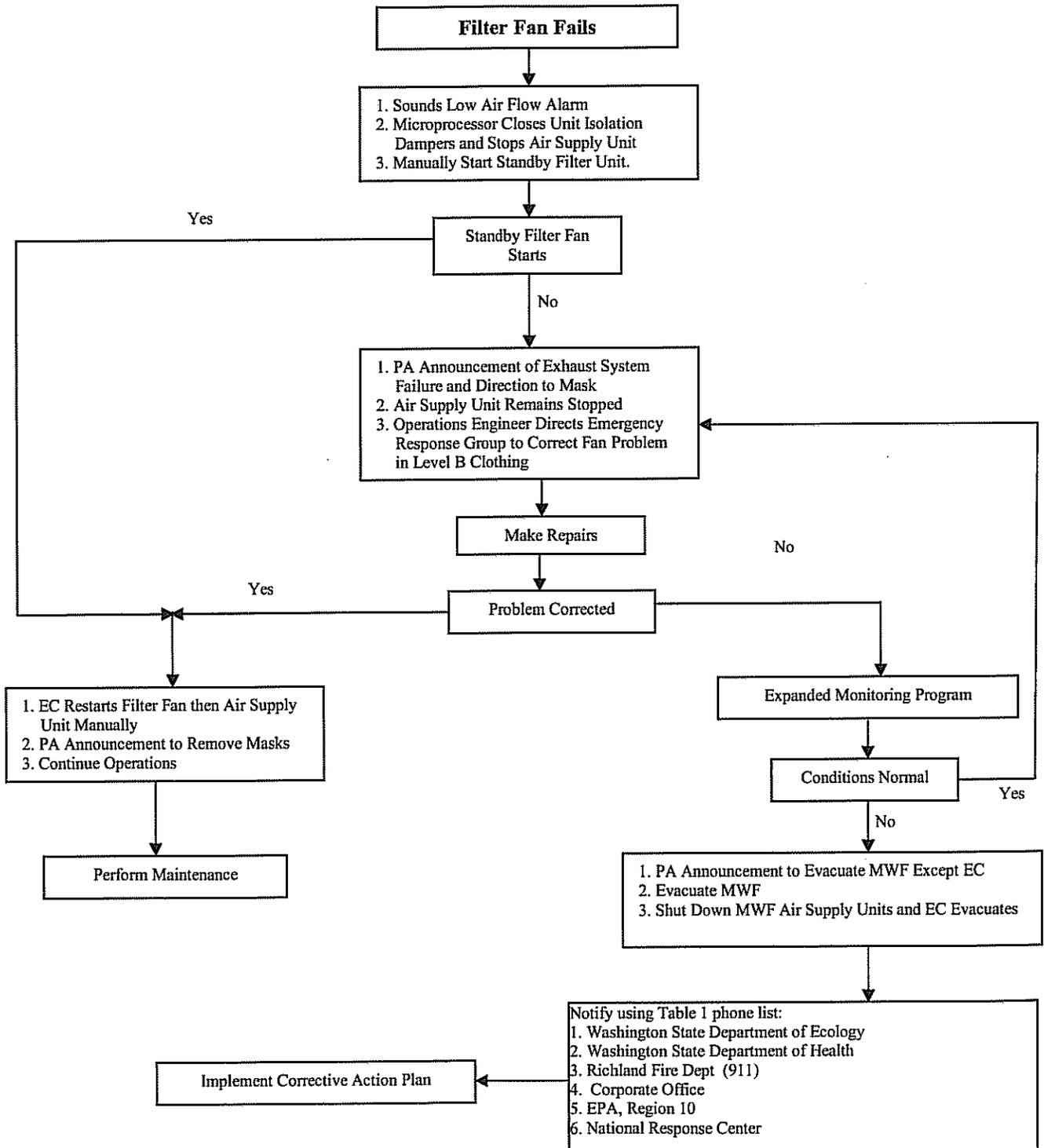
POWER FAILURE FLOW CHART



Mixed Waste Facility

Figure 12.

