Hazardous Materials Management Guide

Port of Oakland
530 Water St.
Oakland, CA 94607

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1.0 Introduction/Executive Summary

The Port of Oakland (Port) stores, generates and handles a variety of hazardous materials (including wastes) during routine operation and maintenance activities on its property. The management of these materials/wastes is strictly regulated to minimize the potential for impacts upon human health and the environment resulting from improper management including accidental spills. This Hazardous Materials Management Guide (Guide) was prepared primarily to assist Harbor and Airport Facilities staff manage its hazardous materials generated and/or stored in their respective areas, and to guide Port employees. It is not a substitute for, or a legal interpretation of, federal, state, or local environmental regulations.

This guide identifies individuals responsible for hazardous materials management at the Port, describes typical hazardous materials/wastes stored, generated and handled, and provides management procedures. Furthermore, this Guide provides information on regulatory requirements, training requirements, and record keeping procedures including inspection checklists. All Port staff with a role in hazardous materials management should review this Guide and provide any updates to the Environmental Programs & Planning (EP&P) Department when applicable.

2.0 Definitions of Key Terms

Acutely Hazardous Wastes: Acutely hazardous wastes (P-Listed) are incorporated by reference into California regulations and listed in 22 CCR 66261.33(e)

California Environmental Reporting System (CERS): A statewide web-based system to support California Unified Program Agencies (CUPA) and Participating Agencies in electronically collecting and reporting various hazardous materials-related data as mandated by the California Health and Safety Code and AB 2286.

Certified Unified Program Agency (CUPA): The local agency designated by the California Environmental Protection Agency (CalEPA) to be responsible for implementing the State's Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (the Unified Program) within the CUPA's jurisdiction. (See Section 4.0)

Environmental Programs and Planning Department (EP & P) Department: The EPP Department is responsible for ensuring proper management of hazardous materials/waste.

Electronic Waste: Electronic waste is obsolete electronic products including computers, televisions, copiers, fax machines, printers, cell phones, etc., that contain a circuit board and potentially high concentrations of metals (e.g., lead, mercury, barium and cadmium).

Extremely Hazardous Waste: Extremely hazardous wastes are designated with an asterisk in the list of hazardous wastes in 22 CCR 66261.126 and 22 CCR 66261.110. These wastes pose a greater hazard to people and the environment than hazardous waste.

Generator Certification: Box number 15 on the uniform hazardous waste manifest. According to the Department of Transportation, a manifest is a legal shipping document and is required to be signed by the

generator or their representative. This must be a "wet" signature (an example would be the signature that someone would put on a personal check). The representative of the generator can use the words "for", "agent for", or "on behalf of" immediately following the true signature, which denotes that this person is signing only as a representative and that the named generator is ultimately responsible for the waste that is generated from this location. (See Section 9.0 Manifesting and Shipping Documents)

Hazardous Material: Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and the environment if released into the workplace or the environment. Hazardous materials include waste that has been abandoned, discarded, or recycled on the property, and as a result represents a continuing hazard.

Hazardous Materials Business Plan (HMBP): A document containing detailed information on the:

- Inventory of hazardous materials at a facility;
- Emergency response plans and procedures in the event of a reportable release or threatened release of a hazardous material;
- Training for all new employees and annual training, including refresher courses, for all employees in safety procedures in the event of a release or threatened release of a hazardous material; and
- A site map that contains north orientation, loading areas, internal roads, adjacent streets, storm and sewer drains, access and exit points, emergency shutoffs, evacuation staging areas, hazardous material handling and storage areas, and emergency response equipment.

Hazardous Waste: Hazardous Wastes in California fall into two major groups: RCRA (Federal Resource Conservation and Recovery Act) and non-RCRA. RCRA hazardous wastes include all hazardous wastes that are identified or listed as hazardous waste under RCRA and that are regulated by the US Environmental Protection Agency (EPA) under that program. Non-RCRA hazardous waste include all federal hazardous wastes that are excluded from regulation under RCRA, and other wastes that exhibit only California hazardous waste characteristics (see 22 CCR 66261 and 66262). In California, the definition of hazardous wastes includes some hazardous materials that have become contaminated or unusable for their intended use, but that can be recycled. Certain wastes are exempt, such as household batteries and fluorescent/sodium/mercury lamps.

Hazardous Waste Generators: Any person or business, by site/facility (categorized by Hazardous Waste Identification number), whose act or process produces hazardous waste or whose act first causes a hazardous waste to become subject to regulation. Conditionally Exempt Small Quantity Generators (CESQGs) generate no more than 100 kg of hazardous waste and no more than 1 kg of acute and/or extremely hazardous waste per month; Small Quantity Generators (SQGs) generate more than 100 kg, but less than 1,000 kg of hazardous waste per month; and Large Quantity Generators (LQGs) generate either 1,000 kg or more of hazardous waste or more than 1 kg of acute and/or extremely hazardous waste per month.

Waste Generation by Month
Per Hazardous Waste Identification Number

CESQG	SQG	LQG
≤ 100 kg (220 lbs or 27 gallons) of hazardous waste and ≤ 1 kg of acute and/or extremely hazardous waste	> 100 kg but < 1,000 kg (2,200 lbs or 270 gallons) of hazardous waste and ≤ 1 kg of acute and/or extremely hazardous waste **The Port seeks to manage its waste (grouped according to HW IDs) to maintain a SQG status.**	≥ 1,000 kg of hazardous waste or > 1 kg of acute and/or extremely hazardous waste

Owner Controlled Insurance Program (OCIP): Port program designated to enable construction contractors, subcontractors and certain consultants to obtain various types of insurance at a generally lower cost, therefore enabling (large or small) contractors to participate in the project bidding process. However, the owner of the program (the Port) oversees environmental health and safety aspects, and defines the parameters of the program and insurance.

Personal Protective Equipment (PPE) Requirement: Required while conducting hazardous waste management operations. The type of PPE will be based on the type of waste that is being managed. In general, basic work clothing should satisfy this requirement. However, employees shall have required PPE to comply with the Port's Personal Protective Equipment Policy (AP 305). Each employee needing a respirator must follow the guidelines in the Port's Respiratory Protection Program.

Recyclable Hazardous Wastes: Hazardous wastes that can feasibly be used or reused.

Spill Prevention Control & Countermeasure (SPCC) Plan: A plan developed for facilities with an oil (fuel, etc.) storage capacity of 1,320 gallons or more. The plan contains an inventory of oil containers, their secondary containment details, expected release flow directions, emergency response procedures, and inspection requirements. The goal is to prevent a discharge of oil into nearby waterways.

Treatment: Any method that changes the physical, chemical, or biological character or composition of any hazardous waste.

Treatment, Storage, and Disposal Facility (TSDF): An off-site hazardous waste facility where hazardous wastes are treated, stored, or disposed of onsite (also known as a landfill).

Universal Waste: A broad term used by EPA to identify certain widely generated wastes such as batteries, fluorescent lamps, pesticides, and thermostats containing mercury (see 40 CFR 273.6). Universal Wastes remain hazardous waste, and while they are not collected and managed as hazardous wastes, EPA has

determined that these wastes require special management practices because of their high-generating volume and the waste's potential to be associated with hazardous waste.

Waste: Includes materials that are to be disposed of, recycled, or that are considered inherently waste-like.

3.0 Roles and Responsibilities

3.1 Harbor and Airport Facility Managers, Building Engineers, Supervisors and Foremen

Facility managers, building engineers, supervisors and foremen are responsible for the following hazardous material management activities:

- Familiarizing themselves with this Guide and the HMBPs, SPCC Plans, and emergency response procedures pertaining to their areas of responsibility;
- Tracking a site's inventory of hazardous materials and notifying EP&P to amend the HMBP and/or SPCC plan as necessary;
- Tracking routine and non-routine hazardous waste generated at the Port facilities, and informing EP&P of the status of hazardous wastes generated (e.g., to avoid exceeding the allowable accumulation time);
- Ensuring that all wastes generated, handled or stored in areas under their supervision are properly evaluated by EP&P staff to determine which, if any, hazardous waste requirements apply;
- Managing hazardous materials and wastes in accordance with the guidelines developed by EP&P;
- Ensuring that personnel under their supervision receive the appropriate training, and that all personnel training records are maintained as described in Section 12 below;
- Ensuring that personnel under their supervision follow the appropriate procedures;
- Ensuring that personnel under their supervision use proper personal protective equipment while managing hazardous waste;
- Conducting routine inspections of oil containers and hazardous waste storage areas; and
- Contacting EP&P for regulatory and technical support, as necessary, to ensure that all of the Port's hazardous materials and wastes are properly managed.

3.2 Port Employees

Port employees that store hazardous materials and/or create hazardous waste during certain operations throughout property owned by the Port are responsible for the following:

- Following this Guide;
- Using proper PPE while handling and storing hazardous waste;
- Ensuring that all materials and wastes are properly handled and stored in the appropriate location; and
- Communicating with their immediate foremen and/or co-workers, as necessary, to ensure that hazardous materials and wastes are properly managed.

3.3 Environmental Programs and Planning

EP&P staff is responsible for the following activities:

- Evaluating routinely generated hazardous waste streams, as well as non-routine occurrences of wastes;
- Developing effective waste minimization programs that minimize costs and liabilities to the Port through recycling and reuse;
- Tracking new and emerging hazardous material/waste rules and regulations;
- Identifying applicable hazardous material/waste requirements and exemptions;
- Developing and maintaining Standard Operating Procedures (SOPs) for use by facility staff;
- Arranging for collection, transportation and disposal of Port-generated hazardous waste;
- Procuring the services of hazardous waste management contractors and managing their activities Port-wide;
- Updating HMBPs and SPCC plans as required;
- Maintaining all documentation associated with hazardous waste generation according to the Port's records retention policy (Section 16400 Hazardous Materials Management); and
- Providing appropriate training and maintaining documentation of training programs.

Appendix A is a sample flow chart of hazardous waste handling and describes responsibilities. Appendix B describes the procedure for testing and disposal of investigation-derived soil waste, including staff responsibilities.

3.4 Emergency Response and Hazardous Waste Disposal Contractor

The Port contracts emergency response and hazardous waste disposal contractor for both OCIP and Non-OCIP operations as follows:

- Containment and clean-up of spills of oil, chemicals or other hazardous, flammable and/or radioactive substances. These spills can occur on dry land areas, wetlands areas or San Francisco Bay or its tributaries.

- Investigation of potentially contaminated soil, and proper disposal of contaminated soil discovered during excavation.

- Furnish equipment or tools necessary or commonly used in the handling of hazardous waste or hazardous materials.

- Provide available trucks for delivering and/or removing equipment and materials required for the work; trucks (including tanker trucks) for removing spilled and/or hazardous materials; boats; containment booms; pumps; portable shower units; protective clothing; and all other equipment, tools and safety gear necessary or commonly used in the spill response work activities and other work listed above.

- reparation and submittal of all hazardous waste manifests and other paperwork required by the appropriate agencies and authorities.

- Ensure that drums and containers are properly labeled, marked in accordance with applicable regulations.

- Disposal of all materials removed from cleanup locations and spill sites at approved TSDFs.

- Routine pick-up of hazardous wastes generated throughout the Port for offsite recycling or disposal at approved TSDFs (landfills).

4.0 Applicable Law and Regulations

4.1 Local (Alameda County)

The CUPA was established in the Health and Safety Code (Section 25404) to bring together six environmental programs:

- Hazardous waste generation regulations and authorizations

- Aboveground storage tank requirements for an SPCC plan

- Hazardous materials release response plans and inventories

- Accidental release prevention program (CalARP)

- Sections of the California Fire Code relating to hazardous material management plans and inventories.

- Underground storage tank requirements (no longer applicable to Port operations, but may still exist on tenant premises or be discovered due to historic use)

These programs had previously been distributed among the State Water Resources Control Board, Department of Toxic Substances Control (DTSC), County Environmental Health Agencies, and the State Fire Marshal. The California Environmental Protection Agency allowed certain local governments to group these programs into one unified program. The state then certified these government agencies as the unified program agencies or CUPAs. The intent was that instead of multiple inspections and fees, businesses would have one hazardous materials inspection and pay one fee. The Alameda County Department of Environmental Health (ACDEH) was certified as the CUPA for the City of Oakland in 2015. The County's authority as CUPA allows it to conduct hazardous materials/wastes inspections on Port property, to specify a schedule for compliance or correction, and to impose administrative penalties for violations observed under the six programs.

4.2 State (DTSC)

California's hazardous material and waste management rules are authorized by the federal Clean Water Act and RCRA and numerous more stringent state laws such as the Aboveground Petroleum Storage Act. The state's rules apply to hazardous waste generators and transporters; owners and operators of hazardous waste TSDFs; handlers of used oil and universal wastes; businesses that have a reportable quantity of any hazardous material/waste; and facilities with a cumulative oil storage capacity of 1,320 gallons or more. The majority of these requirements are contained in the Health and Safety Code (HSC) Sections 25100, 25270, and 25500, et seq., and in the implementing regulations found in Title 22 of the California Code of Regulations (CCR), beginning with Section 66260.1.

4.3 Federal (EPA)

The federal Resource Conservation and Recovery Act (RCRA) authorizes EPA to regulate hazardous waste from "cradle to grave", meaning from generation to disposal. Those who generate, transport, treat, store, and dispose of hazardous waste are subject to strict waste management rules promulgated under Subtitle C of RCRA.

Applicable federal requirements are contained in RCRA and in the implementing regulations contained in 40 CFR Parts 260 through 270. In addition, the U.S. Department of Transportation regulates off-site shipment of hazardous waste under 49 CFR 172. RCRA generally does not apply to Port operations although soil waste may have high concentrations of metals (e.g., lead) and need to be disposed as RCRA waste.

The federal Occupational Safety and Health Act of 1970 requires facilities with hazardous chemicals to prepare or make available material safety data sheets (29 USC 651 et seq.). The Emergency Planning and Community Right-to-Know Act (40 CFR 370 et seq.) further requires annual preparation and submittal of an emergency and hazardous chemical inventory form if a threshold quantity is exceeded. In California, any person who submits an inventory to the California Environmental Reporting System (CERS) under HSC Section 25506 shall be deemed to have complied with the federal filing requirements. The State of California thresholds are more stringent than federal thresholds.

The SPCC rule is part of the EPA's oil spill prevention program published under the authority of the federal Clean Water Act in 1974. The rule may be found in 40 CFR 112.

5.0 Hazardous Materials Management

5.1 Hazardous Materials Business Plans

California HSC Section 25503.5 mandates the preparation and implementation of HMBPs for emergency response to a release or threatened release of a hazardous substance. A HMBP is required if a business handles a hazardous material (or a mixture containing a hazardous material) that at any time during the year has a quantity that meets *any one* of the following criteria:

- Equal to, or greater than a total volume of 55 gallons of a liquid,
- Equal to, or greater than a total weight of 500 pounds of a solid, *or*
- Equal to, or greater than 200 cubic feet of a compressed gas (at standard temperature and pressure).

At a minimum, each HMBP must consist of:

- Facility Information (business activities and business owner/operator identification),
- Hazardous Materials Inventory (chemical inventory and site location map), and
- Emergency Response and Training Plans (emergency response contingency plan and training plan).

All businesses must file their required HMBPs electronically to CERS and maintain hardcopies at their facilities. HMBPs must be amended within 30 days if there is a 100% or greater increase in the quantity of a hazardous material/waste, or if a previously undisclosed hazardous material/waste meeting the reportable quantities is brought to a facility. Annual reviews, updates, and recertification of HMBPs must be performed electronically in CERS (http://cers.calepa.ca.gov). Additional information is available at: www.calepa.ca.gov/CUPA.

With regard to Port of Oakland tenants, HSC Section 25503.6 specifies that any business which is required to establish and implement an HMBP for their facility (pursuant to Section 25503.5) *and* is located on leased or real Port property shall notify the Port in writing that the business is subject to the respective Section and has complied with its provisions. The business must also provide a copy of the HMBP to the Port or Port's agent within five (5) working days after receiving a request for a copy from the Port or Port's agent.

5.2 Spill Prevention, Control and Countermeasure Plan

The federal SPCC rule and state Aboveground Petroleum Storage Act require the preparation of SPCC Plans for facilities with a cumulative oil storage capacity of 1,320 gallons or more. This threshold applies only to those containers with a capacity of 55 gallons or more. Oil includes, but is not limited to, gasoline,

diesel, lubricating oils, mineral oil, hydraulic fluid, and animal and vegetable oils. Oil, however, does not include propane, waxes, tars, or asphalts.

