

APPLICATION FOR RENEWAL OF NPDES PERMIT NO. WA-002515-1

Attachment D

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Attachment D – Best Management Practices Plan
(27 pages)

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Title: OIL AND HAZARDOUS SUBSTANCES SPILL PREVENTION, CONTROL AND COUNTER-MEASURE PLAN		

ENERGY NORTHWEST
COLUMBIA GENERATING STATION
SITE-WIDE PROCEDURES



SWP-ENV-02

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All review and approval signatures are documented on the Procedure Revision Form

Synopsis

From AR # 184076, clarify 4.2.4 with regard to reporting a spill to CRS/SM, align 4.5.2 with Ecology guidance on reporting spills. Throughout the procedure eliminate reference to mixed waste storage area (MWSA) as it is no longer in use and the permit is terminated. Due to program and implementation ownership changes, change reference to Environmental Services throughout the procedure to Environmental & Regulatory Programs. Reflect change of sponsor to Kevin Becker. Also enhance spill prevention and preparedness in Section 4.1. Finally, make editorial changes to update plan accordingly.

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1.0 PURPOSE

This procedure delineates measures to minimize the risk of releases of hazardous substances and prescribes appropriate responses to such releases.

2.0 DISCUSSION

The terms "release" and "hazardous substance" are defined in Section 6.0. It is important to note that oils and hazardous wastes are included as "hazardous substances." Also, a spill is a type of "release" involving accidental or unintentional running or leaking of a material from a container. State and Federal regulations use the term "release" rather than "spill" to describe any entry of any hazardous substance into the environment or workplace. However, most individuals are more familiar with the term "spill" which is the most frequent type of release on Energy Northwest property. To avoid confusion, the term "spill," as used in this procedure, is synonymous with "release."

Actions in response to releases of hazardous substances to the environment are governed by both State and Federal regulations.

This procedure provides requirements for immediate spill response actions necessary to contain a spill, mitigate damage, initiate cleanup, and evaluate for reportability to offsite agencies. Not all releases or spills are reportable to offsite agencies; however, they shall be cleaned up. ABN-HAZMAT provides immediate response requirements for the Fire Brigade during a hazardous substance release.

3.0 PRECAUTIONS

Most hazardous substances and hazardous wastes are toxic on skin contact or inhalation. In addition, some may present fire or explosion hazards. Hazardous substance spill response personnel and cleanup personnel use appropriate personal protective equipment (PPE) as specified by Industrial Safety or Health Physics. This includes respiratory protection equipment which is issued in accordance with PPM 11.2.11.3 (radiological) and ISPM-17 (nonradiological).

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4.0 PROCEDURE

4.1 Spill Prevention and Preparedness

Measures taken to prevent and prepare for spills are best management practices (BMPs) for the handling of hazardous substances. These BMPs are provided below and should be followed. Areas of the site where bulk fuels and chemicals are stored and used receive special emphasis and precautions. Several of these areas are identified in Attachments 8.3 through 8.7. Additional locations include diesel fuel storage tanks at the Kootenai Bldg. (PSF or Bldg. 34), the Sanitary Waste Treatment Facility (SWTF), Control Bldg. (No. 24), and the Protected Area Access Point (PAAP) (Bldg.24).

- 4.1.1 Persons working for or on behalf of Energy Northwest at CGS are responsible for ensuring that best management practices and the highest standards of good housekeeping that will prevent and/or minimize the risk of spills are followed at all times.
- 4.1.2 Persons working for or on behalf of Energy Northwest at CGS are responsible for handling hazardous chemical substances in a manner that will prevent and/or minimize spills.
- 4.1.3 Persons working for or on behalf of Energy Northwest at CGS are responsible for informing their supervision if existing measures, controls or procedures are not adequate to prevent an unintentional release of hazardous chemicals.
- 4.1.4 Persons working for or on behalf of Energy Northwest at CGS have the authority and obligation to stop any work or task that is being performed in a manner that presents a risk of a spill, and to ensure actions are taken to prevent recurrence.
- 4.1.5 During pre-job meetings for work activities with the potential for spills, the "Environmental Hazards" section of the Pre-Job Brief Checklist (form #26320) shall be covered and discussed as appropriate by supervision and staff.
- 4.1.6 Routine visual inspections are conducted in the plant around selected areas of the site in accordance with SWP-MAI-02 and GIH-8.1.5. These inspections include observations of chemical storage areas and containers, leaks, and housekeeping issues that could be precursors to spills.
- 4.1.7 Preventive and restorative maintenance are promptly conducted on equipment used to store, transfer, or transport hazardous substances. This includes preventative maintenance on stationary and mobile equipment that may be a source of fluid leaks and spills (such as oil, gasoline, hydraulic fluid, and antifreeze).
- 4.1.8 Tanks and containers storing fuels and hazardous substances are protected from vehicle traffic by physical barriers or caution markings. Secondary containment and covered storage are provided when practicable. Containers and tanks are not to be left sitting in free-standing water or other liquid.

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- 4.1.9 Portable equipment such as compressors, generators, and pumps with fuel, lubricants, or other hazardous liquids are positioned such that fluid spills will not enter sumps, drains, and drywells. When practicable, the equipment is placed inside a temporary containment structure.
- 4.1.10 Tank filling operations are closely monitored to assure that overfilling does not occur. Drip pans or other appropriate containment devices are used when making and breaking hose connections. Absorbent materials (pads, booms) are readily available to respond to minor spills during tank-to-tank transfers of chemicals and petroleum products.
- 4.1.11 Mobile fuel trucks are equipped with a supply of absorbent materials for limiting the spread of small spills. Fuel tank operators, whether dispensing from fixed tanks or from a fuel truck, remove the fill nozzle when the automatic shut-off valve engages; the vehicle or equipment being refueled is not "topped off". In addition, the tanker trucks involved in offloading activities should not be positioned or parked over soil; but over concrete, asphalt, or other impervious surfaces. When this is not possible, every effort shall be made to prevent spills to the ground.
- 4.1.12 For jobs and tasks having a high degree of risk (dealing with large volumes of hazardous chemicals, work locations near drains, high risk of a health hazard, etc.) a minimum of two individuals (e.g., driver and equipment operator) shall participate to provide oversight for spills and personal safety.

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4.2 Spill Emergency Response Actions

NOTE: This section is not intended to provide a list of all the considerations necessary for assessing the scene of a hazardous substance spill. Rather, it addresses the primary considerations when an individual first discovers a spill. One of the most important actions taken in response to a spill is the initial notification by the individual who discovers the spill. The intent of the spill response actions detailed in this section is to protect personnel, equipment and the environment, yet allow some discretion by knowledgeable personnel in determining when a spill should be reported to the Control Room Supervisor (CRS)/Shift Manager (SM) via extension 2222. If in doubt, notify the CRS/SM.

- 4.2.1 Chemical spills that occur in the Environmental Services Laboratories (Kootenai Bldg.) or the plant Radiochemistry Laboratory (487' RW) should be handled and reported in accordance with the Chemical Hygiene Plan (CI-9.1).
- 4.2.2 The individual who first encounters the scene of a spill should promptly assess the spill as follows:
- a. Attempt to identify the spilled material and determine if it is a hazardous substance or nonhazardous substance. Spills involving nonhazardous substances do not require notification of the CRS/SM unless the substance enters a plant sump or floor drain.
 - b. Determine if the spill presents a threat or potential threat to personnel, equipment, or the environment (air, land, water). This includes whether the spill is contained on or within an impervious surface (e.g., floor, pad, slab, containment structure, sump, paved road) or has been released to the environment. Spills which do not present a threat to personnel, equipment/structures, or the environment do not require notification of the CRS/SM via extension 2222, even if the spill involves a hazardous substance. Environmental & Regulatory Programs may be contacted for guidance on determining if a spill presents a threat or potential threat to personnel or the environment.
 - c. Estimate the quantity and extent of spilled material and whether the spill is stable, unstable, or escalating.