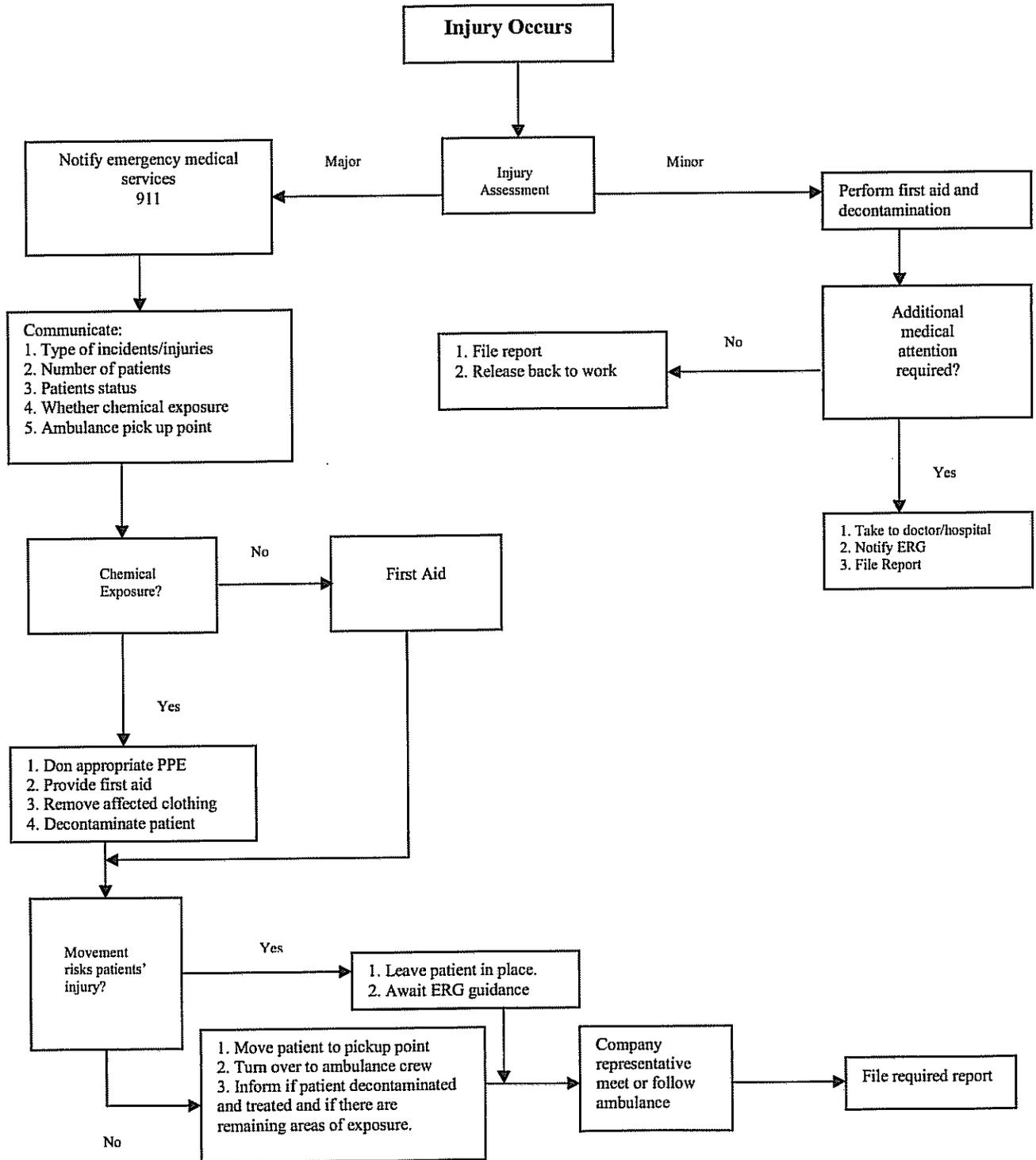
FILTER FAN FAILURE FLOW CHART



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Figure 13.