Similar to a HMBP, an SPCC Plan includes an inventory of qualified oil containers and describes procedures, methods, and equipment at a facility to prevent oil discharges from reaching nearby waterways, including storm drains. While submittal to regulatory agencies is not required, a copy needs to be maintained at the facility and the plan needs to be reviewed and updated at least once every five years or as necessary when there is a technical change that materially alters the facility's potential to discharge oil to nearby surface waterways.

The Port currently maintains three SPCC Plans: two for the seaport (Harbor Facilities Complex, Berths 20 – 24) and one for the airport.

Employees are encouraged to familiarize themselves with these plans relevant to their areas of responsibility and work in order to properly respond to emergencies. Appendix H contains response procedures for small oil spills. Employees are also requested to notify EP&P when new hazardous materials/wastes are handled at a facility.

6.0 Types of Wastes Generated by the Port

Hazardous wastes generated at the Port are classified into one of three categories: Hazardous Waste, Non-Hazardous Waste, and Universal Waste (See Appendix C)

7.0 Waste Management Procedures

This section provides procedures for the use of hazardous waste storage lockers, spill response, and routine hazardous waste management.

A multi-sectioned hazardous waste storage locker has been provided at Harbor and Airport Facilities to store hazardous waste and to minimize the potential for spills. Each locker section is equipped with chemical resistant coated surfaces, integral secondary containment, passive flow-through ventilation, and security locks. Some sections have fire suppression systems enabling them to store ignitable waste. Weekly locker inspections are required. While the Port's contracted hazardous waste hauler provides pre-labeled containers for certain commonly encountered waste, it is up to each individual/group that places uncommon wastes to label each container or waste stream, especially if the waste is not readily apparent. Labels can be requested from EP&P. The Port's waste hauler performs "milk-runs" at least once every three months. areas Appendices D and E summarize the Port's procedures for using the hazardous waste lockers at Harbor and Aviation Facilities, respectively, while Appendix F provides example checklists.

7.1 Procedures for Use of Hazardous Waste Storage Locker for Harbor Maintenance (X120)

This locker is shared by various groups at Harbor Facilities; each group is required to ensure that their waste is properly containerized and stored inside locker. Laine Bass, Maritime Public Works/Railroad Safety Specialist, is currently the designated HW Manager and conducts weekly inspections.

7.2 Procedures for Use of Hazardous Waste Storage Locker for Aviation Maintenance (L-595) and M104

The Maintenance and Utilities groups share the HW locker at the Airport Facilities Complex while the M104 storage area is used primarily by Equipment Systems Engineers. Weekly inspections are conducted by EP&P, Aviation Maintenance (Eddie Villasenor's group), and Utilities (Michael Henning's group).

7.3 Hazardous Waste Disposal Procedures during Normal Operations and Site Investigations

Appendix A presents a typical process of handling and manifesting hazardous waste for offsite disposal during normal operations. Appendix B describes three options available for managing investigation-derived soil waste: onsite backfill; reuse at the airport's Materials Management Site; and offsite disposal at a TSDF.

7.4 Spill Response Procedures

Many types of products containing hazardous materials are used at the Port to accomplish day-to-day activities. Hazardous materials stored in bulk include fuel, hydraulic fluid and motor oils. Paints, cleaning supplies, and aerosol cans (i.e., parts cleaners, spray paint, etc.) can also be found on Port property. The Port of Oakland has established spill response procedures that define how to properly respond to spills that occur within Port facilities. For example, small oil spill response procedures can be found in (Appendix H). In addition, fuel tank monitoring systems (e.g., Veeder-Root) need to be tested periodically (Port retains Balch Petroleum) to ensure their proper operation (40 CFR § 112.8(c)(8)(v)). Annual testing and certification of these monitoring systems at the Airport and Harbor Facilities Complexes and M-911, the Airport Rescue and Firefighting area, is the recommended frequency.

7.5 Standard Operating Procedures for Management of Hazardous Wastes

Detailed Standard Operating Procedures (SOPs) for management of hazardous wastes are included in Appendix G for the following waste streams:

- Asbestos wastes (transite pipe (Appendix L), thermal system insulation, etc.)
- Biohazardous wastes (hypodermic needles, blood or bodily fluid contaminated materials, etc.)
- Diesel fuel waste
- Electronic waste
- Empty containers (> 5 gallons)
- Flammable paint related waste (oil-based paints, thinners, stains, etc.)
- Gasoline waste (filters and liquid)
- Lead acid batteries
- Solid oil debris waste (oily rags, absorbent materials, etc.)
- Spent and non-spent aerosol cans
- Universal wastes (fluorescent lamps, lamp ballasts, mercury switches, household batteries, etc.)
- Used oil filters

- Used waste oil
- Water-based paint waste

7.6 Operating Procedures for Hazardous Waste Satellite Accumulation Sites

Satellite (aka "Workplace") Accumulation Sites are locations designated for the accumulation of hazardous waste in small quantities. However, in order to establish a satellite accumulation site, the following requirements must be met:

- The site location must be properly marked as "Hazardous Waste Satellite Accumulation".
- The site must be located in a secure and covered area, to prevent the introduction of materials that could potential alter the contents of the container.
- There can only be one container and it can be no larger than 55 gallons in size.
- Material can be placed in the container for up to one year or until full, whichever comes first.
- The container must be labeled to reflect the accumulation start date.
- Once the container is full or after one year, the container or its contents must be moved to the designated central hazardous waste accumulation area (e.g., HW locker at Airport or Harbor Facilities) within 3 days.
- Once the container is moved, the container must be relabeled with a Hazardous Waste Label (Appendix I) and the accumulation start date must reflect the day the container was placed at the new location.

Satellite accumulation areas can be useful when the hazardous waste accumulation site is a distance away from designated storage areas, and the amount of materials does not exceed 55 gals within a short period of time.

8.0 List of Waste Disposal Facilities

The Port identifies properly permitted waste disposal facilities to ensure that Port-generated wastes, both hazardous and non-hazardous, are managed in accordance with applicable federal, state and local regulations. Table 8.1 provides a list of approved disposal facilities.

Table 8.1 List of Waste Disposal Facilities

Name of Facility	Address of Facility	Type of Waste Received
AERC Recycling Solutions	30677 Huntwood Avenue Hayward, CA 94544	Universal waste; i.e.: batteries, lamps
AERC Recycling Solutions – R2/RIOS Certified Electronics Recycler Facility	1475 Crocker Avenue Hayward, CA 94544	Electronic waste only
Waste Management, Inc. - Altamont Landfill and	10840 Altamont Pass Road Livermore, CA 94550	Non-hazardous waste landfill

Resource Recovery Facility		
Chemical Waste Management, Inc. – Kettleman Hills Facility	35251 Old Skyline Road Kettleman City, CA 93239	Hazardous waste landfill RCRA and non-RCRA
Clean Harbors Environmental Services, Inc. – Buttonwillow Facility	2500 West Lokern Road Buttonwillow, CA 93206	Hazardous waste landfill; RCRA and non-RCRA (no tires)
Crosby & Overton, Inc.	1630 West 17th Street Long Beach, CA 90813	Full service transport, storage and disposal facility broker
Recology Environmental Solutions, Inc. – Hay Road Landfill	6426 Hay Road Vacaville, CA 95687	Municipal waste landfill (asbestos)
Republic Services, Inc. - Forward Landfill	9999 S. Austin Road Manteca, CA 95336	Non-hazardous waste landfill
Republic Services, Inc. – Vasco Road Landfill	4001 North Vasco Road Livermore, CA 95687	Non-hazardous waste landfill
Waste Recovery West, Inc.	4554 South El Dorado Street Stockton, CA 95206	Waste tires
Potrero Hills Landfill	3675 Potrero Hills Lane Suisun City, CA 94585	Non-hazardous waste landfill

The above list will be revised from time to time and may not be current. Prior to considering use of any of the listed disposal sites/designated facilities or brokers, a current list should be obtained from the EP&P. In addition, any disposal site used must also meet the following five criteria at the time of disposal (even if the site is listed in the table above):

1. Such facility should be properly permitted and licensed to accept and dispose of the applicable waste and in compliance with applicable environmental laws (including federal, state, or other administrative or regulatory bodies or agencies with applicable jurisdiction). Solid waste disposal facilities must have an active permit identified on the CalRecycle's Solid Waste Information System (SWIS) database;
2. Such facility is not listed, not proposed and has never been identified or listed on the Federal National Priorities List (Superfund) or EPA (CERCLA) National Priorities List, CERCLIS List or pursuant to any functional equivalent of those listings made by federal, state, or other administrative or regulatory bodies or agencies with applicable jurisdiction pursuant to "environmental law", State equivalent list, or Local equivalent list;
3. As of 7/14/09, such facility is not subject to Federal information requests under Section 104(c) of CERCLA or Section 3007 (a) of RCRA or, State or Local equivalent requests;
4. As of 7/14/09 or date that the waste is accepted from the Port (or its Contractor or sub-contractor), whichever is later, the non-owned location, its owners and operators (including any such persons, corporations or unincorporated associations) are not in bankruptcy or financial insolvency; and
5. Such facility is not undergoing voluntary or regulatory-required remediation activities at the time the waste is received for disposal.

If the disposal sites listed above do not meet the above-listed criteria, an alternate disposal site which does meet all of the above-listed criteria must be used instead.

9.0 Manifesting and Shipment of Wastes

All shipments of non-recyclable hazardous wastes intended for disposal must be accompanied by a "Uniform Hazardous Waste Manifest", as required by the EPA (40 CFR 262.20), DOT (49 CFR 172.205), and Cal/EPA (22 CCR 66262.23). Upon completing the manifest, a trained Port employee signs Box No. 15, as "***Agent on Behalf of the Port of Oakland"***, then removes the first copy for record keeping. After waste disposal, the final copy will be sent from the designated facility to the generator (the Port). An additional copy must be submitted to the California State Department of Toxic Substances Control (DTSC) within 30 days of shipment (currently assigned to Eric Englehart). Special manifests are required for waste tires as regulated by CalRecycle; the Port Hazardous Waste Contractor manages this function, in conjunction with Port EP&P staff. Example manifests are provided in Appendix I.

Sections of the "Uniform Hazardous Waste Manifest" will typically be completed by the Port's Hazardous Waste Contractor, although all sections need to be checked and verified before a trained Port employee should sign. Several sections are particularly critical:

Box 1. Generator ID Number: Verify the appropriate and correct EPA ID is being used.

Box 5 (Part 1). Generator's Name, Mailing Address, and Phone (include point of contact and e-mail address): Port of Oakland, 530 Water Street, Oakland, CA 94607; Attn: Eric Englehart; eenglehart@portoakland.com.; (510) 627-1187.

Box 5 (Part 2). Generator's Site Address (site name and specific address location of waste): e.g.: Oakland International Airport (Outside AOA), North Field-Airport Facilities, 8500 Earhart Rd., Oakland, CA 94621.

Box 9a. HM: This box should be checked only if a RCRA hazardous waste is listed, and all RCRA wastes are the first items to be listed on the manifest.

Box 13. Waste Codes: The California waste code should be listed first followed by the RCRA waste code (if applicable).

Box 14. Special Handling Instructions and Additional Information: Include the TSO and waste profile number(s) in this box. Profile numbers should correspond in order to each respective waste listed under Box 9b.

Box 15, Generator's/Offeror's Certification: ***Always include the statement: "Agent on Behalf of the Port of Oakland".*** By signing a manifest, you can be held both criminally and personally liable for your certification, forever.

Waste materials that are not hazardous by definition but require special handling shall be accompanied by a bill of lading or "Non-Hazardous Waste Manifest". This shipping document identifies the carrier, the place the waste is being shipped, and the type of waste being shipped (refer to sample in Appendix I). These documents are transported with the shipment. Copies of this document must be retained for 3 years. Examples of wastes that require bills of lading are universal waste and non-hazardous waste.

10.0 Hazardous Waste Generator ID Numbers

All generators of hazardous wastes within California must obtain an Identification Number from either the EPA (for RCRA wastes) or the DTSC (for non-RCRA wastes) before they may store, transport, or dispose of hazardous waste. Appendix J contains a comprehensive list of the Port's current HW ID numbers. The Port is required to annually verify the accuracy of hazardous waste activity data by completing an electronic Verification Questionnaire online and pay an annual ID number verification fee. In addition, another fee is assessed based on the number of manifests filed. The verification process typically occurs in June, prompted by an email notice from DTSC.

It is a good practice to deactivate permanent numbers that are no longer needed to avoid annual verification fees and reduce regulatory exposure. Deactivated numbers can always be reactivated in the future as necessary. Lastly, temporary numbers can be obtained for short-term (up to 90 days) construction or remediation projects.

11.0 Inspections

It is the responsibility of each employee to ensure that the hazardous materials and waste used or generated by his or her work group are stored and managed properly. An important aspect of this responsibility is to conduct weekly inspections of the HW storage areas and monthly and annual inspections of qualifying oil containers (≥ 55 gallons) per the Port's SPCC Plans. The following persons currently conduct inspections:

Airport Facilities	Harbor Facilities	Environmental Programs and Planning – SPCCs only
Eddie Villasenor	Laine Bass	Eric Englehart
Dejon Iglehart	Ernie Richmond	Catherine Mukai
T.C. Padilla	Eric Fan	Khamly Chuop

Appendix F contains the weekly inspection form to be used for the HW storage areas. Sample monthly and annual SPCC inspection forms for oil containers are also included in Appendix F. However, check the SPCC Plans for specific inspection forms approved for use under each plan. Assigned Airport and Harbor Facilities and EP&P personnel are responsible for performing inspections at these facilities. Completed forms shall be kept at or near the site and scanned and electronically submitted to Eric Englehart of EP&P on a quarterly basis.

Although not all employees are directly responsible for conducting compliance inspections, everyone plays an important role in ensuring that hazardous material/waste is properly stored. The following list identifies what to look for during day-to-day operations.

1. **Are there any open containers?** Open containers pose a potential threat to employees (through exposure) and to the environment (by accidental discharge). Ensure that container lids, bung caps or funnel devices are closed.

2. **Are any containers severely rusted?** Rusty containers can over time release their contents into the environment. These containers are also weak and generally can't be easily moved.

3. **Are any containers bulging?** Containers that are bulging may be under pressure, usually caused by either a chemical reaction or excess heat. This is can happen with sealed containers and can be extremely dangerous, especially if it contains a flammable material. In the event that a bulging container is found, DO NOT move it, kick it, or in any way try to release the contents. **Don't take chances, contact EP&P immediately**. If necessary, an emergency response contractor will be contacted to dispose of the container.

4. **Are any containers leaking?** A leaking container constitutes a release into the environment. Even if the spill is contained within a hazardous waste storage locker or other collection area the release is considered uncontrolled, **notify EP&P as soon as possible**. If necessary, EP&P will contact a hazardous materials cleanup contractor.

5. **Are all containers labeled?** It is a violation of state and federal law to leave a container that contains a hazardous waste unlabeled. Labels identify the waste that is inside the container, as well as the location and the accumulation start date. The accumulation start date is the first date when the drum was being filled. (See Appendix I for example label)

6. **Is the hazardous waste area clean and well organized?** A hazardous waste area that is clean and well organized is easy to manage and will help to minimize the potential for accidental release. It also assists the disposal companies in identifying the wastes that need to be removed.

7. **Are all the necessary signs in place?** Signs identify areas based on their use. Hazardous waste areas must be identified by signs in accordance with hazardous waste regulations. If a sign is not posted, contact EP&P. Signs that state "Hazardous Waste Storage Area" must be posted to identify that specific area.

8. **Is the area secure?** Hazardous waste accumulation areas should be secure to prevent accidents and exposure to untrained personnel. Personnel who enter the area must have the initial and/or refresher training outlined in Section 13 of this guide.

9. **Are empty (used) containers marked appropriately?** Containers greater than 5 gallons that once held a hazardous material, which are empty, must be properly marked "EMPTY". These containers shall be treated as hazardous waste and are required to be disposed of in accordance to the routine waste procedures.

Formal integrity testing by a certified inspector needs to be performed once every 20 years for large volume fuel tanks (e.g., the two 8,000-gallon diesel tanks by Building M-371 at the airport). Consult the SPCC Plans for details.

12.0 Fines and Penalties

The DTSC has broad authority to issue a variety of administrative orders (e.g., corrective action orders, field orders and desk orders) and to impose administrative penalties against parties that violate the Hazardous Waste Control Law and implementing regulations. The DTSC may also seek civil or criminal penalties, obtain court orders to stop violations, and revoke permits and licenses.