This assessment forms the basis for determining what actions are to be taken by the individual who discovers the spill. This includes the decision whether the CRS/SM should be notified at extension 2222. The following considerations may be used to make the assessment:

- Individual's working knowledge or familiarity with the spilled material
- Material Safety Data Sheet (MSDS) hazard information (e.g., explosive, flammable, corrosive, reactive, poison, toxic, caustic)

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- Location of the spill
- Container shape, type, labels (NFPA diamond), markings, placards
- Senses (smoke, fire, heat, fumes, mists, gases, vapors, odors, color)
- Information provided by co-workers or supervision
- Technical publications, manuals, literature, records, manifests, bill of lading

4.2.3 If the individual who discovers the spill does not have sufficient knowledge, training, or experience to assess the spill in accordance with Section 4.2.2, the CRS/SM should be notified of the spill immediately, via extension 2222, and provided with the following information if known:

- Time, location, and equipment involved in the spill
- Material spilled and an estimate of the amount spilled
- The cause of the spill
- Control measures taken and the current status of the spill
- Injuries to personnel or damage to equipment

4.2.4 Immediately notify the CRS/SM at extension 2222 and provide the information listed in Section 4.2.3 if the spill assessment identifies any of the following:

- Hazard(s) to personnel
- Adverse affect on equipment/structures
- Threat to the environment (soil, water, air) or work place

4.2.5 If the spill assessment does not identify any of the conditions listed in Section 4.2.4, the individual who discovers the spill notifies Environmental & Regulatory Programs for spill log-in, evaluation of spill as incidental or non-incidenta, and coordination of spill cleanup and disposal. Also notify Industrial Safety for PPE requirements during cleanup. Notification of the CRS/SM is not required. However, an informational notification to the CRS/SM may be made at the discretion of Environmental & Regulatory Programs or Industrial Safety.

4.2.6 Document the spill per SWP-CAP-01 and include an assignment to the AR for Environmental & Regulatory Programs to coordinate spill cleanup and disposal.

NOTE: Spill response actions are conducted in accordance with WAC 296-824.

4.2.7 When notified of a spill, the CRS/SM should refer to Attachment 8.1 for guidance and respond as follows:

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- a. Assess the spill against the guidelines provided in PPM 13.1.1.
- b. Take appropriate actions in accordance with ABN-HAZMAT.
- c. Ensure that the spill site is controlled to ensure personnel safety (e.g., signs, barrier tape).
- d. Direct the hazardous materials response team (Fire Brigade) to initiate spill containment actions during "emergency response" only if the spill presents an immediate threat to personnel, plant systems/structures/components, facilities, or the environment (e.g., fire, explosion, chemical exposure).
- e. When the spill has been stopped, contained and the spill site is stabilized with no threat to personnel, plant, facilities, or the environment:
 - 1) Evaluate the spill against the reporting requirements outlined in Section 4.5 and make notifications if required. Environmental & Regulatory Programs may be consulted for assistance.
 - 2) Notify Environmental & Regulatory Programs of offsite reportability decisions.
 - 3) Notify Environmental & Regulatory Programs to lead/coordinate a site assessment in accordance with section 4.3.
 - 4) Notify Industrial Safety for spill site assessment and coordination of site monitoring and PPE requirements.
 - 5) Notify the Supervisor, Radioactive Material Control/Radwaste (RMC/RW) or on-duty HP Supervisor for assignment of qualified personnel to clean up spills inside the Radiologically Controlled Area (RCA).
 - 6) Notify the Construction and Maintenance Services Laborer Supervisor for assignment of qualified personnel to cleanup/remediate spills that occur outside of the RCA.

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4.3 Spill Site Assessment

Upon completion of the emergency response, the spill site is evaluated in accordance with WAC 296-843-110 to identify specific site hazards and determine appropriate safety and health control procedures needed to protect personnel. In addition, the site is evaluated in accordance with WAC 173-340 to determine the amount and extent of cleanup operations.

- 4.3.1 Industrial Safety performs a preliminary evaluation of the spill site's characteristics to determine appropriate personnel protection methods prior to site entry.
- 4.3.2 Environmental & Regulatory Programs, with the assistance of Industrial Safety determines if, and when, it is necessary to remove hazardous substances or contaminated materials from the spill site.
- 4.3.3 Immediately after initial site entry, Industrial Safety performs a more detailed evaluation of the site's specific characteristics in order to further identify existing site hazards and to further aid in the selection of the appropriate engineering controls and PPE for the tasks to be performed.
- 4.3.4 A spill assessment team, led by Environmental & Regulatory Programs, is formed to provide cross discipline support for ensuring cleanup and/or remediation actions are conducted safely and expeditiously. The spill assessment team consists of representatives from the following organizations, as appropriate: Environmental & Regulatory Programs (lead), Industrial Safety, Health, Operations, Construction and Maintenance Services, HP-RMC/RW, and Engineering.
- 4.3.5 Environmental & Regulatory Programs, with the assistance from others of the spill assessment team, determines the amount and extent of contamination and selects appropriate cleanup and/or remediation actions. The following factors are considered when selecting cleanup actions:
 - Sampling and analytical testing
 - The chemical, physical, and toxicologic properties of substances and the associated hazards to human health, the environment, or equipment/structures
 - Hazardous waste regulations and cleanup standards
 - Effects of cleanup/remediation, including interim actions and temporary alterations, on the function and operability of plant systems, structures and components
 - Energy Northwest policies, procedures and business needs
 - Available resources and cleanup/remediation technologies

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4.4 Spill Cleanup and Disposal

Spill cleanup and decontamination procedures are tailored to the specific hazards of the site and vary in complexity and number of steps, depending on the level of hazard and cleanup personnel's exposure to the hazard. Cleanup methods and the use of PPE will vary depending upon the specific substances, since one procedure or method will not work for all substances. As a result, there may be cleanups where not all of the following cleanup requirements apply or need to be performed. As a minimum, however, the appropriate site control procedures specified in WAC 296-843-140 are implemented.

- 4.4.1 The Industrial Safety Program Manual (ISPM) and implementing procedures are followed to control personnel exposure to hazardous substances during spill cleanup and decontamination.
- 4.4.2 Health Physics RMC/RW provides personnel for spill cleanup activities as follows:
 - Emergency response spill cleanup inside the RCA
 - Post emergency response spill cleanup inside the RCA
 - Emergency response spill cleanup activities outside the RCA if the spill occurs during backshifts or weekends
- 4.4.3 Construction and Maintenance Services provides personnel for post emergency response spill cleanup and/or remediation activities outside of the RCA.
- 4.4.4 Industrial Safety coordinates the use of PPE and exposure monitoring equipment, as needed.
- 4.4.5 Environmental & Regulatory Programs coordinates spill cleanup/remediation and waste disposal. Environmental & Regulatory Programs also evaluates the effectiveness of the cleanup actions and attainment of applicable cleanup standards. The scope of cleanup is generally determined from WAC 173-340 although other standards may apply in specific situations (e.g., Subpart G of 40 CFR 761 for PCBs).
- 4.4.6 Spill cleanup shall be performed within a timely manner. If offsite assistance (cleanup manpower, equipment, and materials) is needed, any of the following may be contacted by individuals responsible for cleanup:
 - NRC Environmental Services, Seattle - 800-337-7455
 - Big Sky Industrial Inc., Spokane - 509-624-4949
 - Able Clean-up Technologies, Spokane - 866-466-5255
 - Tidewater Environmental Services, Vancouver (petroleum spills only) - 360-695-8088 (days), 503-289-4274 (24 hrs)
 - Philip Services Corp., Kent - 800-577-2669 (24-hrs)
- 4.4.7 RMC/RW personnel or Construction and Maintenance Services personnel implement specified cleanup actions with assistance from Industrial Safety and Environmental & Regulatory Programs.
- 4.4.8 Dispose of wastes, including those generated during cleanup, in accordance with SWP-ENV-03.
- 4.4.9 Utilize model work order #01169139 to ensure required cleanup and disposal of main transformer yard oil spills (north side of TG Building).