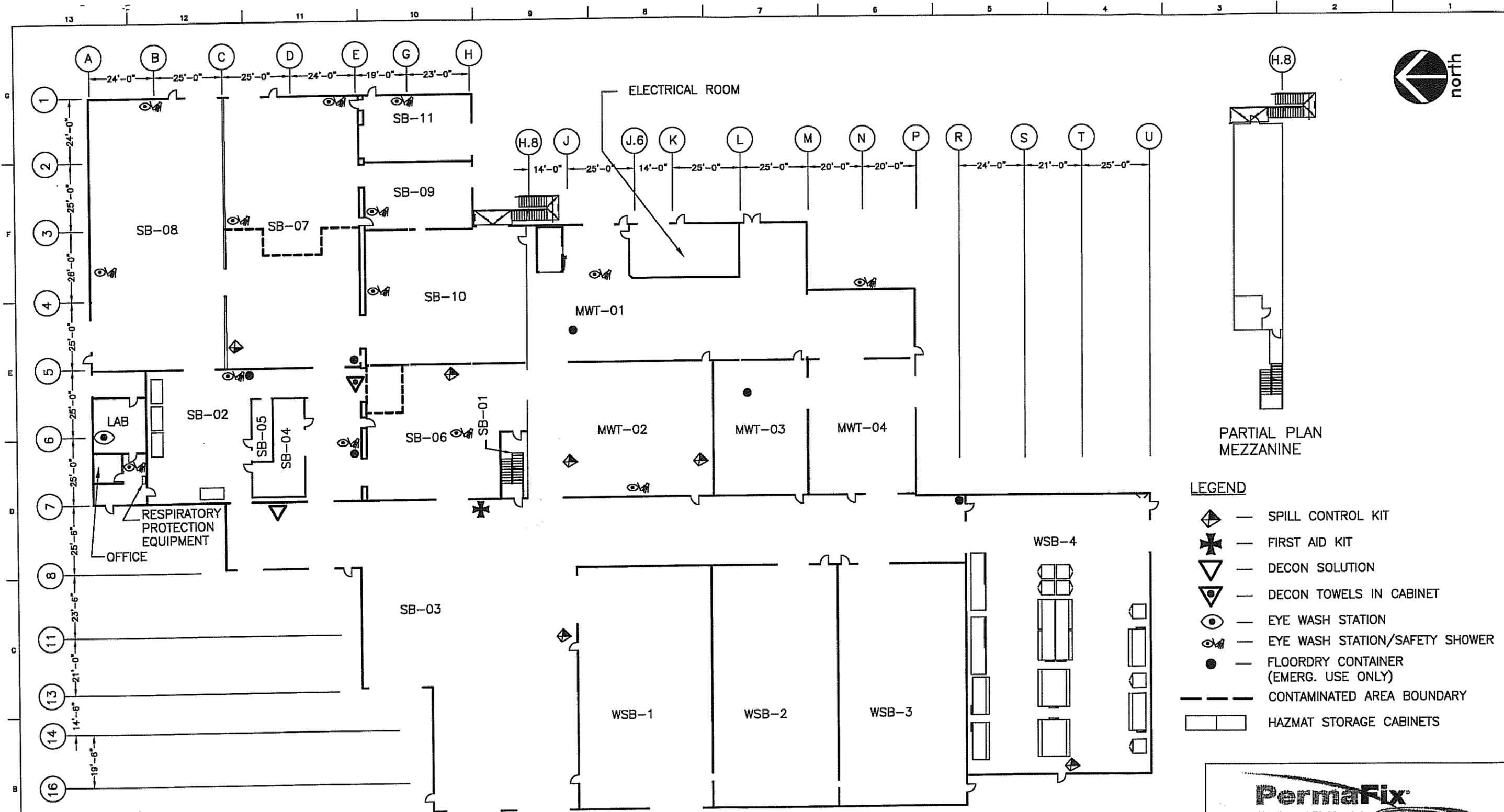
INJURY RESPONSE FLOW CHART



Mixed Waste Facility

Figure 14.

BUILDING 13 EMERGENCY RESPONSE EQUIPMENT [DWG-MW-GA-004]



PARTIAL PLAN MEZZANINE

LEGEND

- SPILL CONTROL KIT
- FIRST AID KIT
- DECON SOLUTION
- DECON TOWELS IN CABINET
- EYE WASH STATION
- EYE WASH STATION/SAFETY SHOWER
- FLOORDRY CONTAINER (EMERG. USE ONLY)
- CONTAMINATED AREA BOUNDARY
- HAZMAT STORAGE CABINETS



PERMAFIX NORTHWEST RICHLAND, INC.
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RICHLAND, WA

(AS-BUILT) MIXED WASTE FACILITY
EMERGENCY RESPONSE
BLDG 13

SCALE: NONE SHT: 1 OF 1

PERMAFIX-DWG-MW-GA-004

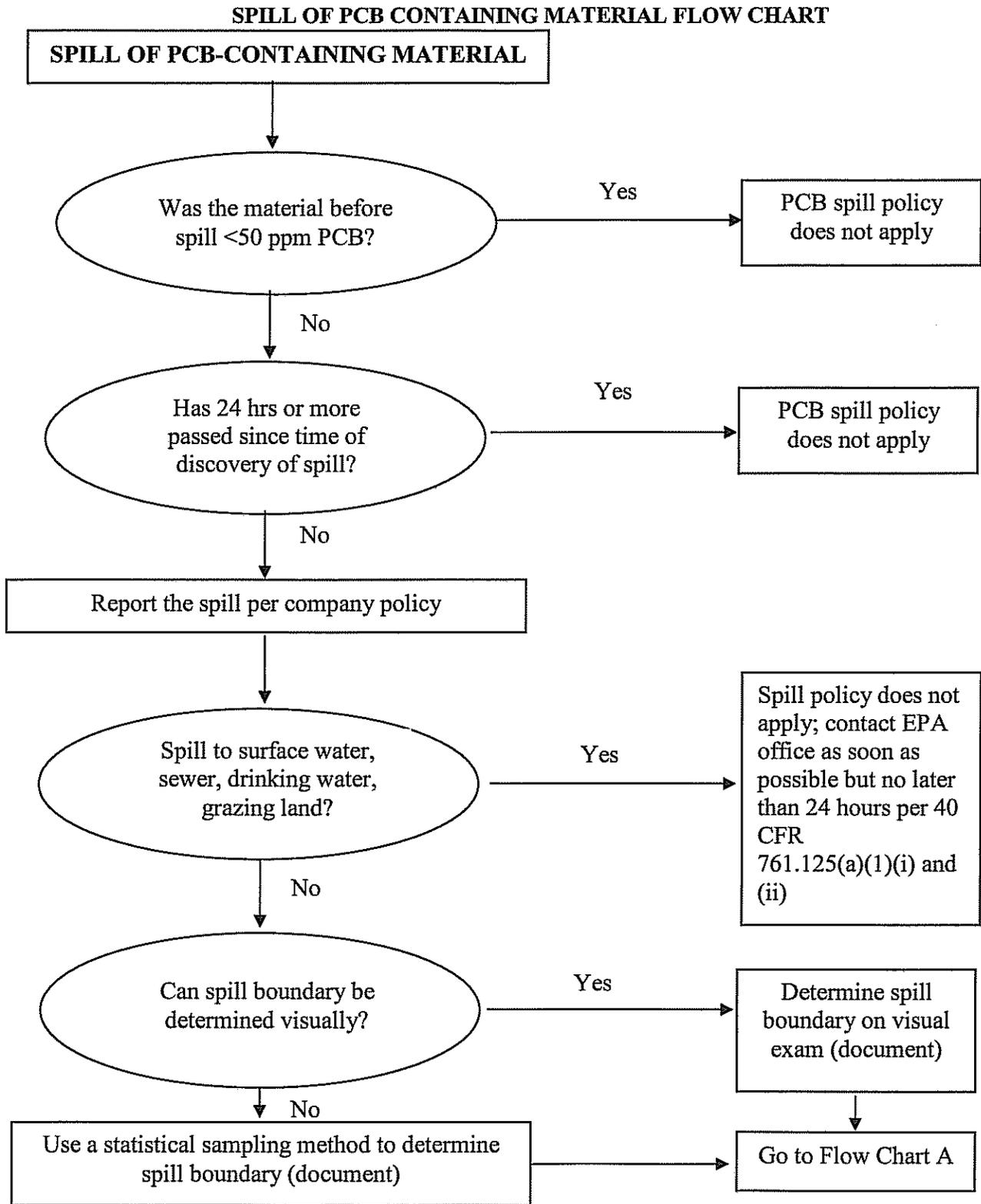
PROFESSIONAL ENGINEERING CERTIFICATION
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