The maximum statutory penalties for various hazardous waste violations range from $1,000 to $250,000 per day, and imprisonment from 6 to 36 months. Although conscientious Port employees are unlikely to be subject to such penalties, proper hazardous waste management is necessary to reduce the risk of regulatory action.

13.0 Training

Any employee conducting hazardous materials and waste management duties shall be trained to perform these duties efficiently and effectively in accordance with regulatory requirements.

Hazardous waste training programs must:

- Be directed by a person trained in hazardous materials/waste management;
- Contain information relevant to the employee's position and responsibilities, including contingency plan implementation and in-house materials/waste management policies;
- Familiarize employees with applicable pollution control laws, rules, and regulations; and
- Be designed to ensure that employees can prevent discharges and respond effectively to emergencies by familiarizing them with emergency procedures, safety equipment and hazardous materials/waste management practices.

New employees that manage hazardous materials and waste must be trained within six months of hire, and may not manage hazardous materials and wastes in unsupervised positions until they have been trained.

Employees must participate in annual refresher training; at a minimum, EPP should arrange for an 8-hour Hazardous Waste Operations and Emergency Response standard refresher course and document participation.

According to 22 CCR 66265.16, the following training records must be maintained indefinitely:

- The job title for each position involved in hazardous waste management, and the name of the employee in that position.
- A written job description for each job listed, including required skill, experience, education or other qualifications, and duties of employees in each position.
- A written description of the type and amount of training (introductory and continuing) that will be given to each person in the listed positions.
- Documentation that each employee who is required to be trained has completed the required training.

14.0 Record keeping

The record keeping and reporting requirements associated with hazardous material and waste regulations are extensive and complex. Generally, EP&P staff is responsible for maintaining such records in accordance with the Port's records retention schedule (at least three years), and submitting appropriate reports and plans to the regulatory agencies.

14.1 Hazardous Waste, Universal Waste and Recyclable Materials Shipments

Records of hazardous waste, universal waste and recyclable material shipments need to be kept for at least 3 years from the date of shipment. Records will document the name and address of the handler or destination facility, quantity of waste and date.

14.2 Above Ground Tank Systems

For each tank system, the Port must obtain and keep on file a written assessment that the tank system is acceptable for storing hazardous materials/waste. Monthly inspections will assess and document general conditions. Inspection reports should be retained for 3 years.

14.3 Waste Minimization

According to California's SB14, facilities (defined by HW Identification number) that routinely generate more than 12,000 kg of hazardous wastes in a calendar year are considered Large Quantity Generators and must prepare waste minimization plans. Starting in 2015 and every four years thereafter, facilities must prepare a hazardous waste management performance report, and a summary progress report. Facilities must also prepare a source reduction evaluation review and plan including an implementation schedule or documentation identifying the rationale for rejecting source reduction measures. Proper management of waste should allow the Port to avoid preparation of these plans, not to mention it is also good for the environment. To the extent feasible, the Port will try to maintain its SQG status by recycling waste oil, used oil filters, and empty containers, and by disposing of non-spent aerosol cans as Universal Waste instead of hazardous waste (Appendix G).

15.0 Miscellany

15.1 Refrigerant Management

The Port complies with state and federal requirements for refrigerants also known as ozone depleting substances or compounds with high global warming potential. Port use of refrigerants is limited to comfort cooling (although some tenants may have to comply with more onerous refrigeration requirements). Port staff at the airport, seaport, and Jack London Square report monthly to EP&P staff on their management of refrigerants. See Appendix L for details. The US EPA requires a phase-out of Refrigerant-22 by 2030 due to its ozone depletion potential. At 530 Water Street, there are 32 refrigeration units that use R-22 and one that uses the new R-401. CARB also wants to accelerate the phase-out of high global warning potential refrigerants according to its short-lived strategy dated November 28, 2016. See Appendix L for details.

15.2 Transite Pipe/Conduit Management

Port Utilities groups may encounter transite pipes or conduits during their day-to-day work. Individuals working on transite pipe or conduit are required to have a minimum 4 hours training specific to transite removal, PPE, and dust controls. Appendix L describes the procedures to follow for pipe/conduit removal, waste management, and EP&P notification.

16.0 References

Aboveground Petroleum Storage Act
HSC § 20270

Certified Unified Program Agency
HSC § 25404

Electronic Waste
http://www.calrecycle.ca.gov/Electronics/Future/Default.htm

Environmental Compliance Manual
East Bay Municipal Utility District, 2003

Hazardous Chemical Reporting: Community Right-to-Know
40 CFR § 370

Hazardous Materials Business Plan Requirements
HSC § 25500-25519

Hazardous Waste Compliance (CUPA) Training, 5th Edition
NES, 2014

Hazardous Waste Control Law
HSC § 25100

Hazardous Waste Regulations
22 CCR § 66260.1

Hazardous Waste Training Requirements
22 CCR § 66265.16

Oakland International Airport Spill Prevention, Control, and Countermeasure (SPCC) Plan
Amec Foster Wheeler, 2016

Occupational Safety and Health
29 USC § 651

Oil Pollution Prevention Requirements
40 CFR § 112

Port of Oakland Records Retention Policy 2016

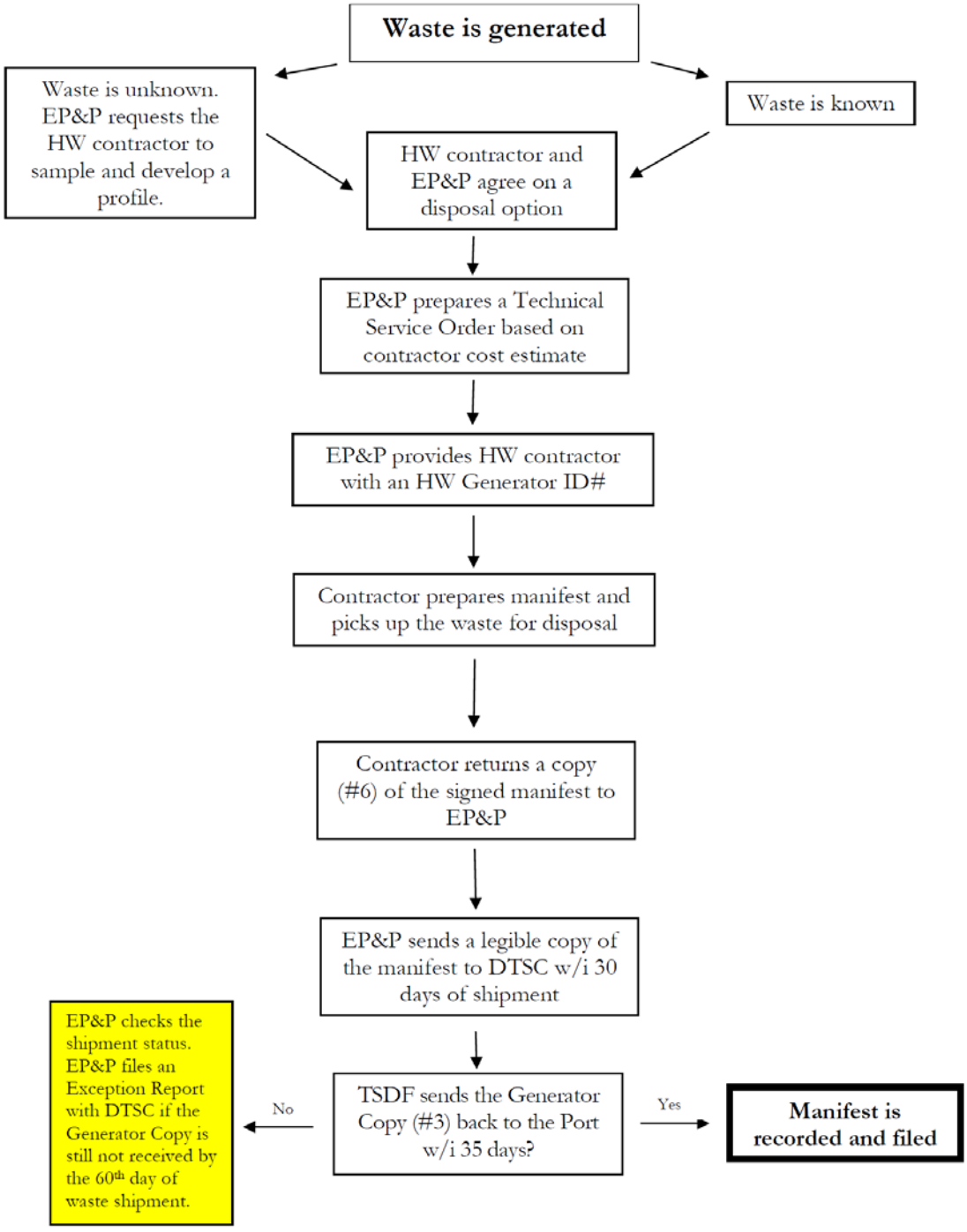
Resource Conservation Recovery Act
40 CFR § 260-270

Uniform Hazardous Waste Manifest
40 CFR § 262.20, 49 CFR § 172.205 & 22 CCR § 66262.23

Waste Minimization
California Senate Bills 14 & 1018

Appendix A – Offsite Hazardous Waste Disposal Flow Chart during Normal Operations

Offsite Disposal Procedure for Hazardous Waste Generated at the Port of Oakland during Normal Operations



Appendix B - Hazardous Waste Disposal Procedures for Site Investigation Operations

Procedure for Testing and Disposal of Investigation-Derived Soil Waste Generated by Port Geotechnical and Environmental Investigations

Environmental Programs & Planning (EP&P) can help with the disposal of investigation-derived waste (IDW) generated by Port investigations. The following procedure encourages design engineers and other Port departments generating soil waste to coordinate with the EP&P prior to performing geotechnical investigations to minimize or possibly eliminate unnecessary soil testing or waste disposal costs, and ensure proper waste disposal[1].

Geotechnical/Geologic Investigations

Prior to initiating any investigation, design engineers or the responsible Port staff should identify proposed boring locations and depths on a map and distribute the proposed work plan to the appropriate EP&P contact. Based on the provided information, EP&P staff will determine whether analytical testing is required and the appropriate laboratory methods.

Appropriate health and safety practices must be implemented during all subsurface investigations. Port staff must follow the Port's 2014 *Environmental Health and Safety Protocol for Shallow Excavations* (EH&SP) where applicable. Soil waste generated from shallow investigations, defined as soil above the first encountered groundwater, should be used as backfill without testing at the investigation location, unless specifically prohibited by the project manager/resident engineer for geotechnical or other site-specific reasons. Spoils from deeper investigations, where groundwater is encountered, shall not be used as backfill to avoid potential cross-contamination. Instead, where the waste volume equals or exceeds 100 cubic yards and is in a deed-restricted or regulated area (Appendices A & B of the EH&SP) or located in the maritime or commercial real estate (CRE) areas, EP&P will arrange to have the waste tested for offsite disposal at an outside permitted facility. Where the site being investigated is not identified in either Appendix A or B of the EH&SP or is not located in the maritime or CRE areas, the soil should be evaluated for possible reuse at the airport Materials Management Site (MMS) in accordance with the Port's 2010 *Port-Wide Soil Management Protocol* (SMP), and as amended. Small volumes (< 100 CY) of soil generated from "deep" investigations, regardless of a site's subsurface condition, should be simply tested for offsite disposal and not considered for reuse. Soil from shallow investigations, as defined above, and not used as backfill, needs to be analyzed following the same process as waste from deeper investigations. The flowchart below provides a step-by-step guide of the decision-making process.

Environmental Investigations

Generally, any drill cuttings or waste generated from environmental investigations should be drummed and disposed based on the results of analytical testing. The Port-wide SMP's analytical testing program needs to be followed if soil reuse is being considered (EP&P discourages testing for potential reuse if the waste volume is less than 100 cubic yards or if soil is from the maritime or CRE areas)[2]. EP&P will assume the lead role in these investigations.

Waste Disposal

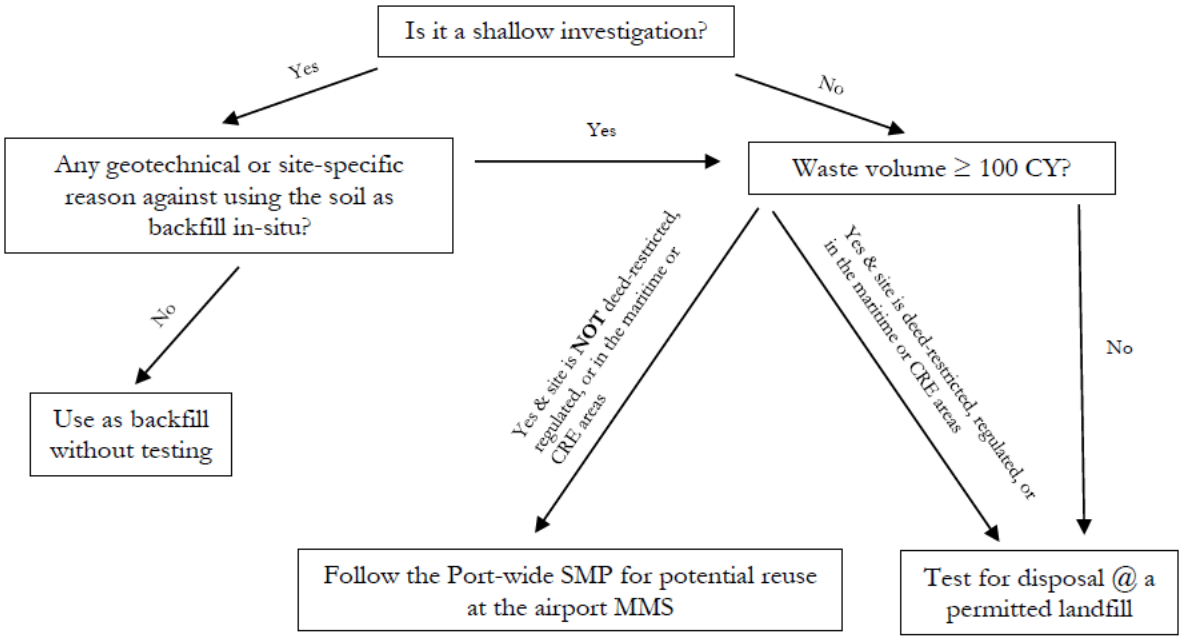
All waste awaiting test results must be drummed and labeled or otherwise stockpiled and protected from rain and runoff. The consultant and/or responsible Port staff should provide EP&P with a waste inventory and the analytical results (together with the chain-of-custody forms) as they become available.

[1] The Alameda County Public Works Agency requires drilling permits for boreholes and well construction/destruction. Holes such permitted must be backfilled with Portland cement grout. The generated waste soil should be managed for either reuse at the airport MMS or disposal at an offsite landfill in accordance with the flowchart below.

[2] EP&P will review, on a case-by-case basis, requests to reuse soil waste generated in the maritime or CRE areas.

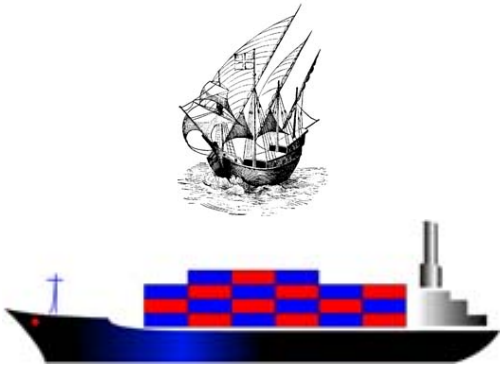
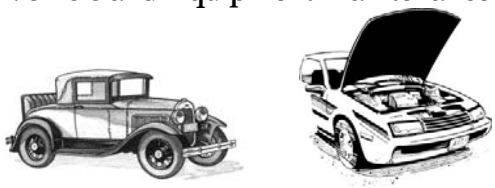
Waste will then be disposed of properly and legally as determined by EP&P staff. Disposal of hazardous waste will need to follow Appendix A of this Management Guide.

Is Analytical Testing Required for IDW?