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4.5 Required Notifications and Reports

NOTE: Spills of nonvolatile materials contained on impervious surfaces (e.g., concrete, asphalt) are not spills to the environment. The assessment of threat to the environment includes consideration of such factors as material released, quantity, location, and time to complete cleanup.

- 4.5.1 Per 40 CFR Part 302, any release to the environment of hazardous substance, the quantity of which exceeds the applicable Reportable Quantity (RQ) as specified in 40 CFR Part 117 and 40 CFR Part 302, shall be reported to the Benton County Department of Emergency Management (586-3131) and Washington Emergency Management Division (1-800-258-5990, 24 hours) if the release will result in exposure to persons offsite, and the National Response Center (1-800-424-8802, 24 hours) with a followup call to Washington Department of Ecology (WDOE) (509-575-2490). This is an immediate notification and is in addition to the reports required in the following sections. This notification may be made via "crash" call if the release will result in offsite exposure. Attachment 8.2 provides a list of hazardous substances likely to be used at Columbia Generating Station and the applicable RQ. This list may not include all hazardous substances found at Columbia Generating Station.
- 4.5.2 Per WAC 173-303-145, any release to the environment of a dangerous waste or hazardous substance, including oil, which threatens human health or the environment shall be reported to the WDOE (509-575-2490, days) or the Washington Emergency Management Division (1-800-258-5990, after hours). The following are conditions resulting from spills at Columbia Generating Station which are judged applicable to this reporting requirement, based on Department of Ecology guidance (Spill Reporting under the Dangerous Waste Regulations, WDOE Pub. No. 92-119), and should be reported immediately following verification:
- Any one person, as a result of exposure, seeks or requires medical attention or examination.
 - A potential for the material (i.e. hazardous substance or dangerous waste) to enter water, including surface water (see section 6.12 for definition) and groundwater. Petroleum product spills (e.g., lube oil, hydraulic oil, or diesel fuel) of 10 gallons or less to the soil at Columbia Generating Station (outside of 100 yards of the Columbia River) are NOT considered a threat to surface water or groundwater and are therefore not considered a threat to human health and the environment. Every effort shall be made to prioritize proper cleanup of the spill with any free-standing liquid cleaned up promptly.
 - Illness, injury, stress or death of fish or wildlife.
 - A release to the air in sufficient quantity or concentration to harm people or animals.
 - A spill to the soil that cannot be quickly controlled and/or remediated.

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- 4.5.3 Per WAC 173-340, a newly discovered past release of a hazardous substance to the environment which may threaten human health or the environment shall be reported to WDOE (509-575-2490, days) or the Washington Emergency Management Division (1-800-258-5990, after hours) within 90 days of discovery.
- 4.5.4 Per WAC 173-360, any oil spill to the soil, ground water or surface water associated with adding to, or dispensing from an underground storage tank is immediately reportable to the Department of Ecology.
- 4.5.5 Per 40 CFR Part 110, any discharge of oil which causes, or threatens to cause, a sheen, film, or discoloration on the surface of the Columbia River or the adjoining shoreline is reportable to the U.S. Coast Guard National Response Center (800-424-8802, 24-hours) and WDOE (509-575-2490, days) or the Washington Emergency Management Division (1-800-258-5990, after hours). The report to the National Response Center must be made immediately upon knowledge of a discharge.
- 4.5.6 Per 40 CFR Part 117 and 40 CFR Part 302, any release to the environment (air, soil, water) of a hazardous substance, the quantity of which exceeds the applicable RQ, is immediately reportable to the National Response Center (1-800-424-8802, 24 hours). Attachment 8.2 is a table of substances likely to be used or stored onsite and the respective RQs (from 40 CFR Parts 117 and 302). A followup call to WDOE is required (509-575-2490).
- 4.5.7 Telephone notifications to outside agencies will be documented in a memo, E-mail message, or record of conversation and retained in accordance with Section 5.0.
- 4.5.8 Organizations responsible for hazardous material spills shall document them per SWP-CAP-01. Information shall be included such as location of spill, amount of spill, and type of spill. Events reported in Section 4.5 may be reportable to the NRC per PPM 1.10.1.
- 4.5.9 The Energy Facility Site Evaluation Council (EFSEC) (360-956-2151) should be notified of reportable releases as soon as possible during business hours.
- 4.5.10 In addition to the notifications required by the previous sections, most spills require follow-up written reports to the appropriate agencies. Environmental & Regulatory Programs is responsible for coordinating the preparation and submittal of these reports.

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4.6 Training

- 4.6.1 Employees participating in emergency response operations at Columbia Generating Station are trained for their assigned roles and duties in accordance with WAC 296-824-300.
- a. All Energy Northwest employees and contractors who have an Energy Northwest badge (Blue or Green) are trained to the first responder "awareness" level in accordance with WAC 296-824-300 (see Section 6.4 for definition). Awareness level training is provided within PA000001 "Protected Area Access" or PA000079 "Blue Badge".
 - b. CGS Fire Brigade personnel serve as hazardous material spill first responders and respond to hazardous material spills at Columbia Generating Station facilities in order to protect nearby persons, property, and/or the environment from the effects of the spill. First responders are trained to the "operations" level in accordance with WAC 296-824-300 (see Section 6.5 for definition). Fire Brigade personnel shall be trained to HZ000006 "Hazardous Materials Emergency Responders".
 - c. The Fire Brigade leader serves as the "incident commander" and assumes control of the incident beyond the first responder awareness level. The incident commander is trained to the requirements of WAC 296-824-300 (see Section 6.7 for definition).
 - d. Control supervisors perform the duties of emergency coordinator in the control room in response to a hazardous substance release at CGS. Control Supervisors shall have SM000015 "Hazmat Emergency Coordinator".
- 4.6.2 Employees involved in spill cleanup operations and spill site remediation at Columbia Generating Station are trained for their assigned roles and duties in accordance with WAC 296-843-200 as applicable. Employees performing cleanup shall be trained to HZ000007 "HAZWOPER Training". Supervisors of cleanup shall be trained to both HZ000007 and HZ000009 "HAZWOPER Supervisor".
- 4.6.3 Training may be conducted internally by the Energy Northwest Training Department or externally by companies, organizations or agencies that provide training services. The Energy Northwest Training Department is responsible for ensuring the requirements of WAC 296-824-300 or WAC 296-843-200 are met when employees receive external training.
- 4.6.4 Initial training is provided before an employee is allowed to participate in the following emergency response or hazardous waste operations:
- An actual emergency response
 - Spill cleanup and/or spill site remediation
- 4.6.5 Refresher training is provided annually.