REV	DATE	DESCRIPTION	REFERENCES
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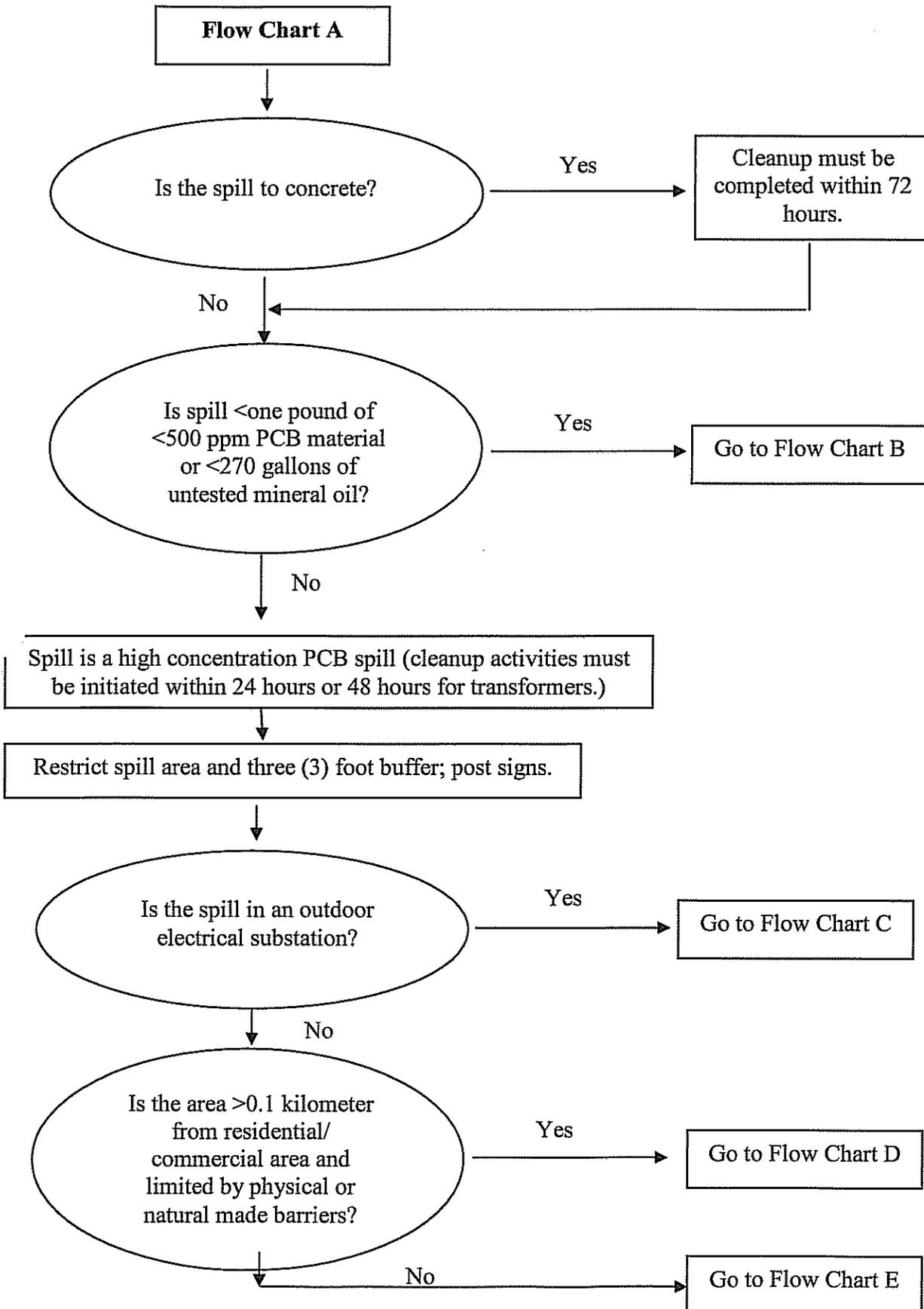
DRAWN S.NORTON
ENGR
QA

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Figure 15.



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Flow Chart B

Spill is low concentration PCB spill (spill cleanup must be completed within 48 hours.)

Is spill to a solid surface?

Yes

Double wash/rinse surface (40 CFR 761.123 and one (1) foot buffer per requirements.)

Go to Flow Chart F

No

Is spill to a soil?

Yes

Double wash/rinse surface (40 CFR 761.123 and one (1) foot buffer per requirements.)