Appendix C - List of Wastes Generated by Port Operations

List of Hazardous, Non-Hazardous and Universal Wastes generated by Port Facilities/Utilities and Capital Projects

Location	Types of Waste
Airport Facilities/Utilities and Landside Operations 	➢ Paint and Paint related Waste ➢ Oil Waste, including oil filters ➢ Diesel Fuels Waste ➢ Gasoline Waste ➢ Solid Oil Debris Waste ➢ Universal Waste ♦ Fluorescent and other hazardous lamps ♦ NiCd, Lithium, and other batteries ➢ Spent Aerosols ➢ Biohazardous Wastes
Harbor Facilities/Utilities 	➢ Paint and Paint related Waste ➢ Oil Waste, including oil filters ➢ Diesel Fuels Waste ➢ Gasoline Waste ➢ Solid Oil Debris Waste ➢ Universal Waste ♦ Fluorescent and other hazardous lamps ♦ NiCd, Lithium, and other batteries ➢ Spent Aerosols
Vehicle and Equipment Maintenance 	➢ Oil Waste ➢ Diesel Fuels Waste ➢ Gasoline Waste ➢ Lead Acid batteries ➢ Spent Aerosols ➢ Fuel Filters ➢ Oil Filters ➢ Solid Oil Debris Waste ➢ Waste Tires
Various Capital Projects 	➢ Lead Contaminated Soil ➢ Drill Tailings, Soil Cuttings, Purge Water ➢ PCB containing Transformers ➢ Lead / Chromium Contaminated Waste ➢ Asbestos Waste ➢ Other miscellaneous contaminants

Appendix D - Harbor Facilities Hazardous Waste Locker

Harbor Facilities Maintenance Hazardous Waste Locker (X120) Procedures

Purpose of Procedures

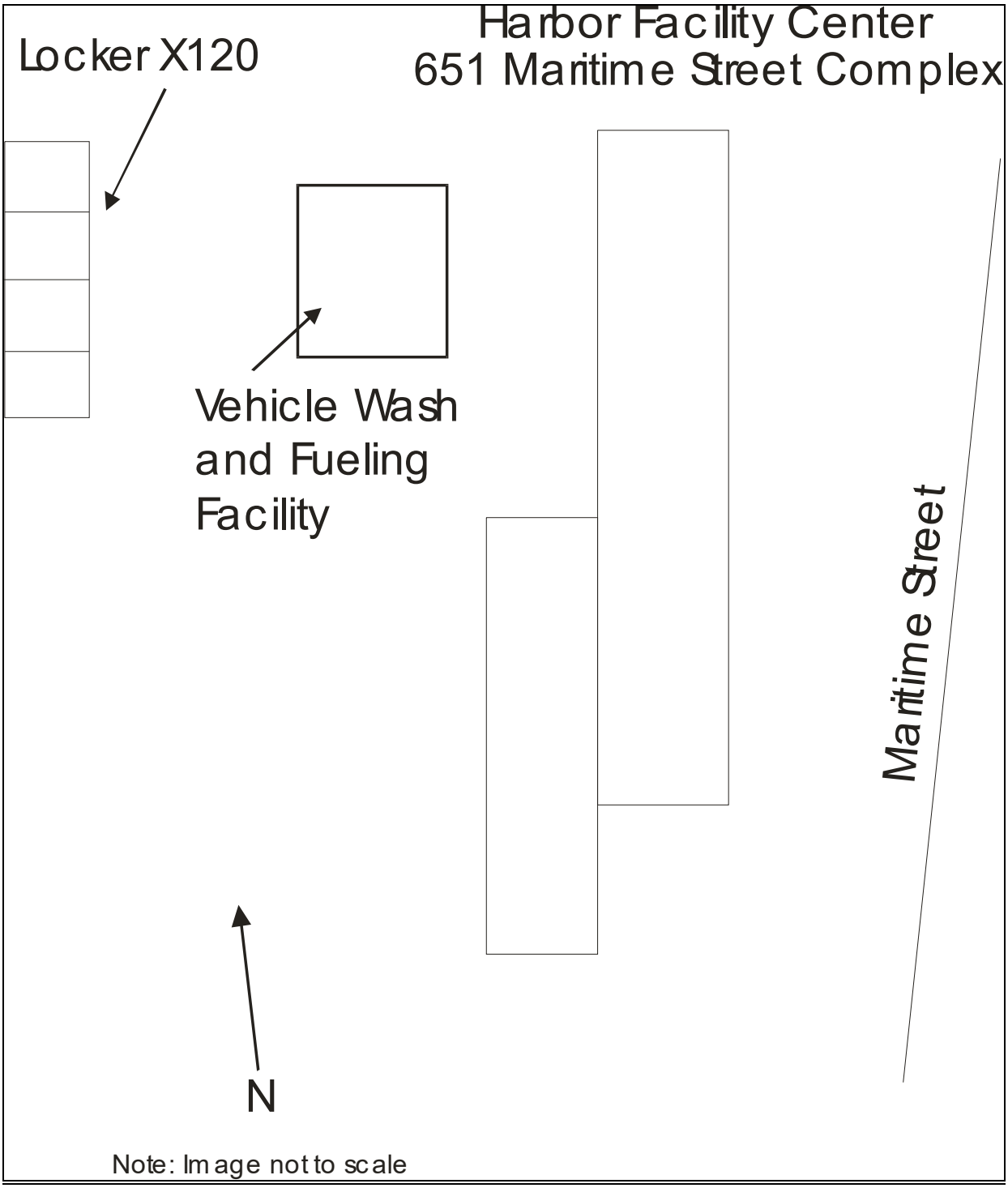
These guidelines are for the use of the hazardous waste (HW) storage locker to accumulate and store hazardous wastes generated by the Port of Oakland Harbor Facilities Division. Environmental Programs and Planning (EP&P) is responsible for the overall manifesting and coordinating of the disposal of hazardous waste generated at the Port of Oakland Harbor Facilities Maintenance areas. However, the onsite management of hazardous waste, including weekly inspections, is the responsibility of a designated HW manager, which is currently Laine Bass, Maritime Public Works/Railroad Safety Specialist. Each individual group that generates hazardous waste is responsible for ensuring that their waste is properly containerized and stored inside locker X120. **DO NOT JUST LEAVE DRUMS AND CONTAINERS OUTSIDE OF LOCKER X120. This is a violation of Hazardous Waste Storage regulations[3].**

Hazardous Waste Storage

If the hazardous waste has been identified, then the person that generated the waste will be required to place the waste in the appropriate locker designated for that waste. If the hazardous waste is unidentified, refer to Appendix A of this guide.

The HW storage locker, Locker X120, is located at 651 Maritime Street at the Harbor Facilities Center. Locker X120 is located west of the Vehicle Wash and Fueling Facility. (See Figure 1)

[3] One exception is empty containers (> 5 gallons in capacity) waiting to be transported offsite for recycling. These containers need to have an "Empty" label on them and closed.



Locker X120 located at Harbor Facility Center

Building X120

The storage locker is a custom design locker built by Safety Storage Inc. to meet all the Federal, State and local regulations regarding the storage of hazardous waste. The locker is designed to hold HW drums (55 gal) and various smaller size containers. The sump has the capability of holding (between the four sumps) approximately 1,463 gallons of spilled liquid material. It is equipped with a fire suppression system and each compartment is provided with individual fire resistant lighting and ventilation. For additional information on this storage locker contact EP&P.

Locker X120 located at the Harbor Maintenance Facilities Center

Hazardous Waste Storage Features

Storage Features:

- Constructed of heavy-gauge welded steel
- Secondary containment sump with floor grating and a drain fitting
- Chemical resistant coated surfaces & Inside shelving
- Forced ventilation via a roof turbine & Static grounding system
- Security lock with interior safety release
- Forklift opening for ease of relocation
- Hold-down brackets
- Hazard placards, signs and labeling

X120 Section #1: Paints and Paint Related Waste

Door # 1 is labeled for "Oil and Latex Based Paints and Solvents only". This locker contains five drums, each holding fifty-five gallons. Two drums are designated for liquid oil-based paints and solvents (e.g., thinners, lacquers, alcohols, and stains) and two other drums are designated for liquid latex paints. A fifth drum is an open top drum used for "Paint Solids" which include paint cans (up to five gallons in size with dried paint exceeding 10% by volume). Containers are also available for spent aerosol cans. The paint and solvent drums have a sign above them identifying the drum contents. All containers must also have a corresponding State of California hazardous waste label.

KEEP CONTAINER CLOSED

Containers are required to be closed at all times unless you are filling them.

Latex Based Paint Drum

All latex water-based paints that can be poured or scraped out should be consolidated into the Latex type paint drums. If the paint is too thick to consolidate, it can be left on the shelf uncovered to dry out. Then it can be disposed of in the 30-yard dumpster.

Locker X120 Section #1 - Paints and Paint Related Waste

Flammable Paint Related Waste (i.e., Oil based paints, lacquers, thinners, alcohol, stain) Drum

All oil-based paints and solvents that can also be poured or scraped out should be consolidated into the oil-based paint drums. Empty cans and those that cannot be cleaned out are left open on the shelves to dry out

prior to disposing. Any paint cans thrown into the regular garbage dumpster must contain 10% or less paint solids (applies to oil-based paints only) and must be dry.

Paints Containing Heavy Metals

Any paints containing heavy metals (e.g., traffic paint) cannot be consolidated in the oil or latex-based drums, or thrown away in the dumpster. They should be left in their original containers, placed on the shelf, and left for the Port's Hazmat contractor to manifest as is. A HW label needs to be affixed to the container.

X120 Section #2: Oil and Diesel Fuel Wastes

KEEP CONTAINER CLOSED

Containers are required to be closed at all times unless you are filling them.

Door #2 is labeled for "Used Motor Oil and Asphalt/Diesel Fuel Waste Only". This locker contains five 55-gallon drums. There are three primary types of waste in this locker. Two drums are designated for asphalt/diesel fuel waste. Two are designated for used motor oil waste. The last drum is used for oily debris, including solid oil absorbents. The oil and diesel drums have burp-less, low splash funnels with attached lids. All containers must have a corresponding State of California hazardous waste label.

Locker X120 Section #2 - Oil and Diesel Fuel Wastes

Asphalt/Diesel Fuel Waste Drum

DO NOT pour waste oil into this drum. This drum is for asphalt/diesel waste only. If the drum becomes full, use the reserve and notify your hazardous waste manager. Ensure that the lid on the funnel is securely closed. If you have any questions, contact the HW manager.

Waste Motor Oil Drum

DO NOT pour Asphalt/Diesel fuel waste into this drum. This drum is for waste oil only. If draining oil filters, ensure that the filters are drained completely before moving them to the designated solid waste drum.

Solid Oil Waste

DO NOT put liquid waste into this drum. This drum is used for oily debris, including waste oil absorbents. Ensure the drum is properly labeled. Drained oil filters shall be managed for scrap metal recycling according to Appendix G and not placed in this drum.

Note: DO NOT mix liquids and solids together unless this has been approved by the Port EP&P. Drums that contain both solids and liquids generally cost more to transport and dispose because of the special handling required.

X120 Section #3: Universal Waste (*e.g., Electronic devices, batteries, & light tubes*)

Door #3 is labeled "E-Waste". This locker is set up with round tubs and other containers for small batteries (one tub for Ni-Cad batteries, one for the lead-acid batteries and one for the alkaline batteries), light tubes, and electronic or mercury containing devices.

Lead Acid, Alkaline, Ni-cad batteries

Separate containers are used to hold the different batteries. The tubs are used to isolate and prevent incidental mixing of chemicals in case of battery leakage. DO NOT store different types of batteries in the same tub. Ensure that the batteries are placed in the container that is marked accordingly. Place large automotive lead-acid batteries on a pallet for disposal or recycling.

Universal Waste (UW) Lamps and Lighting Wastes

Universal waste lamps include most (but not all) fluorescent tubes, high intensity discharge lamps, sodium vapor lamps and any other lamps that exhibit a characteristic of a hazardous waste (*i.e.*, contains mercury or some other hazardous material). Keep the tubes and lamps in the original box that they were transported in, if possible. If no box is available, then contact the HW manager to identify how to proceed. DO NOT Break the lamps to make more room, this is strictly prohibited by California EPA regulations. Place lamps and/or ballasts in the appropriate area. If there is no room to accommodate the lamps, contact the HW manager. All containers must have a corresponding Universal Waste label.

Locker X120 Section #3 - Universal Wastes

X120 Section #4: Emergency Spill Equipment, Absorbent Materials, Biohazard Sharps Containers, & Non-Waste Hazmats

Section #4 is used primarily for storing spill cleanup equipment and materials, biohazards, and limited non-waste hazardous materials.

Wastes other hand biohazards shall not be stored in this section without consulting the HW manager.

Biohazards Sharps Containers

Occasionally biohazards are found in the Port harbor area, because of this, storage locker #4 has been set up to receive such waste. The sharps containers are small, portable and lockable containers that can be stored in the toolbox of a truck and are used to pick up sharps that are found during working operations. Contact HW managers to drop off containers or pick up new ones.

Locker X120 Section #4 – Emergency Spill Equipment

Access To The Locker

The hazardous waste storage locker must be locked at all times except when hazardous wastes are being added or removed. Port of Oakland Facilities and Utilities maintenance employees have access to the assigned lockers that apply to their group. Supervisors, foremen and the HW manager have access to all the lockers.

General Requirements

Because of strict storage requirements:

- DO NOT place materials in an area that is not designated for that type of waste.
- DO NOT remove equipment and materials from section #4 for general purposes.
- Contact the HW manager to replenish the spill response equipment and absorbent materials.
- If additional drums or containers are needed, contact the HW manager.

- If materials other than those listed in Appendix C need to be placed into the storage locker, contact the HW manager or EP&P.
- Each container needs either a HW, UW, or "Drained Oil Filters" label with all the required information filled out. Apply a new label each time the first waste item is deposited in an empty container or refresh a reusable label with new accumulation start and pick-up dates, along with a manifest tracking number.
- Keep all containers closed when not in use.
- The HW manager must perform weekly inspections of the HW locker using the inspection form contained in Appendix F, or its equivalent. The completed forms must be scanned and electronically transmitted to EP&P on a quarterly basis.

Housekeeping

- Housekeeping is the responsibility of every Port personnel who drops off or consolidates hazardous wastes at building X120. Ensure that your areas are kept clean and well maintained.
- Remove debris.
- Clean up small spills immediately if safe and trained to do so.
- Contact Desmond DeMoss (510-773-9991) or EP&P to clean up significant spills.

Successful and consistent implementation of the above-described management practices will ensure a safe and well-maintained storage area that complies with the Federal, State and local regulations.

Appendix E - Aviation Maintenance Hazardous Waste Storage Areas (M104 & Airport Facilities Complex)

Aviation Maintenance Hazardous Waste Storage Areas (M104 and Airport Facilities Complex) Procedures

Purpose of Procedures

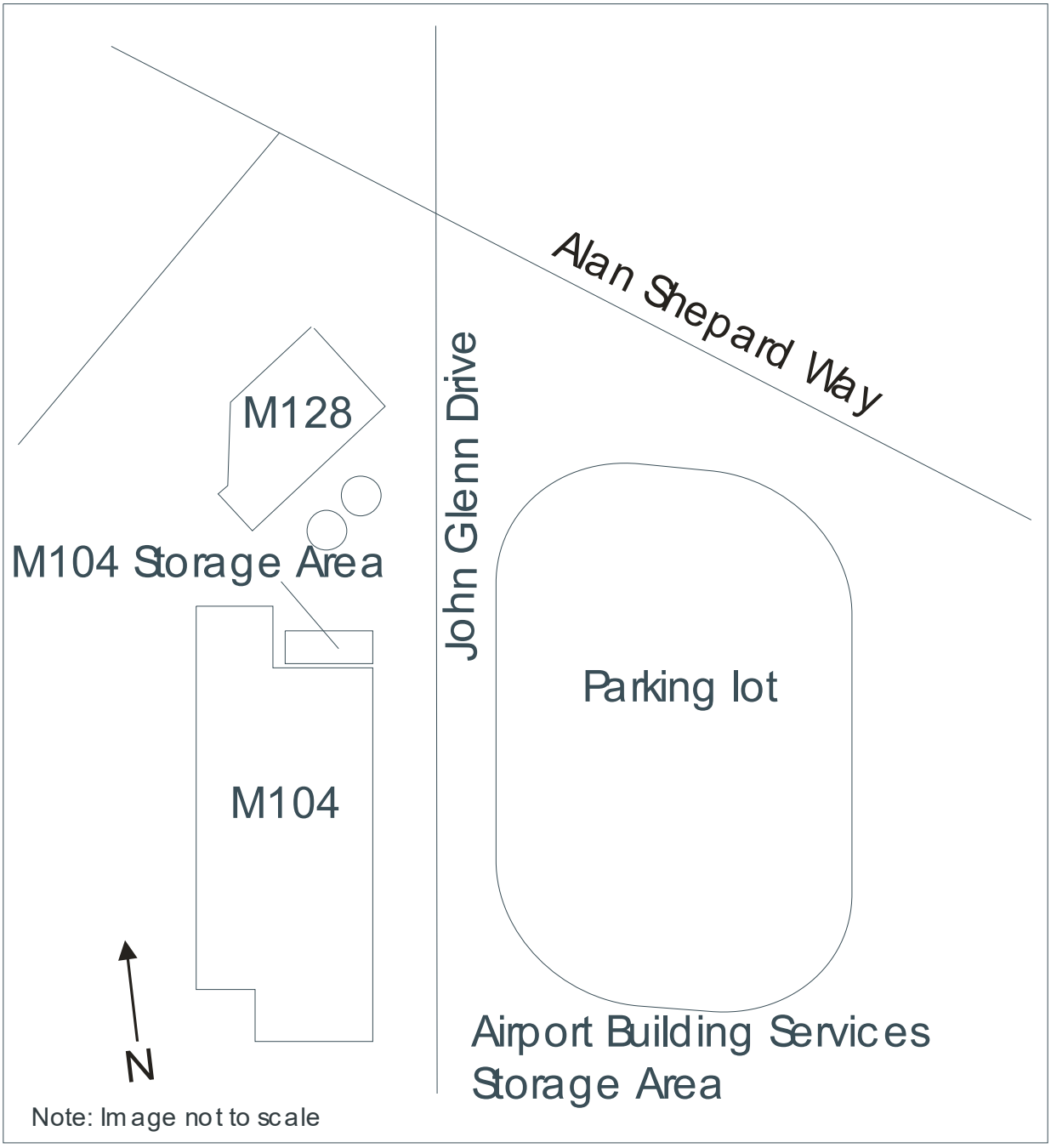
These guidelines are for the use of the hazardous waste storage areas to accumulate and store hazardous wastes generated by Port of Oakland Aviation Maintenance Operations. Environmental Programs and Planning (EP&P) is responsible for the overall manifesting and coordinating of the disposal of hazardous waste generated at the Port of Oakland Harbor/Airport Facilities areas (see Appendix A). Disposal of the hazardous waste is performed by Patriot Environmental Services and is coordinated by EP&P. However, onsite management of the hazardous waste is the responsibility of each individual department that generates hazardous waste.