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4.6.6 Trainers are trained and qualified in the emergency response requirements of WAC 296-824-2005 and/or the hazardous waste operations requirements WAC 296-843-20035.

4.6.7 The Training Department schedules and coordinates periodic drills for environmental incidents (e.g., spills).

4.6.8 Employee training for emergency response and hazardous waste operations is documented and qualifications are tracked in the Personnel Qualification Directory (PQD).

4.7 Medical Surveillance

4.7.1 Medical surveillance is provided per WAC 296-824-400 for employees involved in emergency response, and per WAC 296-843-21005 for employees involved in hazardous waste operations.

4.7.2 Records of employee medical surveillance are prepared and maintained per WAC 296-824-40010 and WAC 296-843-22010.

5.0 DOCUMENTATION

Any written reports, records, logs, and outside agency notifications prepared per this procedure are permanent records and are maintained in the permanent plant file (DIC 1315.8) per the appropriate record procedure(s).

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6.0 DEFINITIONS

- 6.1 Emergency Response - A response effort by the Fire Brigade or by other designated responders (Hanford HAZMAT Team) to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area are not emergency responses. Responses to a release of hazardous substances where there is no potential safety or health hazard (i.e., fire, explosion, or chemical exposure) are not emergency responses.
- 6.2 Environment - Any plant, animal, natural resource, surface water (including underlying sediments), ground water, drinking water supply, land surface (including shorelands) or subsurface strata, or ambient air.
- 6.3 Extremely Hazardous Substance - A substance listed in Appendices A and B of 40 CFR Part 355.
- 6.4 First Responder "Awareness Level" - Employees who are likely to witness or discover a hazardous substance release. They are trained to initiate an emergency response by notifying the Columbia Generating Station Control Room (ext. 2222). Responders at this level take no further action beyond notification of the Control Room.
- 6.5 First Responder "Operations Level" - Employees who respond to actual or potential releases in order to protect nearby persons, property, and/or the environment from the effects of the release. They are trained to respond defensively, without trying to stop the release. They may try to confine the release from a safe distance, keep it from spreading, or protect others from hazardous exposures. At Columbia Generating Station, Fire Brigade members serve as first responders at the operations level.
- 6.6 Hazardous/Dangerous Waste - Solid, liquid, or gaseous material with certain properties that per WAC 173-303, could pose dangers to human health or the environment.
- 6.7 Hazardous Materials Response (HAZMAT) Team - An organized group of personnel, designated by Energy Northwest, who are called upon to control or stabilize actual or potential spills of hazardous substances. At Columbia Generating Station, Fire Brigade members are trained, qualified, and designated as HAZMAT team members.

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- 6.8 Hazardous Substance - Any of the following substances (in liquid, solid, gas or sludge form) that could adversely affect an exposed employee's health or safety, or damage plant systems, structures, or components:
- Substances defined under WAC 173-340, Model Toxics Control Act Cleanup Regulation.
 - Biological or other disease-causing agents released that could reasonably be expected to cause death, disease, behavior abnormalities, cancer, genetic mutation, physiological malfunctions or physical deformations in a person or their offspring when the person:
 - Is directly exposed to the agent in the environment
 - Directly ingests, inhales, or assimilates the agent from the environment
 - Indirectly ingests the agent through a food chain
 - Substances listed by United States Department of Transportation as hazardous materials under 49 CFR Part 172, Section 101 and Appendices.
 - Hazardous wastes as defined in WAC 173-303, Dangerous Waste Regulations. Attachment 8.2 provides a list of hazardous substances likely to be used or stored at Columbia Generating Station. This list may not include all hazardous substances found at Columbia Generating Station.
 - Substances defined under 40 CFR 302, Designation, Reportable Quantities, and Notification.
- 6.9 Incident Commander (IC) - A member of the Fire Brigade who is in charge of the site-specific incident command system (ICS) and acts within his/her designated role and training level. The IC has ultimate responsibility for directing, controlling, and coordinating emergency response operations at the spill site. Equipment Operators serve as the IC during emergency response operations at Columbia Generating Station. If the emergency response is beyond the capabilities and training of the Fire Brigade, the Hanford emergency response team will provide the IC.
- 6.10 Non Volatile Materials - materials which do not easily vaporize or evaporate.
- 6.11 Post Emergency Response - That stage of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the site has started.
- 6.12 Release - Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposal into the environment (air, land, surface water, or ground water) or workplace which has not been authorized by a permit or law.
- 6.13 Reportable Quantity (RQ) - The specified amount of either a Hazardous Substance or an Extremely Hazardous Substance that when "released" must be reported in accordance with 40 CFR Parts 117 and 302. Examples of substances present at Columbia Generating Station which may be reportable if released are listed in Attachment 8.2.

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6.14 Surface Water - WAC 173-201A-020 "Surface waters of the state" includes lakes, rivers, ponds, streams, inland waters, salt waters, wetlands and all other surface waters and water courses within the jurisdiction of the state of Washington. For the purposes of CGS- the Columbia River and the circulating cooling water system (which has direct pathway to Columbia River) would be considered Surface Water.