No

Spill Cleanup Policy does not apply

Flow Chart C

Clean spill to meet:
Solid Surfaces $100\mu\text{m}/100\text{cm}^2$
Soils ≤ 25 ppm or 50 ppm if posted

Perform post-cleanup sampling per 40 CFR 761.130

Go to Flow Chart F

Mixed Waste Facility

Flow Chart D

Area is a restricted access area

Clean spill to meet:
High contact solid surfaces: $10\mu\text{g}/100\text{ cm}^2$
Low contact indoor impervious surfaces:
 $10\mu\text{g}/100\text{ cm}^2$
Low contact indoor non-pervious surfaces:
 $10\mu\text{g}/100\text{ cm}^2$
Low contact outdoor: $10\mu\text{g}/100\text{ cm}^2$
Soils: ≤ 25 ppm may be left

Perform post-cleanup sampling per
40 CFR 761.130

Go to Flow Chart F

Flow Chart E

Area is a restricted access area

Clean spill to meet:
Indoor solid surfaces: $10\mu\text{g}/100\text{ cm}^2$
Indoor vaults and low contact impervious
surfaces: $10\mu\text{g}/100\text{ cm}^2$
Low contact indoor non-pervious surfaces:
 $10\mu\text{g}/100\text{ cm}^2$
Low contact outdoor non-pervious solid
surfaces: $10\mu\text{g}/100\text{ cm}^2$
Soils: ≤ 100 ppm may be left provided that soil
is excavated to minimum depth of 10 inches.
The excavated soil will be replaced with < 1
ppm soil and the site is restored.

Perform post-cleanup sampling per
40 CFR 761.130

Go to Flow Chart F

Mixed Waste Facility

Flow Chart F

↓

Certify cleanup. Place certification in unit records and maintain for five (5) years.
40 CFR 761.125(b)(3)

↓

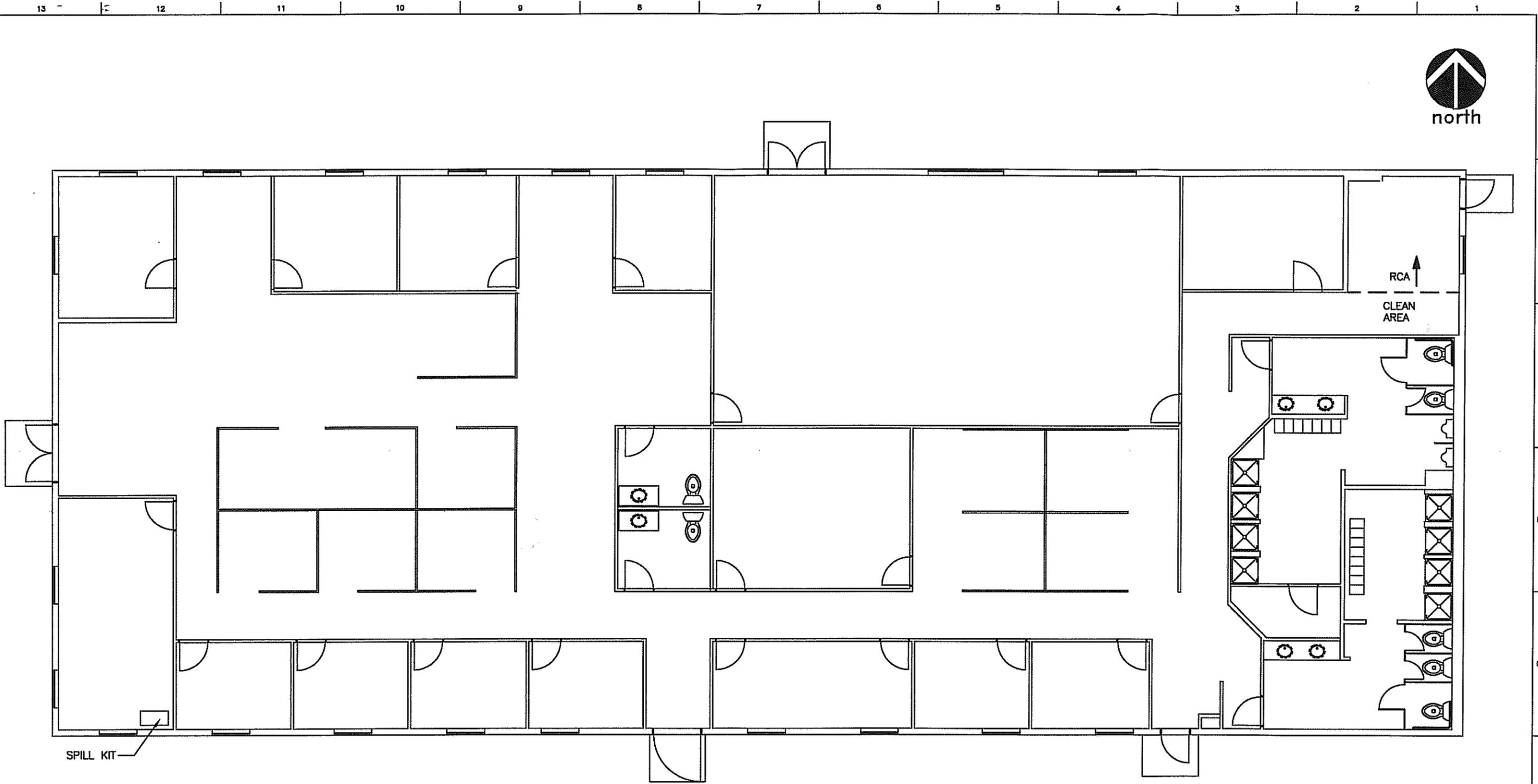
Document. Maintain for five (5) years.