Hazardous Waste Storage

If the hazardous waste has been identified, then the person that generated the waste will be required to place the waste into the appropriate container and area that is designated for that waste. If the hazardous waste is unidentified, refer to Appendix A of this guide.

M104 Airport Building Services Storage Area

This area is located near the cooling tower adjacent to Building M104 located at South Field north of Terminal 1 (Figure 2).



Location of M104 Storage Area

The M104 storage area is used to store hazardous wastes. The storage area is covered and has secondary containment built in. It is a locked and secure area. The following types of waste are commonly found there:

- Waste Oil
- Solid Oil Waste Debris and Oil Absorbent Waste
- Universal Waste (e.g., lamps, ballasts, batteries, & mercury thermostats, etc.)

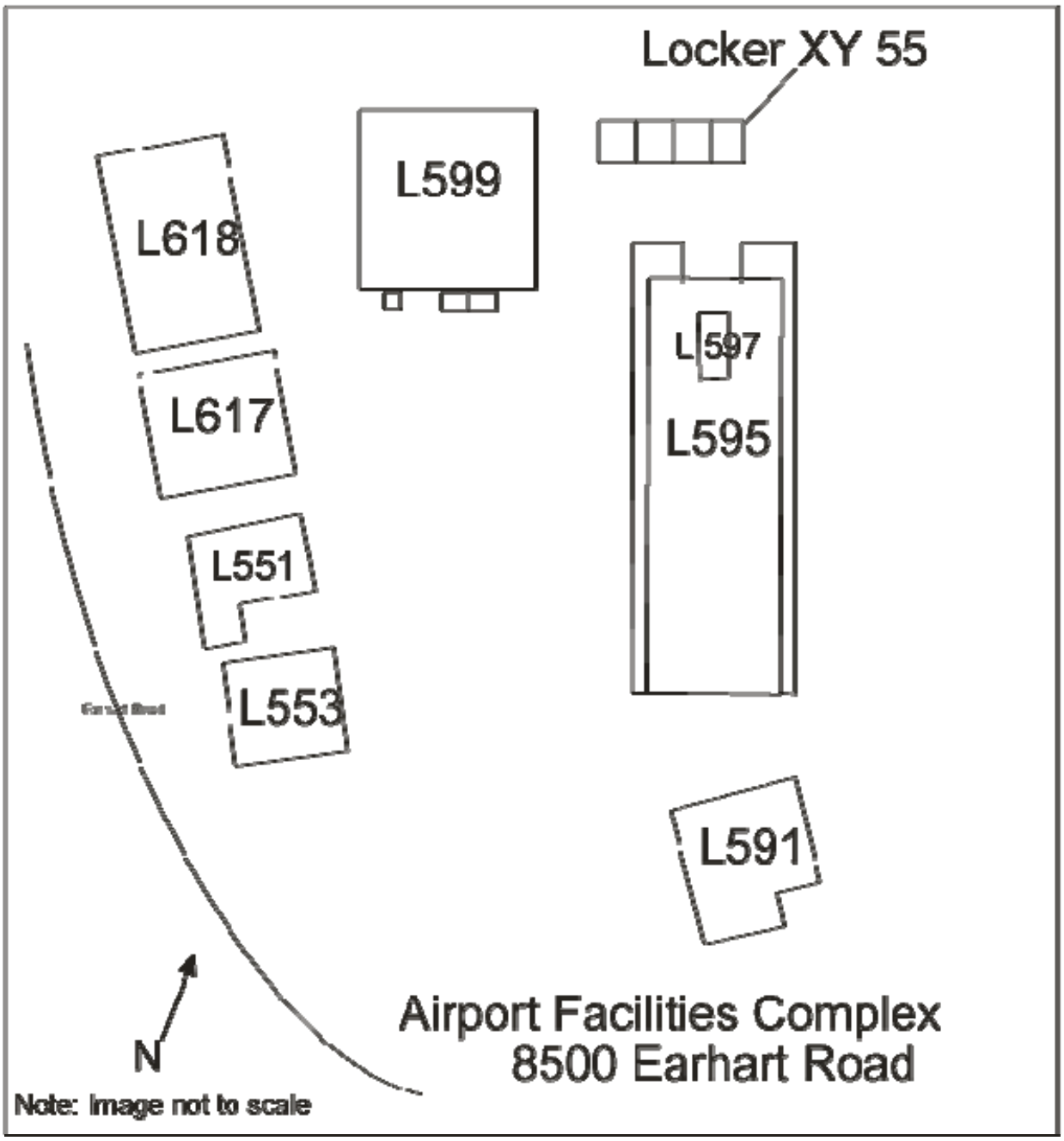
General Procedures

- Ensure that all drums and containers that contain hazardous waste remain in the covered and bermed area.
- Ensure that drums and containers that are stored in this area remain closed at all times.
- Any funnels, siphons, hand pumps or other devices used to transfer waste oil must be closed to prevent the introduction of other materials. If these devices cannot be closed, they must be removed and the container closed.
- Keep area clean and free from unnecessary debris and trash.
- Ensure proper signs and labels are posted in the area and on the containers.
- Ensure Universal Wastes (such as fluorescent lamps) are stored in their original containers, if possible.
- DO NOT tape fluorescent tubes together.
- DO NOT MIX different waste materials into one container.

Waste Storage Area M104 located at M104 Airport Bldg Storage Area

Airport Facilities Complex Hazardous Waste Storage Locker

The Airport Facilities Complex, located at 8500 Earhart Road, is the home of Aviation Maintenance Operations (Figure 3). The area consists of three buildings: L591 (Administration), L595/L597 (Shops/Vehicle Maintenance) and L599 (Warehouse). The entire area around the buildings is paved. One hazardous waste storage locker (XY55) is located north of L595. XY55 is a large self-contained facility divided into four sections.



Location of Locker XY55

Hazardous Waste Locker XY55

HW Locker XY55 is a large storage locker divided into four sections, numbered 1, 2, 3 and 4, described below. The storage locker is a custom design locker built by Haz-Mat Containment Corp, Inc. to meet all Federal, State and local regulations regarding the storage of hazardous waste. The locker is designed to hold hazardous waste drums (55 gal.) and various smaller sized containers. The sump has the capability of holding approximately 1,196 gallons of spilled liquid matter (total capacity). The locker is designed with a 4-hour fire rating with fire resistant lighting and ventilation.

Locker XY55 located at Airport Maintenance Complex

XY55 Section #1 (Painters Storage)

Door #1 is labeled "Paint & Paint Related Waste". This area is used to store paint and paint related hazardous wastes. This bay, along with all the other bays, is designed with floor grating as part of the secondary containment. There are 55-gallon drums clearly labeled for various paint related wastes. There are shelves for the paint cans to dry out to be disposed of at a later time. The following types of waste are commonly found there:

- Paint waste
- Paint-related waste (thinner, stains, lacquer, etc.)

XY55 Section #1 – Painter's Storage

General Procedures

- Ensure that all drums and containers that contain hazardous waste remain in the secured area.

- Ensure that drums and containers that are stored in this area remain closed at all times.
- Any funnels, siphons, hand pumps or other devices used to transfer waste oil must be closed to prevent the introduction of other materials. If these devices cannot be closed, they must be removed and the container closed.
- Keep area clean and free from unnecessary debris and trash.
- Ensure proper signs and labels are posted in the area and on the containers.
- DO NOT MIX different waste materials into one container.

XY55 Section #2

Door #2 is labeled "Oil & Diesel Fuel Waste". The locker holds drums designated for waste motor oil, asphalt/diesel waste, and solid oil absorbent waste. The following types of waste are commonly found there:

XY55 Section #2 – Waste Oil & Oily Debris

- Oily Debris
- Waste Oil
- Diesel waste

General Procedures

- Ensure that all drums and containers that contain hazardous waste remain in the secured area.
- Ensure that drums and containers that are stored in this area remain closed at all times.
- Any funnels, siphons, hand pumps or other devices used to transfer waste oil must be closed to prevent the introduction of other materials. If these devices cannot be closed, they must be removed and the container closed.
- Keep area clean and free from unnecessary debris and trash.
- Ensure proper signs and labels are posted in the area and on the containers.
- DO NOT MIX different materials into one container.

XY55 Section #3

This door is labeled "Universal Waste" and "Spill Kit Inside". The primary UW stored in this here is spray cans. This area also contains spill response supplies. The following are commonly found there:

- Unspent Aerosol Cans
- Spill Response Supplies

XY55 Section #3 – Spill Kit & Aerosol Cans

General Procedures

- Ensure that all drums and containers that contain hazardous waste remain in the secured area.
- Ensure that drums and containers that are stored in this area remain closed at all times.
- Any funnels, siphons, hand pumps or other devices used to transfer waste oil must be closed to prevent the introduction of other materials. If these devices cannot be closed, they must be removed and the container closed.

- Keep area clean and free from unnecessary debris and trash.
- Ensure proper signs and labels are posted in the area and on the containers.
- Follow "Spent & Non-Spent Aerosols" disposal guidelines in Appendix G for both spent and unspent spray cans. Despite the "Empty Aerosol Cans" label on the locker wall here, completely spent aerosol cans should be disposed of as municipal waste while only unspent cans should be placed here in the locker for offsite disposal as UW.
- DO NOT MIX different waste materials into one container.

XY55 Section #4

This door is labeled "Universal Waste- Non Lead Acid Batteries, Gas Discharge Lamps, Lamp Ballasts". This locker has room for lamp ballasts to be stored in steel drums or original containers. There are 5-gallon buckets for the disposal of non-lead acid, alkaline and nickel-cadmium batteries, each labeled accordingly. There is also a wooden box for light tubes. The following types of waste are commonly found there:

- Batteries
- Lamp Ballasts
- Gas Discharge Lamps

XY55 Section #4 – Batteries


XY55 Section #4 – Box for Light Tubes

General Procedures

- Ensure that all drums and containers that contain hazardous waste remain in the secured area.
- Ensure that drums and containers that are stored in this area remain closed at all times.
- Ensure Universal Wastes (such as fluorescent lamps) are stored in their original containers, if possible.
- Keep area clean and free from unnecessary debris and trash.
- Ensure proper signs and UW labels are posted in the area and on the containers.
- DO NOT tape fluorescent tubes together.
- DO NOT mix different waste materials into one container.

Appendix F - Inspection Checklists

APPENDIX F - A

Weekly Hazardous Waste Storage Area Inspection Form

Weekly Hazardous Waste Storage Area Inspection Form

Facility Name: _____

Inspection Date	Inspector's initials	The storage area has a warning sign visible from 25 ft away.	The facility's fencing is intact and the storage locker's doors are locked or access to the locker/storage area is otherwise controlled.	There is secondary containment for all containers.	The storage area is free of spills and leaks.	All containers are closed when not in use.	All containers are in good condition. They are not leaking, corroded, bulging, or severely dented.	Incompatibles are properly segregated.	Each container has a legible HW label. All containers are turned so that the labels are readily visible.	Each HW label has all information required for HW storage (i.e., generator info, accumulation start date, contents composition, physical state, & hazardous properties).	Waste is not stored over allowable time (≤ 180 days for HW and ≤ 365 days for Universal and Excluded Wastes).	All empty containers to be recycled or otherwise disposed of have an "Empty" label with the date emptied. Universal waste containers have the "Universal Waste" labels and they are properly filled out.	Appropriate and functional PPEs, first-aid kit, and spill response equipment are available and easily accessible.	Comments/Corrective Actions Required:

Place a "√" in the box where the condition described immediately above is met. If not, explain in the "Comments/Corrective Actions Required" box. Write "N/A" where the condition described is not applicable. Use one row for each week.

APPENDIX F - B

Monthly & Annual SPCC Inspection Forms

Monthly Inspection Checklist

General Inspection Information:
Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Tanks Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- Upon discovery of water in the primary tank, secondary containment area, interstice, or spill container, remove promptly or take other corrective action. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.
- **In the event of severe weather (heavy rain, wind storms) or maintenance (such as painting) that could affect the operation of critical components (normal and emergency vents, valves), an inspection of these components is required as soon as the equipment is safely accessible after the event.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for water, oily sheen, debris, cracks or fire hazard	☐ Yes* ☐ No ☐ N/A	
1.2 Primary tank	Check for water	☐ Yes* ☐ No	
1.3 Containment drain valves	Operable and in closed position	☐ Yes ☐ No* ☐ N/A	
1.4 Pathways and entry	Clear around concrete stem wall	☐ Yes ☐ No* ☐ N/A	
2.0 Leak Detection			
2.1 Tank	Visible signs of leakage	☐ Yes* ☐ No	

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2.2 Secondary Containment	Visible signs of leakage from tank into secondary containment	☐ Yes* ☐ No	
2.3 Surrounding soil	Visible signs of leakage	☐ Yes* ☐ No ☐ N/A	
2.4 Interstice	Visible signs of leakage	☐ Yes* ☐ No ☐ N/A	
3.0 Tank Equipment			
3.1 Valves	a. Check for leaks	☐ Yes* ☐ No ☐ N/A	
	b. Tank drain valves kept locked	☐ Yes* ☐ No ☐ N/A	
3.2 Spill containment boxes on fill pipe	a. Inspect for debris, residue, and water in the box and remove	☐ Yes* ☐ No ☐ N/A	
	b. Drain valves operable and closed	☐ Yes* ☐ No ☐ N/A	
3.3 Liquid level equipment	a. Both visual and mechanical devices must be inspected for physical damage	☐ Yes ☐ No* ☐ N/A	
	b. Check that the device is easily readable	☐ Yes ☐ No* ☐ N/A	
3.4 Overfill equipment	a. If equipped with a "test" button, activate the audible horn or light to confirm operation. If battery powered, replace battery if needed	☐ Yes ☐ No* ☐ N/A	
	b. If overfill valve is equipped with a mechanical test mechanism, actuate the mechanism to confirm operation	☐ Yes ☐ No* ☐ N/A	