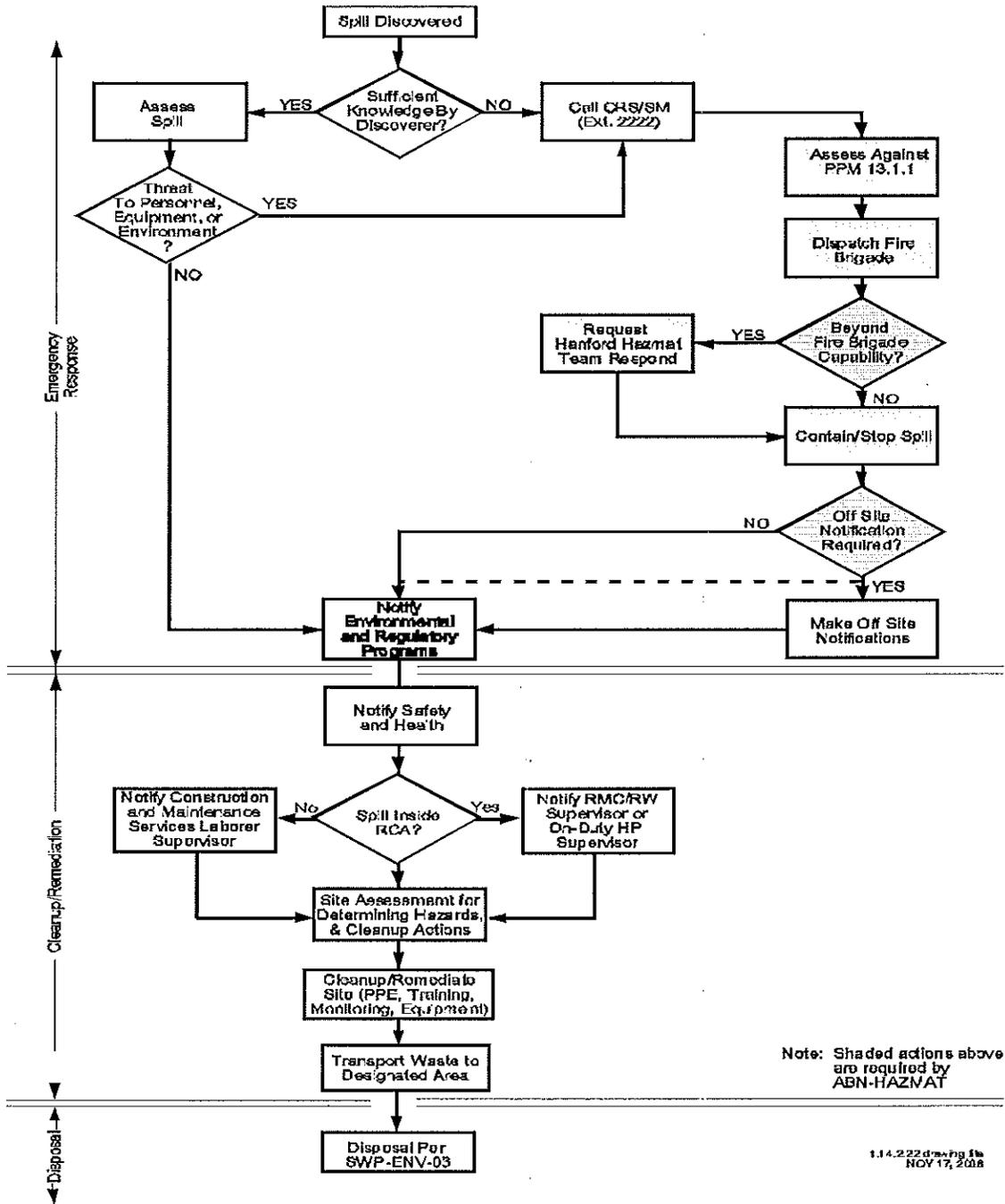
7.0 REFERENCES

- 7.1 40 CFR Part 110, Discharge of Oil
- 7.2 40 CFR Part 117, Determination of Reportable Quantities for Hazardous Substances
- 7.3 40 CFR Part 302, Designation, Reportable Quantities, and Notification Requirements for Hazardous Substances
- 7.4 CFR 761, Subpart G, PCB Spill Cleanup Policy
- 7.5 CI-9.1, Chemical Hygiene Plan
- 7.6 ISPM, Industrial Safety Program Manual
- 7.7 ISPM-17, Respiratory Protection
- 7.8 OER 82027C (SOER 82013) Intrusion of Resin, Lubricating Oil, and Organic Chemicals into Reactor Coolant Water
- 7.9 WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington
- 7.10 WAC 173-303, Dangerous Waste Regulations
- 7.11 WAC 173-340, Model Toxics Control Act Cleanup Regulation
- 7.12 WAC 173-360, Underground Storage Tanks
- 7.13 WAC 296-843, Hazardous Waste Operations
- 7.14 WAC 296-824, Emergency Response
- 7.15 ABN-HAZMAT, Hazardous Materials Spills/Releases
- 7.16 SWP-CAP-01, Corrective Action Program
- 7.17 SWP-ENV-03, Hazardous Waste Management
- 7.18 SWP-MAI-02, Plant Material Condition Inspection Program
- 7.19 PPM 1.10.1, Notifications and Reportable Events
- 7.20 PPM 11.2.11.3, Issuance of Respiratory Protection Equipment
- 7.21 PPM 13.1.1, Classifying the Emergency

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- 7.22 Spill Reporting under the Dangerous Waste Regulations, WDOE Pub. No. 92-119, August 2006, revised July 2007
- 7.23 GIH-8.1.5, Chemical Management
- 8.0 ATTACHMENTS
- 8.1 Oil and Hazardous Substance Spill Response Sequence
- 8.2 Hazardous Substances and Reportable Spill Quantities
- 8.3 Potential Spill Sites - Cooling Towers
- 8.4 Potential Spill Sites - Transformer Yard and Potable Water Treatment Facility
- 8.5 Potential Spill Sites - Spray Ponds
- 8.6 Potential Spill Sites - Fuel Polishing Building
- 8.7 Potential Spill Sites - Vehicle Fuel Station

OIL AND HAZARDOUS SUBSTANCE SPILL RESPONSE SEQUENCE



**Environmental & Regulatory Programs may provide guidance for, and make, off-site notification

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HAZARDOUS SUBSTANCES AND REPORTABLE SPILL QUANTITIES⁽¹⁾

<u>Hazardous Substance</u>	<u>Alternate Names</u>	<u>Commercial Chemical Products</u>	<u>Reportable Quantity⁽¹⁾</u>	
			<u>(lbs)</u>	<u>(gals.)</u>
Acetic Acid			5000 (1000 per 40 CFR 117)	
Acetone	2-Propanone, Dimethyl Ketone		5000	760
Ammonia, Anhydrous	Gaseous Ammonia		100	
Ammonium Hydroxide	Aqueous Ammonia	All Pure Clear Ammonia	1000	130
Asbestos			1	
Bromochlorodifluoromethane	Halon 1211		See Sections 4.5.2 - 4.5.5 ⁽²⁾	
Bromotrifluoromethane	Halon 1301		See Sections 4.5.2 - 4.5.5 ⁽²⁾	
Butyl Acetate			5000	
		Keeler & Long 3700 Thinner (15%) Keeler & Long 4093 & 6300 Thinners (15%)		4550 4550
Chlorodifluoromethane	Freon 22		See Sections 4.5.2 - 4.5.5 ⁽²⁾	
Creosote			1	0.1
Dichlorodifluoromethane	Freon 12		5000	400
Ethyl Acetate	Ethyl Ester Acetic Acid		5000	
Ethylene Glycol			5000	500
Formaldehyde	Methylene Oxide		100	
Hazardous Waste - ignitable, reactive, or corrosive			100	
Hydrazine	Diamine		1	0.1
Hydrochloric Acid	Muriatic Acid, Hydrogen Chloride		5000	500
		Hydrogen Peroxide 50%	See Sections 4.5.2 - 4.5.5 ⁽²⁾	
Hydrogen Peroxide (\leq 52%, Chem Permit #0241)			See Sections 4.5.2 - 4.5.5 ⁽²⁾	

- (1) These RQs relate to specific external reports per Sections 4.5.1 and 4.5.6. In fact, smaller spills less than the RQ may be reportable per Section 4.5.2.
- (2) Items listed as "see Sections 4.5.2-4.5.5" do not have RQ limits but have been listed for information only as they would require assessment for reporting according to those sections.

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<u>Hazardous Substance</u>	<u>Alternate Names</u>	<u>Commercial Chemical Products</u>	<u>Reportable Quantity⁽¹⁾</u>	
			<u>(lbs)</u>	<u>(gals.)</u>
Isobutyl Alcohol	2-Methyl Propanol		5000	
Mercury			1	
Methyl Alcohol	Methanol		5000	
Methyl Chloride	Chloromethane		100	
Methyl Ethyl Ketone	MEK, 2-Butanone	Keeler & Long 2200 Thinner (100%)	5000	750
Methylene Chloride	Dichloromethane		1000	90
Pentachlorophenol			10	
Petroleum Products	Gasoline, Diesel Fuel, Lube Oil, Cutting Oil, Mineral Oil, Grease		See Sections 4.5.2 - 4.5.5 ⁽²⁾	
Phosphoric Acid			5000	
Polychlorinated Biphenyls	Askarel, PCB	Interteen, Pyranol	1	
Potassium Hydroxide			1000	
Phosphoric Acid (1-5%) (in TK-41 & TK-42) Chem Permit #1447)		Nalco DVS3A002	See Sections 4.5.2 - 4.5.5 ⁽²⁾	
Poly Quaternary Ammonium		Bulab 6002 (60%)	See Sections 4.5.2 - 4.5.5 ⁽²⁾	
Sodium Bromide (in TK-4, Chem Permit #1446)		Betz Dearborn Spectrus OX1201 (40%) Ashland Drewbrom (40%)	See Sections 4.5.2 - 4.5.5 ⁽²⁾	
Sodium Hydroxide	Caustic Soda		1000	
Sodium Hypochlorite (in CL-TK-3, Chem Permit #0220)	Bleach		100	
Sodium Nitrite			100	
Sodium Silicate		Nalco 39M (5%) Bulab 9080 (38%)		200
Sodium Tetraborate	Sodium Borate	Borax	See Sections 4.5.2 - 4.5.5 ⁽²⁾	

- (1) These RQs relate to specific external reports per Sections 4.5.1 and 4.5.6. In fact, smaller spills less than the RQ, may still be reportable per Section 4.5.2.
- (2) Items listed as "see Sections 4.5.2-4.5.5" do not have RQ limits but have been listed for information only as they would require assessment for reporting according to those sections.