- a. Source of spill
- b. Date and time of spill
- c. The date and time cleanup was complete or terminated (note any delay in cleanup).
- d. Brief description of the spill location
- e. Pre-cleanup sampling data used to establish spill boundaries if required.
- f. Brief description of the solid surfaces cleaned and of the double wash/rinse method used.
- g. Approximate depth of soil and the amount of soil removed.
- h. For high concentration spills, post-cleanup verification sampling data.

Mixed Waste Facility

Figure 16.

BUILDING 17 SPILL KIT LOCATION [DWG-SITE-CIVIL-005]



PLAN VIEW
SCALE: 3/32"=1'-0"



PERMAFIX NORTHWEST RICHLAND, INC.
2025 BATTELLE BLVD.
RICHLAND, WA

(AS-BUILT)		BLDG 17	
		SPILL KIT LOCATION	
SCALE: AS SHOWN	SHT: 1 OF 1		
PERMAFIX-DWG-SITE-CIVIL-005		REV	1

PROFESSIONAL ENGINEERING CERTIFICATION
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

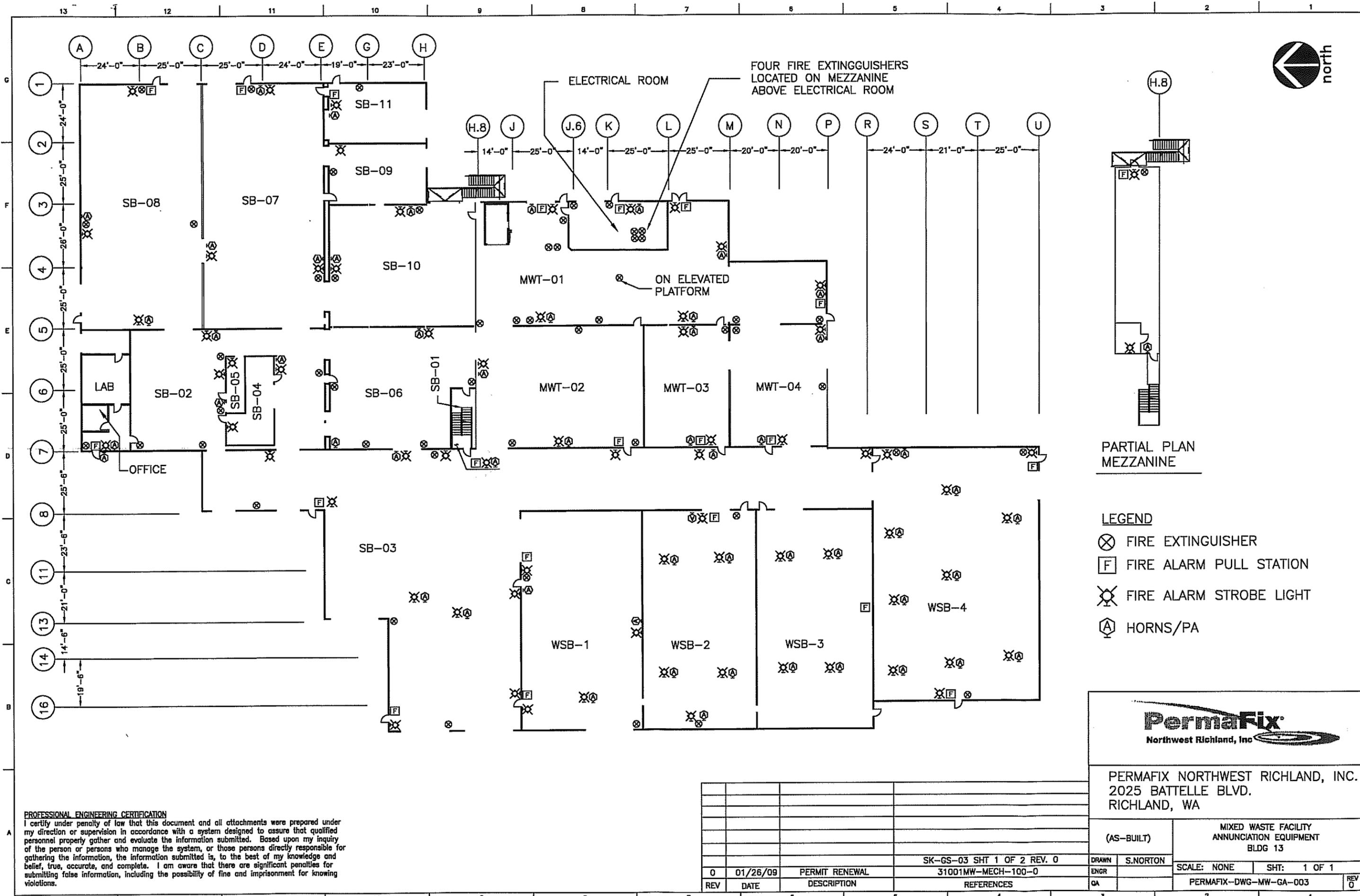
REV	DATE	DESCRIPTION	REFERENCES
0	03/10/09	PERMIT RENEWAL	

DRAWN S.NORTON
ENGR
QA

Mixed Waste Facility

Figure 17.