3.5 Piping connections	Check for leaks, corrosion and damage	☐ Yes* ☐ No	
4.0 Tank Attachments and Appurtenances			
4.1 Platform structure	Secure with no sign of severe corrosion or damage?	☐ Yes ☐ No* ☐ N/A	
4.2 Signage	a. Sign listing container contents visible	☐ Yes ☐ No*	
	b. NFPA signs posted	☐ Yes ☐ No*	
	c. Flammable and No Smoking signs posted	☐ Yes ☐ No*	
	d. Emergency shut off sign clearly posted	☐ Yes ☐ No*	
5.0 Truck Loading/Unloading Area			
5.1 Standing water in loading/unloading areas		☐ Yes* ☐ No	
5.2 Tank connections are capped or blank-flanged		☐ Yes ☐ No*	
5.3 Containment walls and bollard protection is in place and undamaged		☐ Yes ☐ No*	
5.4 Catch basins are free of contamination		☐ Yes ☐ No*	
5.5 Drip pans are not overflowing		☐ Yes ☐ No*	
5.6 Transfer hoses are not leaking, cracked, or damaged		☐ Yes ☐ No*	
5.7 Driver warning signs are clearly posted		☐ Yes ☐ No*	
6.0 Spill Response Equipment			
6.1 Contents of spill kit(s) are complete		☐ Yes ☐ No*	
6.2 Fire extinguisher within 20 feet of tank and inspection current		☐ Yes ☐ No*	
6.3 Eyewash accessible and expiration date checked		☐ Yes ☐ No*	
6.4 Emergency telephone numbers posted		☐ Yes ☐ No*	
7.0 Site Security			
7.1 Fence and gates are intact		☐ Yes ☐ No*	

7.2 Gates have working locks	☐ Yes ☐ No*	
7.3 Starter controls for pumps locked when not in use	☐ Yes ☐ No*	
7.4 Lighting is working properly	☐ Yes ☐ No*	
7.5 Security cameras are working properly	☐ Yes ☐ No* ☐ N/A	
8.0 Other Conditions		
8.1 A copy of the SPCC Plan is on site and accessible	☐ Yes ☐ No*	
8.2 Past inspection records are filed and in order	☐ Yes ☐ No*	
8.3 Are there other conditions that should be addressed for continued safe operation or that affect the site spill prevention plan?	☐ Yes* ☐ No	

Additional Comments:

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Annual Inspection Checklist

General Inspection Information:
Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Tanks Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- Remove promptly upon discovery standing water or liquid in the primary tank, secondary containment area, interstice, or spill container. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.
- In order to comply with EPA SPCC (Spill Prevention, Control and Countermeasure) rules, a facility must regularly test liquid level sensing devices to ensure proper operation (40 CFR 112.8(c)(8)(v)).
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a certified inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.
- Complete this checklist on an annual basis supplemental to the owner monthly-performed inspection checklists.
- **Note: If a change has occurred to the tank system or containment that may affect the SPCC plan, the condition should be evaluated against the current plan requirement by a Professional Engineer knowledgeable in SPCC development and implementation.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for: • Holes or cracks in containment wall or floor • Washout • Liner degradation • Corrosion • Leakage • Paint failure • Tank settling	☐ Yes* ☐ No ☐ N/A	
2.0 Tank Foundation and Supports			
2.1 Foundation	Settlement or foundation washout?	☐ Yes* ☐ No	
2.2 Concrete pad or ring wall	Cracking or spalling?	☐ Yes* ☐ No ☐ N/A	

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Item	Task	Status	Comments
2.3 Supports	Check for corrosion, paint failure, etc.	☐ Yes* ☐ No ☐ N/A	
2.4 Water drainage	Water drains away from tank?	☐ Yes ☐ No* ☐ N/A	
2.5 Tank grounding	Strap secured and in good condition?	☐ Yes ☐ No* ☐ N/A	
3.0 Cathodic Protection			
3.1 Galvanic cathodic protection system	Confirm system is functional, includes the wire connections for galvanic systems	☐ Yes ☐ No* ☐ N/A	
3.2 Impressed current system	a. Inspect the operational components (power switch, meters, and alarms)	☐ Yes ☐ No* ☐ N/A	
	b. Record hour meter, ammeter and voltmeter readings	☐ Yes ☐ No* ☐ N/A	
4.0 Tank Shell, Heads, Roof			
4.1 Coating	Check for coating failure	☐ Yes* ☐ No	
4.2 Steel condition	Check for: • Dents • Buckling • Bulging • Corrosion • Cracking	☐ Yes* ☐ No	
4.3 Roof slope	Check for low points and standing water	☐ Yes* ☐ No ☐ N/A	
5.0 Tank Equipment			
5.1 Vents	Verify that components are moving freely and vent passageways are not obstructed for: • Emergency vent covers • Pressure/vacuum vent poppets • Other moving vent components	☐ Yes* ☐ No	
5.2 Valves	Check the condition of all valves for leaks, corrosion and damage	☐ Yes* ☐ No	

Item	Task	Status	Comments
5.2.1 Anti-siphon, check and gate valves	Cycle the valve open and closed and check for proper operation	☐ Yes ☐ No* ☐ N/A	
5.2.2 Pressure regulator valve	Check for proper operation. (Note that there may be small, ¼ inch drain plugs in the bottom of the valve that are not visible by looking from above only)	☐ Yes ☐ No* ☐ N/A	
5.2.3 Expansion relief valve	Check that the valve is in the proper orientation. (Note that fuel must be discharged back to the tank via a separate pipe or tubing)	☐ Yes ☐ No* ☐ N/A	
5.2.4 Solenoid valves	Cycle power to valve to check operation. (Electrical solenoids can be verified by listening to the plunger opening and closing. If no audible confirmation, the valve should be inspected for the presence and operation of the plunger)	☐ Yes ☐ No* ☐ N/A	
5.2.5 Fire and shear valves	a. Manually cycle the valve to ensure components are moving freely and that the valve handle or lever has clearance to allow valve to close completely	☐ Yes ☐ No* ☐ N/A	
	b. Valves must not be wired in open position	☐ Yes ☐ No* ☐ N/A	
	c. Make sure fusible element is in place and correctly positioned	☐ Yes ☐ No* ☐ N/A	
	d. Be sure test ports are sealed with plug after testing is complete and no temporary test fixture or component remains connected to valve	☐ Yes ☐ No* ☐ N/A	

5.3 Interstitial leak detection equipment	Check condition of equipment, including: • The window is clean and clear in sight leak gauges • The wire connections of electronic gauges for tightness and corrosion • Activate the test button, if applicable	☐ Yes ☐ No* ☐ N/A	
5.4 Spill containment boxes on fill pipe	a. If corrosion, damage, or wear has compromised the ability of the unit to perform spill containment functions, replace the unit	☐ Yes* ☐ No ☐ N/A	
	b. Inspect the connections to the AST for tightness, as well as the bolts, nuts, washers for condition and replace if necessary	☐ Yes* ☐ No ☐ N/A	
	c. Drain valves must be operable and closed	☐ Yes* ☐ No ☐ N/A	
5.5 Strainer	a. Check that the strainer is clean and in good condition	☐ Yes ☐ No* ☐ N/A	
	b. Access strainer basket and check cap and gasket seal as well as bolts	☐ Yes ☐ No* ☐ N/A	
5.6 Filter	a. Check that the filter is in good condition and is within the manufacturer's expected service life. Replace, if necessary	☐ Yes ☐ No* ☐ N/A	
	b. Check for leaks and decreased fuel flow	☐ Yes* ☐ No ☐ N/A	
5.7 Flame arrestors	Follow manufacturer's instructions. Check for corrosion and blockage of air passages	☐ Yes* ☐ No ☐ N/A	

5.8 Leak detector for submersible pump systems	Test according to manufacturer's instructions and authority having jurisdiction. Verify leak detectors are suited and properly installed for aboveground use	☐ Yes ☐ No* ☐ N/A	
5.9 Liquid level equipment	a. Has equipment been tested to ensure proper operation?	☐ Yes ☐ No* ☐ N/A	
	b. Does equipment operate as required?	☐ Yes ☐ No* ☐ N/A	
	c. Follow manufacturer's instructions	☐ Yes ☐ No* ☐ N/A	
5.10 Overfill equipment	a. Follow manufacturer's instructions and regulatory requirements for inspection and functionality verification	☐ Yes ☐ No* ☐ N/A	
	b. Confirm device is suited for above ground use by the manufacturer	☐ Yes ☐ No* ☐ N/A	
6.0 Insulated Tanks			
6.1 Insulation	Check condition of insulation for: • Missing sections • Areas of moisture • Mold • Damage	☐ Yes* ☐ No ☐ N/A	
6.2 Insulation cover or jacket	Check for damage that will allow water intrusion	☐ Yes* ☐ No ☐ N/A	
7.0 Miscellaneous			
7.1 Electrical wiring and boxes	Are they in good conditions	☐ Yes ☐ No* ☐ N/A	
7.2 Labels and tags	Ensure that all labels and tags are intact and readable	☐ Yes ☐ No* ☐ N/A	

Additional Comments:

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APPENDIX F - C

Quarterly Safety Inspection Form

Quarterly Safety Inspection Checklist (Performed by the Port Environmental Health & Safety Specialist)

Port of Oakland

Safety Inspection Checklists

Date of Inspection: _____ **Inspected by:** _____

Area Inspected: _____

Reason for Inspection:
- □ Periodic
- □ New substances, processes, procedures or equipment
- □ New or unrecognized hazard

Each work area must be inspected periodically to identify existing and potential safety hazards. Facilities/operations areas must be inspected quarterly (unless the inspection is done by a trained and approved inspector- then the frequency is reduced to semi-annually); office areas must be inspected at least semi-annually (unless the inspection is done by a trained and approved inspector- then the frequency is reduced to annually). This checklist has been developed to make the inspections quick and easy.

The checklist likely includes both questions that are applicable, and some that are not (N/A); for those that are not, simply check the N/A box. (Please confirm that the question is truly N/A if you are not certain!)

When you've completed the inspection and filled out the checklist (including planned corrective actions), send copies to Environment and Safety. Once all corrective actions have been completed, forward a second copy to the same department.

In addition, any safety elements found to be lacking or in need of improvement must be addressed. If a solution is not immediately obvious, or if you need assistance in designing or implementing an improvement, feel free to call H&S for advice and help.

[1] Conforms means that all requirements are met. Does not conform means that all requirements are not met. N/A means that the condition/work practice cannot exist in the area being inspected.
[2] See matrix on the last page of the checklist.

PORT OF OAKLAND
IIPP INSPECTION CHECKLIST

				CORRECTIVE ACTION	
CONDITION/WORK PRACTICE	**CRITERIA**	**FINDING[1]**	**HAZARD SEVERITY[2]**	**WORK NEEDED**	**DATE COMPLETED**
Paper and other combustible material storage.	*Paper storage should be orderly and away from sources of ignition (including welding, heaters, electrical outlets, etc.).*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Exits and aisle spaces.	*All exits and aisle spaces should be clear and unobstructed, and should be clear of temporary storage; if edges or corners of machines or equipment protrude into aisle ways, they must be moved or covered to prevent inury.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Exit signs.	*All exit signs should be visible and properly illuminated; wherr possible, exit signs should be tested to verify proper operation.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Exit/emergency lighting.	*Where possible, exit/emergency lighting should be tested to verify proper operation.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Work and walking surfaces.	*All floors, walls, stairways, ramps, doors, etc. should be kept in good working condition, and free of spills or materials that create slipping or tripping hazards. (Also look for uneven surfaces, equipment pads, etc.)*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Fire extinguishers.	*Fire extinguishers should be mounted and fully charged; access to fire extinguishers must be unblocked.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		

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[2] See matrix on the last page of the checklist.

				CORRECTIVE ACTION	
CONDITION/WORK PRACTICE	**CRITERIA**	**FINDING[1]**	**HAZARD SEVERITY[2]**	**WORK NEEDED**	**DATE COMPLETED**
Fire sprinklers.	*Materials are not to be stored within 18 inches of any sprinkler heads.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Emergency eyewashes and showers.	*Eye washes and safety showers must be provided wherever corrosive or flammable materials are handled; emergency showers and eyewashes must be tested to ensure proper operation.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
First aid supplies.	*All first aid kits should contain all required supplies, as indicated on the contents list or established in the Department program.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Small electrical devices.	*All small electrical devices (coffee pots, space heaters, water pots) must be equipped with safety shut-offs and must be plugged into a properly rated outlet (NOT into extension cords, power strips, etc.)*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Electrical cords.	*Electrical cords should have proper grounding (3-prong), and should be free of cuts and excessive stretching. Electrical cords are not to be repaired with electrical tape.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Temporary wiring.	*Extension cords and other temporary wiring is not to be used in place of permanent wiring. Fixed machines must be supplied with permanent wiring.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Power strips.	*Power strips must be equipped with a fuse or breaker. Power strips are not to be used to create additional outlets, and should be used only for equipment requiring over-current protection.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		

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[2] See matrix on the last page of the checklist.

				CORRECTIVE ACTION	
CONDITION/WORK PRACTICE	**CRITERIA**	**FINDING[1]**	**HAZARD SEVERITY[2]**	**WORK NEEDED**	**DATE COMPLETED**
Electrical conductors.	*All switch boxes, receptacles, fixtures, wiring, fuse boxes, junction boxes, etc. must be free of physical damage, and must be closed/sealed. Panel doors must be closed. No exposed conductors are allowable.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Equipment marking.	*All disconnect switches, circuit breakers, motor control circuits, etc. must be labeled to indicate their use or equipment served.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Electrical rooms.	*No flammable or combustible materials (including paper and cardboard) are to be stored or left in electrical equipment or mechanical rooms.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Electrical panel/ controller access.	*Adequate access (3 feet minimum) is required to all electrical panels, controllers, and machine shut-off switches.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Circuit breaker slots.	*All circuit breaker slots are to be sealed with either breakers, or blank panels.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Hazardous material labeling.	*All containers (vats, bottles, cans, tanks) must be labeled with product identity and hazard warnings related to health and physical hazards.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		

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[2] See matrix on the last page of the checklist.

				CORRECTIVE ACTION	
CONDITION/WORK PRACTICE	**CRITERIA**	**FINDING[1]**	**HAZARD SEVERITY[2]**	**WORK NEEDED**	**DATE COMPLETED**
Chemical storage.	*Hazardous chemicals must be stored properly; incompatible materials (acids and caustics; flammables and oxidizers) must be stored separately. Incompatible gases must be stored separately. (Note: Oxygen and acetylene cannot be stored together on a welding cart unless properly manifolded for use.)*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Flammable storage.	*Flammable material must be stored in flammable storage cabinets when not in use; cabinet doors must remain closed.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Waste fluorescent bulbs.	*Waste bulbs must be properly stored (boxed) and labeled, and transferred to the storage area.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Use, storage, and maintenance.	*All hand and power tools must be used as designed. All must be properly stored and maintained when not in use.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Personal protective equipment (PPE).	*Appropriate PPE including gloves, safety glasses or goggles, and hearing protection must be provided and used as necessary.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Grinder guarding.	*Workrests on bench grinders must be level, and adjusted to within 1/8 inches of the abrasive wheel; throat guards must be adjusted to within ¼ inches of the abrasive wheel.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		

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[2] See matrix on the last page of the checklist.

				CORRECTIVE ACTION	
CONDITION/WORK PRACTICE	**CRITERIA**	**FINDING[1]**	**HAZARD SEVERITY[2]**	**WORK NEEDED**	**DATE COMPLETED**
Band saw guarding.	*Guards on band saw blades must enclose the entire blade, and must be adjusted to the top of the work stock when operating.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Guarding.	*All moving parts of machinery and points of operation must be guarded to prevent contact.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Cords and hoses.	*All electrical cords, pneumatic and hydraulic hoses must be maintained in good condition, or must be disposed of.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Ladders.	*All ladders must be maintained in good condition; joints between steps and side rails must be tight, all hardware and fittings must be securely attached, and moveable parts must operate freely without binding or undue play.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Gas cylinders storage.	*All gas cylinders must be securely chained in an upright position; valve covers are to be in place when they are not in use; all gas cylinders must be legibly labeled.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Fire protection (applicable to designated hot work areas)	*Fire extinguishing equipment must available; no combustibles in designated areas; hot-work permits required in non-designated areas.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Manifolding.	*Oxygen and acetylene systems must have the gases turned off and the hoses drained of pressure when not in use.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		

[1] Conforms means that all requirements are met. Does not conform means that all requirements are not met. N/A means that the condition/work practice cannot exist in the area being inspected.
[2] See matrix on the last page of the checklist.

				CORRECTIVE ACTION	
CONDITION/WORK PRACTICE	**CRITERIA**	**FINDING[1]**	**HAZARD SEVERITY[2]**	**WORK NEEDED**	**DATE COMPLETED**
PPE storage.	*All PPE, including respirators must be properly cleaned and stored when not in use.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Cranes.	*All cranes are required to be inspected daily before use.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Alloy chain slings.	*Alloy steel chain slings must have a permanently affixed tag, and must be inspected daily before use.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		
Nylon web slings.	*Nylon slings must be inspected daily before use. Damaged slings must be removed from service and destroyed, or marked as out of service for lifting if it is to be used for chafing.*	□ Conforms □ Does not conform □ N/A	□ Non-serious □ Serious □ Dangerous □ Imminent		

---

[1] Conforms means that all requirements are met. Does not conform means that all requirements are not met. N/A means that the condition/work practice cannot exist in the area being inspected.
[2] See matrix on the last page of the checklist.