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<u>Hazardous Substance</u>	<u>Alternate Names</u>	<u>Commercial Chemical Products</u>	<u>Reportable Quantity⁽¹⁾</u>	
			<u>(lbs)</u>	<u>(gals.)</u>
Azole, sodium salt blend, (in TK-43, Chem Permit #1565)	Halagen Resistant Azole, HRA	Betz Dearborn Inhibitor AZ8104 (17%)	See Sections 4.5.2 - 4.5.5 ⁽²⁾	
Stoddard Solvent	Mineral Spirits, Petroleum Naphtha, Petroleum Distillates	Chevron 325 Thinner (100%) Safety Kleen Premium Solvent (100%) Safety Kleen 105 Parts Washer (85%) Keeler & Long P-Series Paints Keeler & Long 1638 Thinner	See Sections 4.5.2-4.5.5 ⁽²⁾	
Sulfuric Acid (in SAT-TK-2, Chem Permit #0447)	Hydrogen Sulfate	Sulfuric Acid	1000	65
Tetrachloroethylene	Perchloroethylene, Perc, PCE		100	
Toluene	Methyl Benzene		1000	130
1,1,1-Trichloroethane	Methyl Chloroform, Chloroethene	Dow Chloroethene SM Solvent (97%)	1000	90
		Magnaflux SKD-NF Developer (65%)		94
		Magnaflux SKC-NF Cleaner/Remover (95%)		15
		Magnaflux SKC-NF Cleaner/Remover (95%)		10
		Wetspo Spot Remover (25%)		45
Trichloroethylene	Trichloroethene, TCE		100	8
		Mobiltac E Grease (14%)		70
Trichlorofluoromethane	Freon 11		5000	400
1,1,2-Trichloro-1,2,2-trifluoroethane	Freon 113, Freon TF	Valclene	See Sections 4.5.2 - 4.5.5 ⁽²⁾	
		Fyrquel EHC & 220	NR	NR
Waste 1,1,2-Trichloro-1,2,2-trifluoroethane	Spent Freon 113 Laundry Still Bottoms		5000	385
Xylene	Dinethyl Benzene	Keeler & Long 1200 Thinner (100%)	100	14
		Keeler & Long 3500 Paints (5%)		150
		Keeler & Long 3700 Thinner (85%)		16
		Keeler & Long Epoxy 4093 Thinner (85%)		16
		Waste Xylene		1000

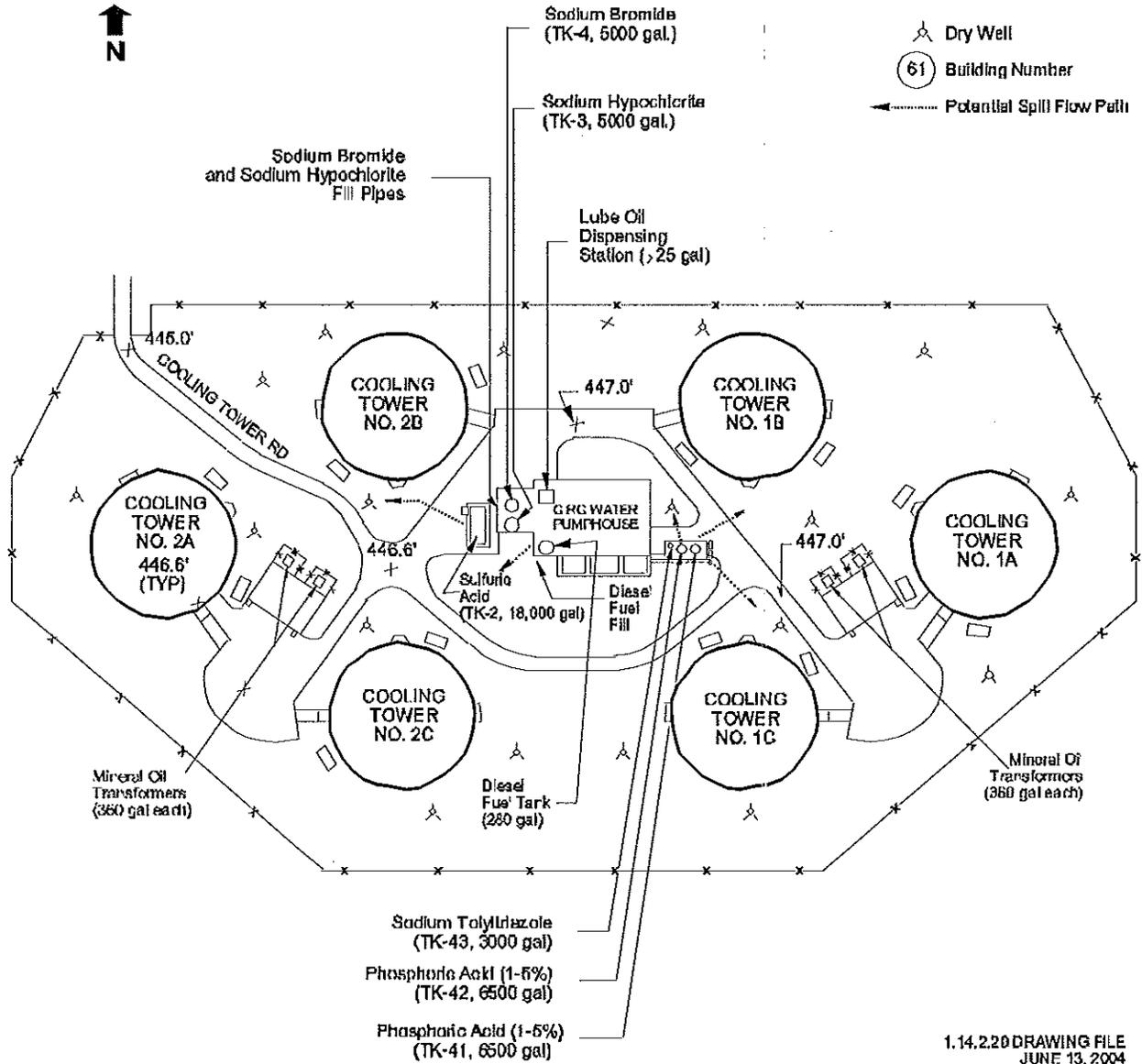
(1) These RQs relate to specific external reports per Sections 4.5.1 and 4.5.6. In fact, smaller spills less than the RQ may be reportable per Section 4.5.2.