BUILDING 13 ANNUNCIATION EQUIPMENT [DWG-MW-GA-003]



PARTIAL PLAN MEZZANINE

- LEGEND**
- ⊗ FIRE EXTINGUISHER
 - FIRE ALARM PULL STATION
 - ⊗ FIRE ALARM STROBE LIGHT
 - ⊗ HORNS/PA



PERMAFIX NORTHWEST RICHLAND, INC.
2025 BATTELLE BLVD.
RICHLAND, WA

(AS-BUILT) MIXED WASTE FACILITY
ANNUNCIATION EQUIPMENT
BLDG 13

SCALE: NONE SHT: 1 OF 1

PERMAFIX-DWG-MW-GA-003

REV	DATE	DESCRIPTION	REFERENCES
0	01/26/09	PERMIT RENEWAL	SK-GS-03 SHT 1 OF 2 REV. 0 31001MW-MECH-100-0

PROFESSIONAL ENGINEERING CERTIFICATION
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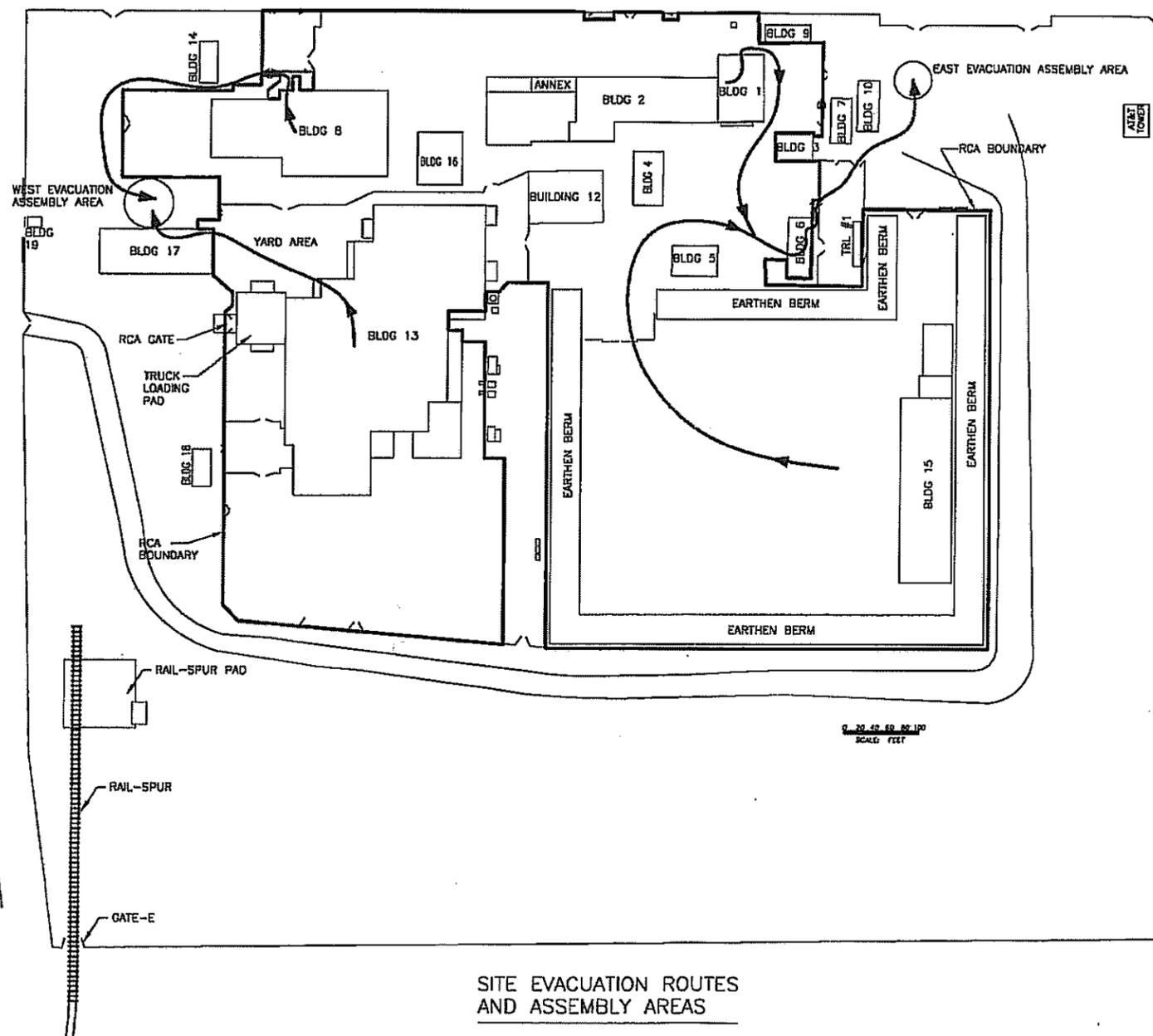
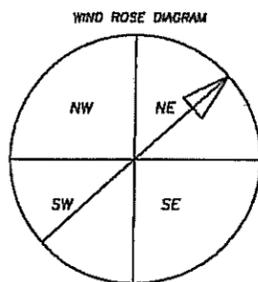
Figure 18.