Hazard Severity Matrix (Use to Determine Hazard Severity)

SEVERITY OF CONSEQUENCES	PROBABILITY/FREQUENCY OF OCCURRENCE/EXPOSURE			
	IMPOSSIBLE[1]	OCCASIONAL[2]	FREQUENT[3]	ON-GOING[4]
Death or Injuries to Multiple Parties	Non-Serious	Imminent	Imminent	Imminent
Severe Injury (Major Fractures, Severe Electrical Shock, Sutures, Damage to the Eyes, etc.)	Non-Serious	Dangerous	Imminent	Imminent
Minor Injury (First Aid)	Non-Serious	Serious	Dangerous	Dangerous
Regulatory Issue (No actual safety exposure; predominantly regulatory)	Non-Serious	Non-Serious	Serious	Serious

[1] There is no possibility of employee exposure or occurrence of an incident related to this issue/condition.
[2] If this issue/condition remains, there is a possibility that an exposure or occurrence of an incident will occur on an occasional (less than once per month) basis.

[3] If this issue/condition remains, there is a possibility that an exposure or occurrence of an incident will occur on a frequent (weekly to monthly) basis.
[4] If this issue/condition remains, there is a possibility that an exposure or occurrence of an incident will occur on an on-going (daily to weekly) basis.
(1) Conforms means that all requirements are met. Does not conform means that all requirements are not met. N/A means that the condition/work practice cannot exist in the area being inspected.
(2) See matrix on the last page of the checklist.

Appendix G - Routinely Generated Waste Procedures

Routinely Generated Waste Procedures

Purpose

To promote environmental responsibility and assist Port personnel in maintaining the facility in compliance with environmental regulations

Contents

The requirements and instructions outlined in these procedures represent Port guidelines for the proper management of routinely generated wastes.

Definition

Routinely generated wastes are those wastes that are produced on a regular basis and include hazardous as well as non-hazardous wastes.

Wastes Procedures

- Asbestos Waste
- Biohazardous Wastes
- Diesel Fuel Waste
- Electronic Waste
- Empty Containers (> 5 gallons)
- Flammable Paint Related Waste
- Gasoline Waste (filters and liquid)
- Lead Acid Batteries
- Solid Oil Debris Waste
- Spent & Non-Spent Aerosols
- Universal Wastes
- Used Oil Filters
- Used Waste Oil
- Water-Based Paint Waste

Additional Information

Environmental Programs & Planning – (510) 627-1185

Asbestos Waste

Purpose	Contents
To provide general guidelines for use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper handling of asbestos waste.

Description	Procedures	Comments
This may include but not limited to the following items: • Transite Pipe • Thermal System Insulation	1. Port of Oakland employees generally will not perform any work that disturbs asbestos or generates asbestos wastes with the exception of transite pipe/conduit abatement. 2. Transite waste needs to be disposed of within 90 days. 3. Transite waste needs to be double-wrapped with 6 mil plastic prior to transport for offsite disposal. 4. Transite waste should be temporarily stored at the job site but, to the extent feasible, kept out of public sight. 5. Contact EP&P (Eric Englehart, Angela Clapp, or Tracy Fidell) to arrange for waste disposal.	All employees engaged in transite pipe/conduit management must have received a minimum four hours of training specific to transite removal, PPE, and dust controls. Consult Appendix L for required transite pipe/conduit removal and waste management practices. **Port staff should only employ manual methods of transite pipe/conduit abatement.** EP&P strongly advises using an outside contractor such as Sterling for transite abatement involving mechanical means.

Biohazardous Wastes

Purpose	Contents
To provide general guidelines for use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of Biohazardous waste.

Description	Procedures	Comments
This may include, but is not limited to the following items: • Hypodermic Needles • Sanitary Napkins • Blood soiled waste debris • Blood/body fluid cleanup materials • Blood/body fluid contaminated sharps, such as glass. • Or other materials that contain or are contaminated with blood and/or body fluids.	1. Ensure that you have the appropriate receptacles to place the contaminated items into, such as sharps containers, biohazard bags, etc. 2. If sharps are found, place them into an appropriate sharps container, seal the container and place into the properly marked drum/can for future removal. 3. Ensure that the drum/can is securely closed after placing biohazard waste inside.	Because of the possible health issue involved with cleanup and removal of biohazardous materials, ensure that every precaution is followed. Ensure that you are wearing the proper personal protection for the task. Ensure that you have the appropriate utensils for pickup and removal of contaminated items. Utensils include absorbents, tongs (for sharps), scoops, sweeps, etc. For detailed description on cleaning surfaces contaminated with blood and body fluids refer to the Port Blood Borne Pathogen Program.

Diesel Fuel Waste

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of diesel fuel waste.

Description	Procedures	Comments
Diesel fuel is used in various forms throughout the Port. These instructions are intended for use for waste that is generated from equipment/vehicle maintenance and/or asphalt operation.	1. Ensure that proper size and type of container for collection is used. 2. Before transfer of material begins, ensure all sources of ignition are extinguished. 3. Pour material in the container slowly to prevent splashing. 4. Do not spill container while transferring waste. If materials are spilled cleanup immediately. 5. Once transfer is complete ensure that the lids/cover are securely in place. 6. For fuel filters, ensure that any liquid fuel is poured out completely before placing filter into the designated drum.	Once a container is designated for a specific waste, ensure that no other type waste is placed inside. Label this drum for Used Diesel Fuel Waste. **DO NOT** place anything but Used Diesel Fuel Waste in this drum. Drained used fuel filters are allowed to be stored in the same container as drained used oil filters and be onsite for up to 365 days prior to offsite recycling as scrap metal. No other materials or liquids are allowed. A proper label (e.g., "Used Fuel Filters") needs to be affixed to the container.

Electronic Waste

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities.	Instructions for the proper management of electronic waste (obsolete computers, televisions, copiers, fax machines, printers, palm pilots, cell phones, etc.)

Description	Procedures	Comments
Electronic waste is commonly found in an office environment. In addition, Port employees may come across abandoned electronic waste that require removal. Electronic waste is considered Universal Waste. Electronic waste may contain high concentrations of lead, mercury, barium and cadmium. These metals can cause health problems if released into the air, water and/or soil.	Unwanted electronic devices should be recycled. Organizations that recover unwanted electronics can be found at: http://www.calrecycle.ca.gov/Electronics/Collection/ Closest facilities (charge a fee): **Davis St. Transfer Station** – 2615 Davis Street, San Leandro. M-F 7:00 am – 5:00 pm S-S 8:00 am – 4:00 pm **Universal Waste Management** – 721 31st Avenue, Oakland. Mon-Sun 8:00 am – 4:00 pm The Port has also contracted Patriot Environmental Services to perform milk runs to pick up hazardous wastes, including UWs, from Port facilities. Contact Eric Englehart at (510) 627-1187 for additional pick-ups or special arrangements.	Electronic waste should be placed at the designated locations within the Port's HW storage lockers. They are allowed to be stored as waste for up to one year. Patriot performs milk runs to the Port's facilities typically every 90 days for the regular HW. However, they pick up UW less frequently. UW labels should therefore be used for electronic waste to indicate the accumulation start date.

Empty Containers (> 5 gallons in capacity)

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of empty hazardous material containers greater than 5 gallons in size.

Description	Procedures	Comments
Any facility or operation that uses a hazardous material in containers greater than 5 gallons must follow these procedures. Some examples include, but are not limited to, cooling tower chemicals, paint thinner drums, traffic paint drums, or any other type of hazardous product that is generally distributed from a container larger than 5 gallons.	1. Ensure that a container is completely empty, meaning no material can be poured or drained from the container regardless of the orientation of the container. 2. An "Empty" container label must be affixed to the empty container with the date the container became empty. 3. All empty containers must be closed while in storage (up to one year). (Latex paint drums can be left open, while inside the HW locker, to dry the residual paint. Once dried, they can be stored outside, adjacent to the locker, with the lids/bungs closed prior to removal for offsite recycling.)	Empty containers are exempt from HW regulations. They should <u>not</u> be crushed or cut. Empty drums must be stored in or adjacent to the HW storage area. Look under "Spent Aerosols" and "Used Oil Filters" for management practices for empty containers that are <u>5 gallons or less in capacity</u>.

Flammable Paint Related Waste

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of oil based/flammable paint waste.

Description	Procedures	Comments
This procedure is for the disposal into liquid oil-based paints and solvents drums of flammable paint related wastes such as: • Oil based paints • Lacquers • Thinners • Alcohols • Stains	1. Ensure that all ignition sources are extinguished and ventilation is adequately provided. 2. Remove drum lid/cap and install proper funnel. 3. Pour or scrape as much of the contents of the paint container into the funnel /drum. 4. Do not spill contents while transferring waste. If materials are spilled cleanup immediately. 5. Once contents are poured or scraped from the container, place the container in a safe place to dry completely. Once container is dry, place in the regular municipal waste receptacle. Any oil-based paint cans thrown into the municipal waste must contain 10% or less paint solids by volume and must be completely dry.	This container is for Flammable Paint Related Waste ONLY. **DO NOT** place any other type of paint waste in this drum. Cans with dried oil-based paint that exceeds 10% by volume left should be deposited in the "Paint Solids" drum where available. Otherwise, the lid should be replaced on each can and a HW label should be applied. These cans should be placed on the HW locker shelves to await offsite disposal at a permitted facility.

Gasoline Waste

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of gasoline waste.

Description	Procedures	Comments
Gasoline waste could be liquid waste or fuel filters that are accumulated from the vehicle maintenance operations and other operations where machinery may be involved.	1. Ensure that proper size and type of container for collection is used. 2. Before transfer of material begins, ensure all sources of ignition are extinguished. 3. Ensure that the waste container is properly grounded before pouring liquid fuel waste into drum 4. Pour material in the container slowly to prevent splashing. 5. Do not spill container while transferring waste. If materials are spilled cleanup immediately. 6. Once transfer is complete ensure that the lids/cover are securely in place. 7. For fuel filters, ensure that any liquid fuel is poured out completely before placing filter into the designated drum.	The drum designated for used gasoline fuel shall not have any other types of fuel waste (e.g., diesel) placed in it. Drained used fuel filters are allowed to be stored in the same container as drained used oil filters and be onsite for up to 365 days prior to offsite recycling as scrap metal. No other materials or liquids are allowed. A proper label (e.g., "Used Fuel Filters") needs to be affixed to the container.

Lead Acid Batteries

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of lead acid batteries.

Description	Procedures	Comments
This waste is commonly found in the vehicle maintenance garage, however, on occasion Port employees come across abandoned batteries that require removal.	1. Place batteries within the designated sections of the HW storage lockers. 2. If leaking, place in a corrosion-resistant container.	Spent lead acid batteries are considered Excluded Waste and should be recycled or exchanged for operable batteries. **Do not mix with other types of batteries.**

Solid Oil Debris Waste

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of solid oil debris waste, including absorbents.

Description	Procedures	Comments
This could include oily rags, debris, absorbent material or any other solid material that has been contaminated with oil product.	1. Place waste in drums/containers marked for "Oily Debris" or "Solid Oil Absorbents." 2. Close the container after waste transfer.	Once a container is designated for a specific waste, ensure that no other type waste is placed inside.

Spent & Non-Spent Aerosols

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of Spent Aerosol cans.

Description	Procedures	Comments
This may include, but are not limited to the following types of materials: • Spray Paint Cans • Spray Adhesives • Solvent Cans • Spray Cleaners • Spray Lubricants • Or other similar containers that use a propellant to broadcast the product inside. Malfunctioned spray cans that contain materials are also included in this description.	1. Completely spent aerosol cans (i.e., emptied of contents and propellant to the maximum extent practical under normal use) should be disposed of as municipal waste. 2. Non-spent cans should be treated as Universal Waste and stored in containers placed on an impervious surface. (Propane cylinder cans, MAPP gas cans, pesticides cans, and hissing cans shall NOT be included as UW.) 3. Containers holding non-spent aerosol cans must be closed at the end of each workday. 4. Accumulate non-spent aerosol cans in a well-ventilated area to avoid forming explosive atmospheres.	Completely empty cans by **using** them. Do not release contents intentionally into the atmosphere, or puncture, drain, or crush cans in order to declare them "spent" as that would constitute "processing" and would require CUPA notification and management of the resultant waste as HW. Affix UW labels to containers with non-spent cans. There are no container labeling requirements for cans to be managed as general refuse. Aerosol cans, empty or not, that previously held acutely (P-Listed) or extremely hazardous waste technically need to be disposed of as HW. However, since that is very rare, it is acceptable to manage all empty cans as municipal waste and non-spent ones as UW, unless specific acutely/extremely hazardous wastes are known to have been present.

Universal Wastes

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of Universal Wastes.

Description	Procedures	Comments
• Hazardous waste lamps: fluorescent lamps, mercury vapor lamps, sodium vapor lamps, high intensity discharge lamps or other lamps that exhibit a hazardous characteristic, including lamp ballasts. • Hazardous waste batteries: rechargeable nickel cadmium batteries, silver button batteries, mercury batteries, small sealed lead acid batteries, lithium ion batteries, alkaline and carbon zinc batteries and any other batteries that exhibit a hazardous characteristic. • Mercury-containing devices (e.g., mercury switches, thermostats that contain mercury)	1. Ensure that the proper containers are used to store the type of waste. 2. Place hazardous waste lamps into a container/package so they will not break. **For long fluorescent tubes do not tape them together but place then in the original or similar package.** 3. Place hazardous waste batteries into the proper container. **If possible, do not mix the different types of batteries especially if they are leaking. Lithium batteries should be placed in a separate container.** 4. Place the hazardous waste thermostats into a proper container**. Do not break the thermostat.**	This container is for Universal Waste ONLY. **DO NOT** place anything but Universal Waste in this container. Universal Waste can be accumulated for up to one year but should be kept separate from HW. Broken lamps must be cleaned up immediately with the waste placed in a closed container. Broken lamps that cannot be recycled will need to be managed as hazardous waste with a HW label affixed to the container. Incandescent lamps are non-hazardous and not classified as UW. Automotive lead-acid batteries should be handled differently. Refer to "Lead Acid Batteries" in this appendix.

Used Oil Filters

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of used/waste oil filters in a drum.

Description	Procedures	Comments
Waste oil filters are generated in various Port operations. Primarily they are found in vehicle maintenance facilities, however this waste can be also found at Airport Terminal Services, and some Harbor Utilities maintenance operations.	1. Remove the filter from the machine and prevent oil spills. 2. Use a proper container to transport the filter to the disposal area. <u>Oil Filters (Crushed)</u> 1. After removing the filter from the machine, place the filter on filter crusher and follow the directions to safely crush the filter. 2. Immediately after the filter is crushed, place the filter in a drum with a "Drained Used Oil Filters" label. <u>Oil Filters (Non-Crushed)</u> 1. After removing the filter from the machine, place the filter on a funnel or tank screen to allow as much of the oil to drain out, into the tank or drum. 2. Immediately after draining, place the filter in a drum with a "Drained Used Oil Filters" label.	Follow safety guidelines for proper crushing of filters. **DO NOT** place anything but drained (i.e., no free-flowing liquids) used oil filters in this drum. Drained used oil filters are considered Excluded Waste and can be stored for up to 365 days.

Used Waste Oil (Tank)

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of used/waste oil stored in a tank.

Description	Procedures	Comments
Waste Oil that is generated from various types of equipment and vehicles. *Generally this is the duty of the vehicle maintenance unit.*	1. Ensure that proper size and type of container for collection is used. 2. Do not spill container while accumulating or transferring waste. If materials are spilled, cleanup immediately. 3. Transfer waste material into the designated waste tank. 4. Do not leave collection pans, filters, etc., on the top of the tank, or leave the tank lid open. 5. Ensure lid on tank is closed when transfer is finished.	Waste oil tanks are provided for recycling of oil waste from Port equipment at both of the vehicle maintenance shops. Waste Oil tanks are provided to Marina tenants for the disposal of waste oil generated from tenant maintenance operations. Waste oil tanks are emptied by a Port contractor.

Used Waste Oil (Drum)

Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at the facilities	Instructions for the proper management of used/waste oil stored in a drum.