NOTE: Items identified as NR (Not Reportable) or those which represent unrealistic spills at Columbia Generating Station (such as 150 gallons of paint) have been included on this list for information only.

(2) Items listed as "see sections 4.5.2-4.5.5" do not have RQ limits but have been listed for information only as they would require assessment for reporting according to those sections.

END

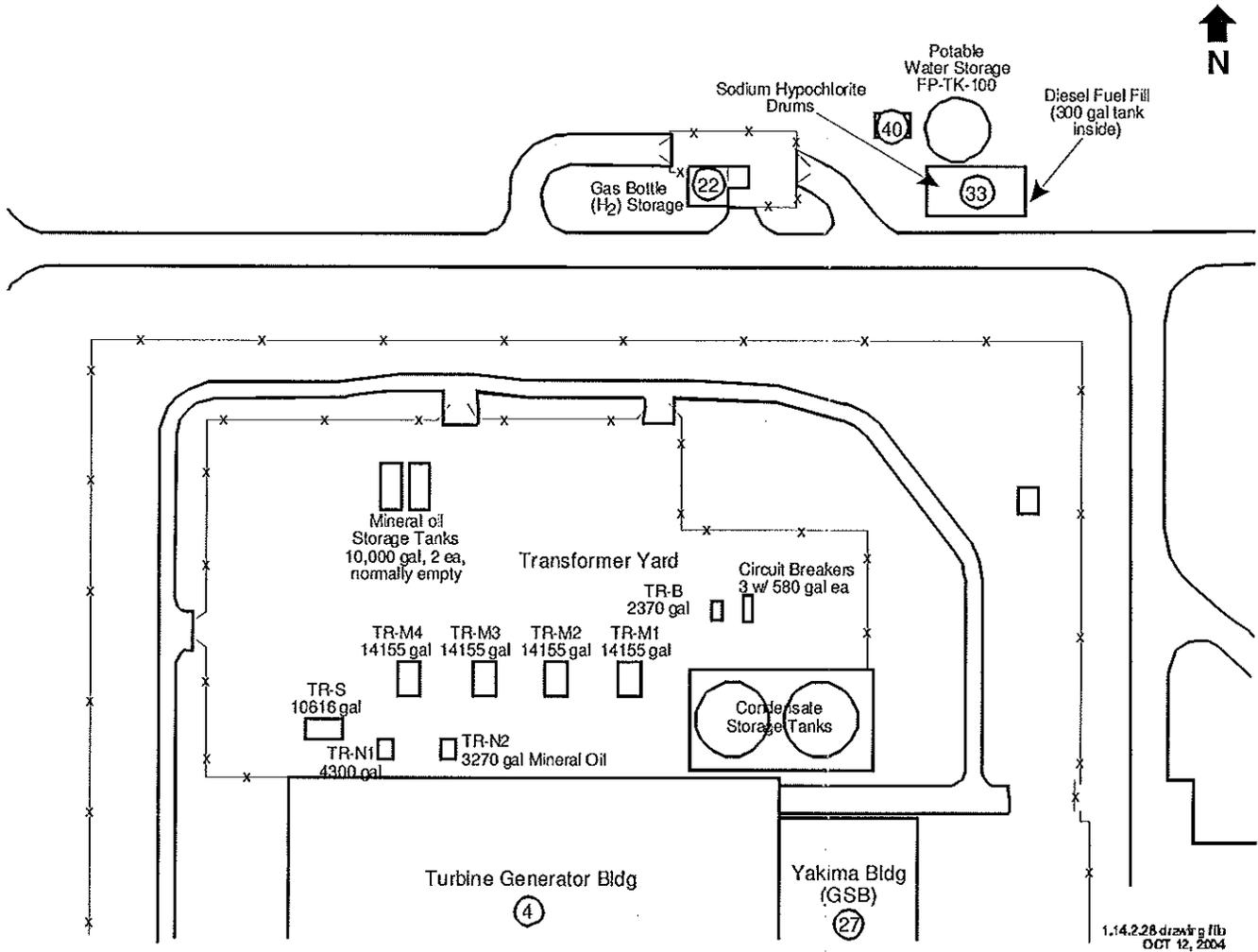
POTENTIAL SPILL SITES - COOLING TOWERS



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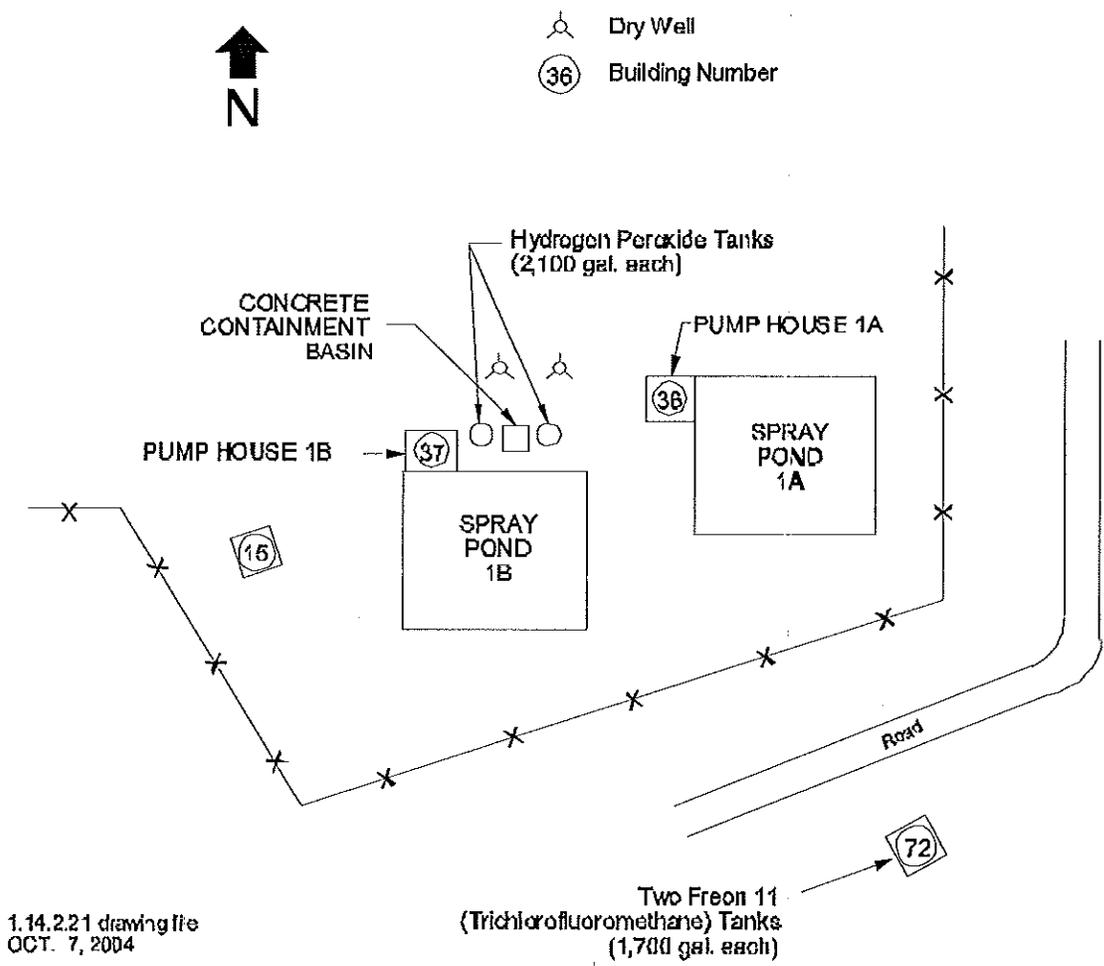
POTENTIAL SPILL SITES – TRANSFORMER YARD AND POTABLE WATER TREATMENT FACILITY