EVACUATION ROUTES [DWG-SITE-CIVIL-004]



BUILDING LEGEND

BLDG 1	LOW LEVEL NON THERMAL (LLNT)
BLDG 2	LOW LEVEL NON THERMAL (LLNT)
BLDG 3	WAREHOUSE AND MACHINE SHOP
BLDG 4	RAD STORAGE
BLDG 5	MAINTENANCE SHOP
BLDG 6	CLEAN RELEASE
BLDG 7	OFFICE
BLDG 8	LOW LEVEL THERMAL (LLT)
BLDG 9	OFFICE
BLDG 10	OFFICE
BLDG 12	RAD STORAGE
BLDG 13	MIXED WASTE (MW)
BLDG 14	OFFICE
BLDG 15	RAD STORAGE
BLDG 16	LOW LEVEL THERMAL (LLTH)
BLDG 17	ADMINISTRATION
BLDG 18	AIR AND NITROGEN COMPRESSORS
TRL #1	WHOLE BODY COUNTER
BLDG 19	GUARD SHACK
RCA	RADIOLOGICAL CONTROL AREA
ANNEX	LOW LEVEL NON THERMAL (LLNT)



0 20 40 60 80 100
SCALE: FEET

SITE EVACUATION ROUTES AND ASSEMBLY AREAS

PROFESSIONAL ENGINEERING CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

1	04-11-11	ADDED RAIL-SPUR AND PAD, BLDG. 13 LOADING PAD. REVISED FENCELINE @ BLDG 12 & 17. REMOVED TRLR#2 AND BLDG. 11. ADDED ANNEX.	
0	03/09/09	PERMIT RENEWAL	ALTA/ACSM LAND TITLE SURVEY WORLEY SURVEYING SERVICE, INC. 6/04/07
REV	DATE	DESCRIPTION	REFERENCES



PERMAFIX NORTHWEST RICHLAND, INC.
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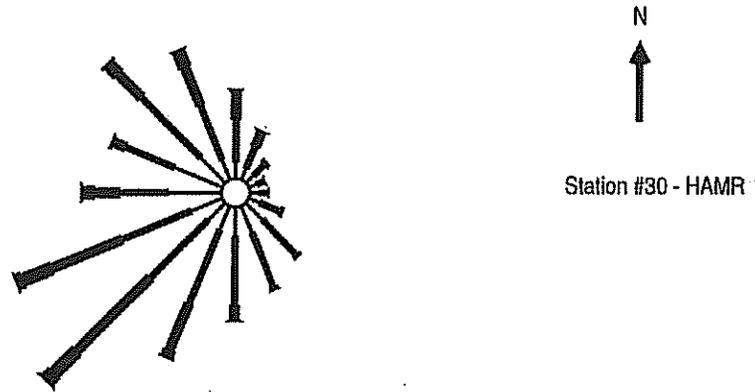
(AS-BUILT)	PERMAFIX NORTHWEST SITE EVACUATION ROUTES AND ASSEMBLY AREAS
SCALE: AS SHOWN	SHT: 1 OF 1
PERMAFIX-DWG-SITE-CIVIL-004	REV 1

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ENGR
CA S.NORTON

Mixed Waste Facility

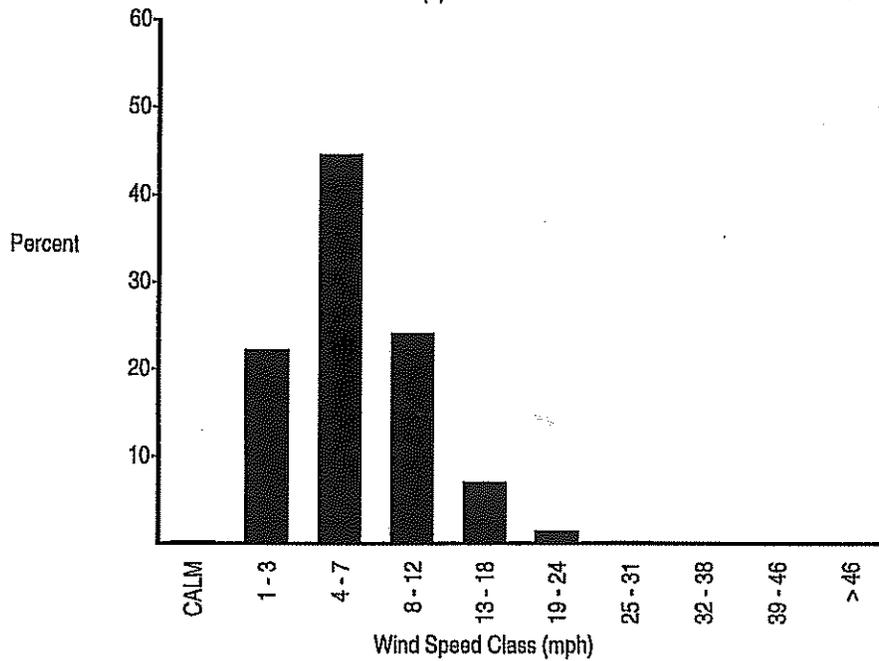
Figure 19.

WIND ROSE



(a) Wind Rose

Period: 1/2007 - 12/2007



(b) Wind Speed Histogram