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POTENTIAL SPILL SITES - SPRAY PONDS



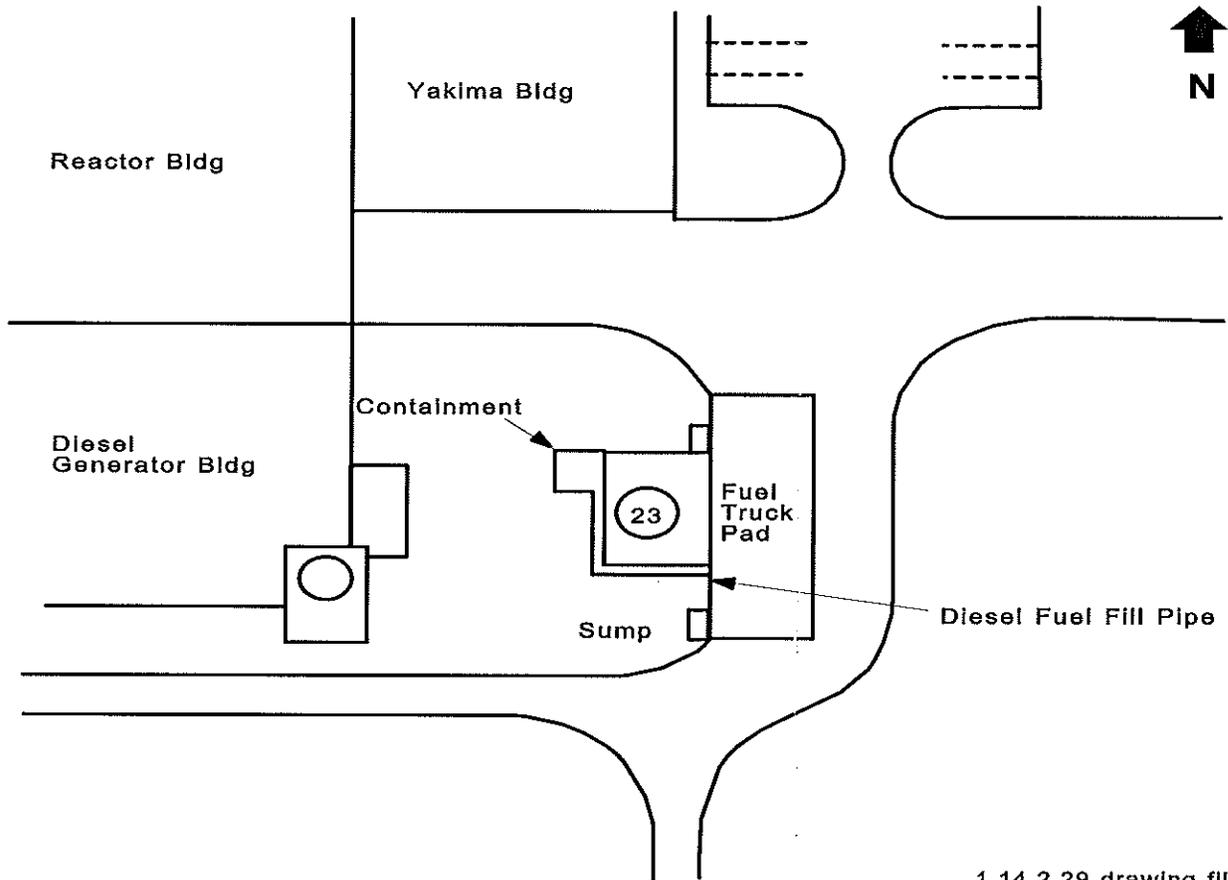
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Attachment 8.5, Potential Spill Sites Spray Ponds

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POTENTIAL SPILL SITES - FUEL POLISHING BUILDING

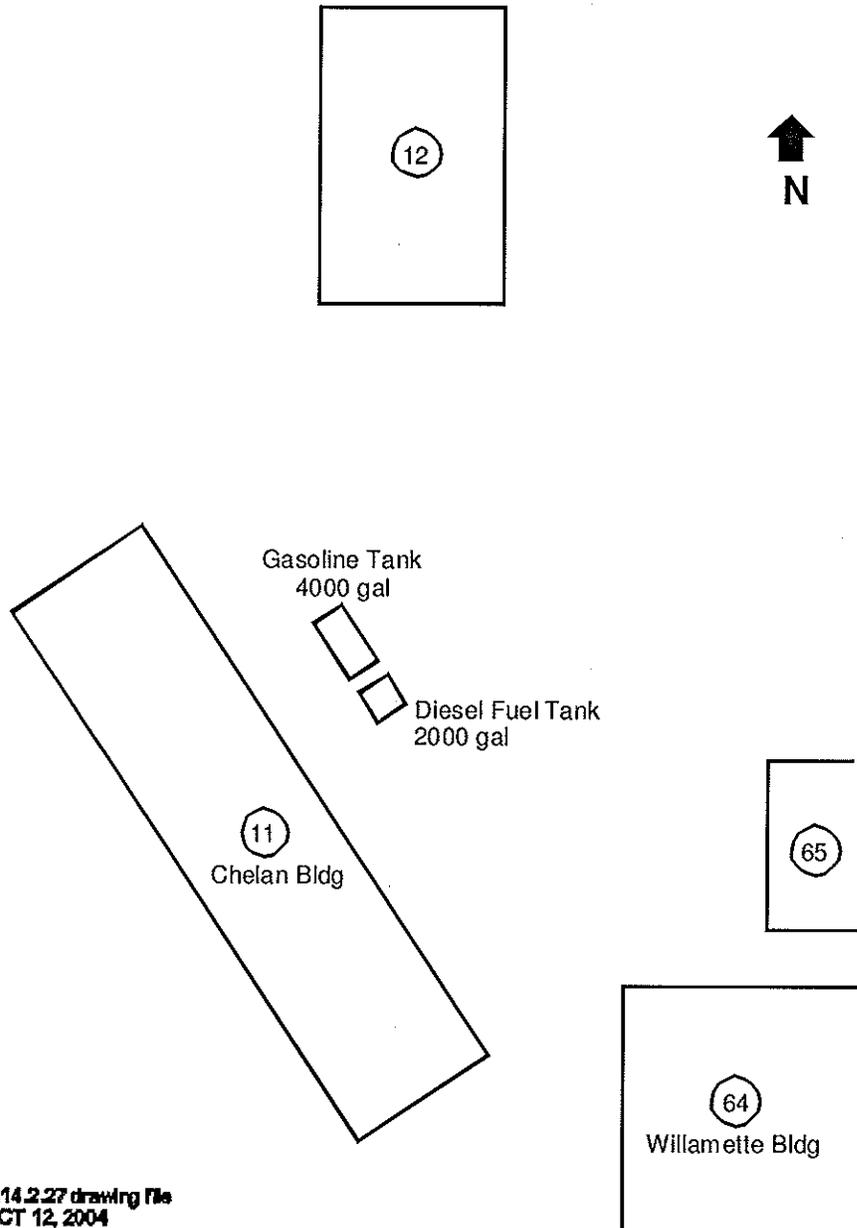


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POTENTIAL SPILL SITES - VEHICLE FUEL STATION



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OCT 12, 2004

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