Description	Procedures	Comments
Waste Oil that is generated from various types of equipment and vehicles. These drums should be marked specifically for "Used Motor Oil".	1. Ensure that proper size and type of container for collection is used. 2. Ensure that there is some sort of funnel attached to the drum before transfer of material begins. 3. Do not spill container while transferring waste. If materials are spilled, cleanup immediately. 4. Do not leave collection pans, filers, etc., in the funnels, or leave the drum lid open. 5. After transfer of material, ensure that the lid/cover is replaced (even for the funnel).	This drum is for Used Motor ONLY. **DO NOT** place anything but waste motor oil in this drum.

Water Based Paint Waste

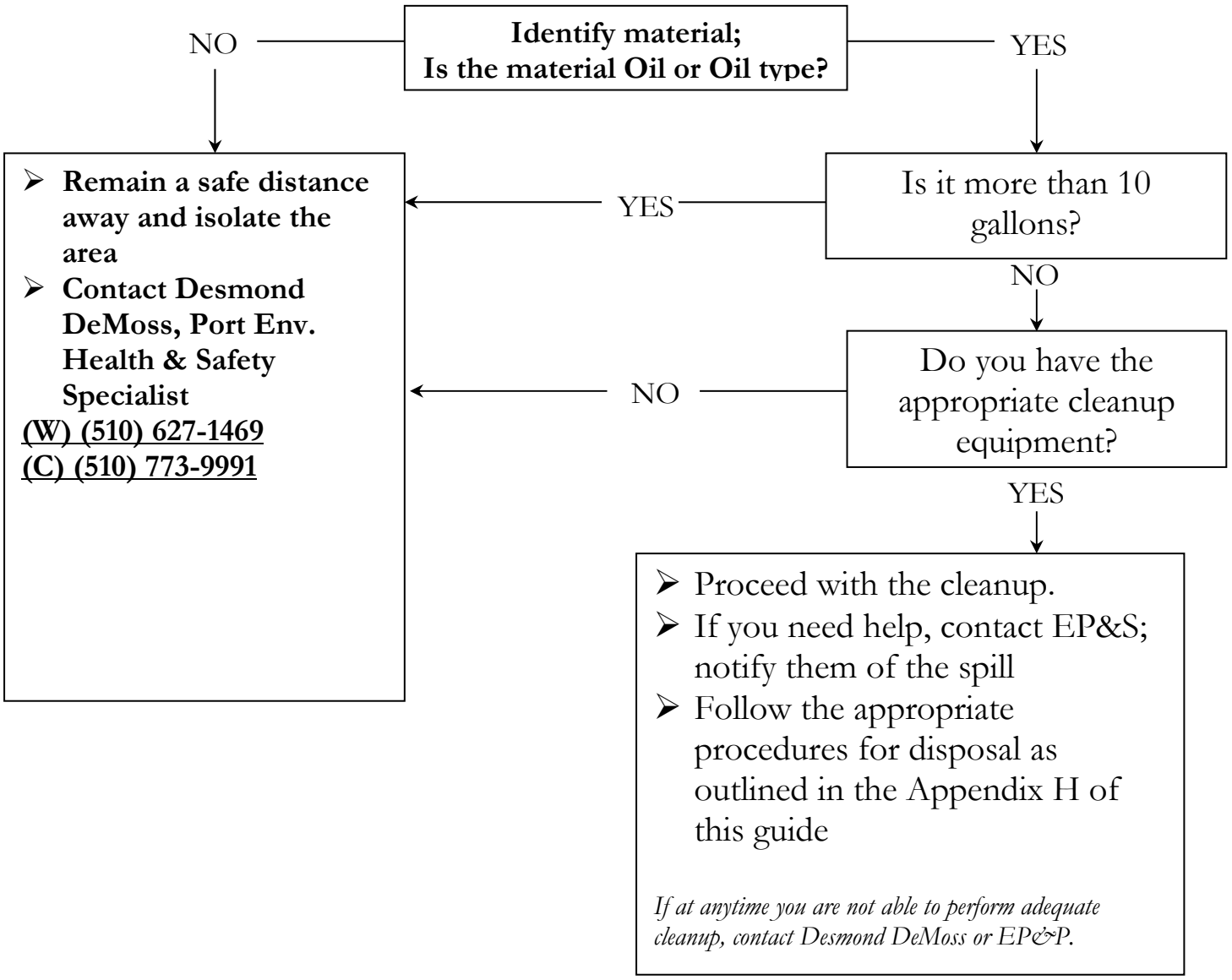
Purpose	Contents
To provide general guidelines for the use by Port of Oakland personnel to manage routinely generated waste at maintenance facilities	Instructions for the proper management of latex/water based paint waste.

Description	Procedures	Comments
This procedure is for the disposal of water based type paints that can be poured or scraped from the container.	1. Remove drum lid and install proper funnel. 2. Pour or scrape as much of the contents of the paint container into the funnel /drum. 3. Do not spill contents while transferring waste. If materials are spilled, cleanup immediately. 4. Once contents are poured or scraped from the container, place the container in a safe dry place and allow it to dry completely. Once container (≤ 5 gallons in capacity) is dry, place into the regular municipal waste receptacle.	This paint waste container is for Used Water Based Paint Waste ONLY. **DO NOT** place any other type of paint waste in this drum. There are no container labeling requirements for empty containers ≤ 5 gallons in capacity that are destined for garbage.

Appendix H - Small Oil Spill Response Procedures

Small Oil Spill Response Procedures

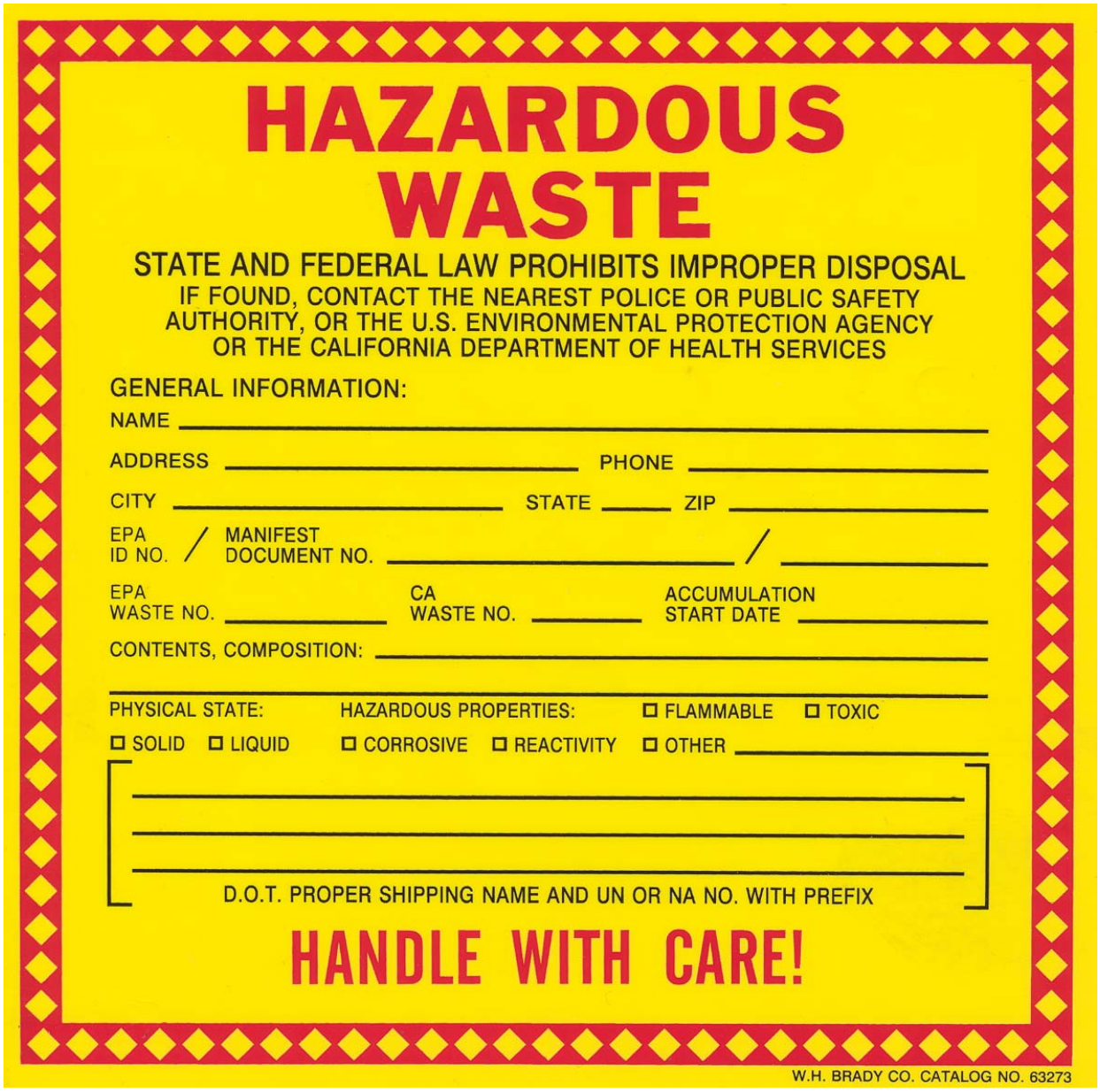
The following flowchart is for the response of a small manageable oil spill that may occur in the hazardous waste storage area or other locations where oil is stored and used.



Appendix I - Examples of Various Labels and Shipping Documents

Standard Hazardous Waste Label

This label is required to be posted on all hazardous waste drums and containers.



Standard Hazardous Waste Label (Example for Liquid Waste Oil)

Contact EP&P for the appropriate information that is entered for the type of waste that is being disposed.

HAZARDOUS WASTE

STATE & FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL.

GENERATOR INFORMATION:

NAME PORT OF OAKLAND

ADDRESS 530 WATER ST. PHONE (510)627-1134

CITY OAKLAND STATE CA ZIP 94607

EPA ID NO. / MANIFEST DOCUMENT NO. CAL000213428 /

EPA WASTE NO. NIR CA WASTE NO. 221 ACCUMULATION START DATE 1/28/2003

CONTENTS, COMPOSITION: OIL

PHYSICAL STATE: ☐ SOLID ☒ LIQUID

HAZARDOUS PROPERTIES: ☐ FLAMMABLE ☐ TOXIC ☐ CORROSIVE ☐ REACTIVITY ☒ OTHER CA Haz

NON-RCRA HAZARDOUS WASTE, LIQUID (OIL)

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

HANDLE WITH CARE!

CONTAINS HAZARDOUS OR TOXIC WASTES

CP-3

PRINTED BY: MESA LABEL EXPRESS, INC. SAN DIEGO, CA (858) 693-4987 FAX: (858) 693-1458

Standard Hazardous Waste Label (Example for Solid Oily Debris)

Contact EP&P for the appropriate information that is entered for the type of waste that is being disposed.

HAZARDOUS WASTE

STATE & FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL.

GENERATOR INFORMATION:

NAME PORT OF OAKLAND

ADDRESS 530 WATER ST. PHONE (510)627-1134

CITY OAKLAND STATE CA ZIP 94607

EPA ID NO. / MANIFEST DOCUMENT NO. CAL000213428 /

EPA WASTE NO. NIA CA WASTE NO. 223 ACCUMULATION START DATE 1/28/2003

CONTENTS, COMPOSITION: OILY DEBRIS

PHYSICAL STATE: [X] SOLID [ ] LIQUID

HAZARDOUS PROPERTIES: [ ] FLAMMABLE [ ] TOXIC [ ] CORROSIVE [ ] REACTIVITY [X] OTHER CA Haz

NON-RCRA HAZARDOUS WASTE, SOLID (OILY DEBRIS)

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

HANDLE WITH CARE!

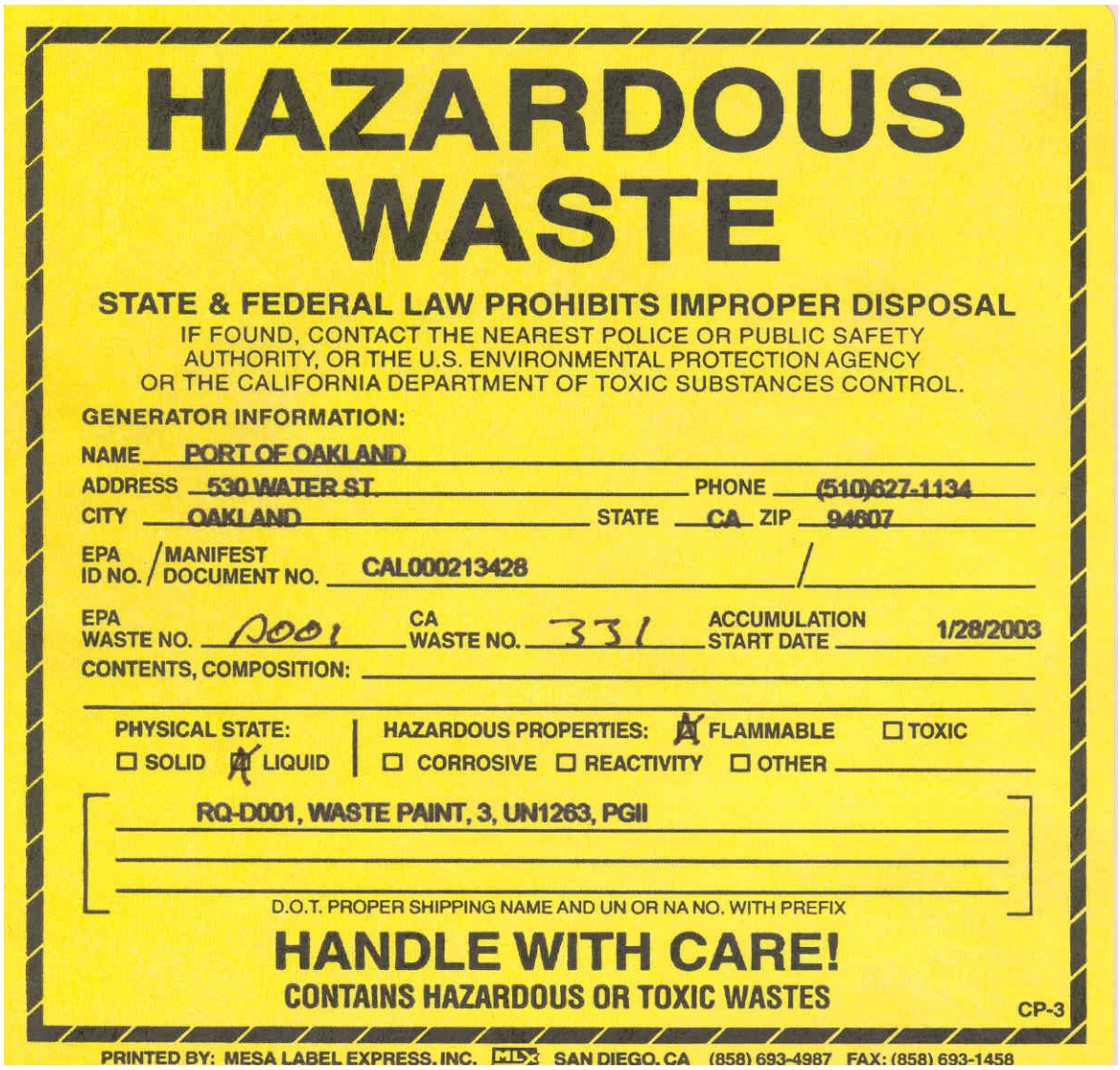
CONTAINS HAZARDOUS OR TOXIC WASTES

CP-3

PRINTED BY: MESA LABEL EXPRESS, INC. SAN DIEGO, CA (858) 693-4987 FAX: (858) 693-1458

Standard Hazardous Waste Label (Example for Waste Paint)

Contact EP&P for the appropriate information that is entered for the type of waste that is being disposed.



HAZARDOUS WASTE

STATE & FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL.

GENERATOR INFORMATION:

NAME PORT OF OAKLAND

ADDRESS 530 WATER ST. PHONE (510)627-1134

CITY OAKLAND STATE CA ZIP 94607

EPA ID NO. / MANIFEST DOCUMENT NO. CAL000213428 /

EPA WASTE NO. D001 CA WASTE NO. 331 ACCUMULATION START DATE 1/28/2003

CONTENTS, COMPOSITION:

PHYSICAL STATE: ☐ SOLID ☒ LIQUID

HAZARDOUS PROPERTIES: ☒ FLAMMABLE ☐ TOXIC ☐ CORROSIVE ☐ REACTIVITY ☐ OTHER

RQ-D001, WASTE PAINT, 3, UN1263, PGII

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

HANDLE WITH CARE!

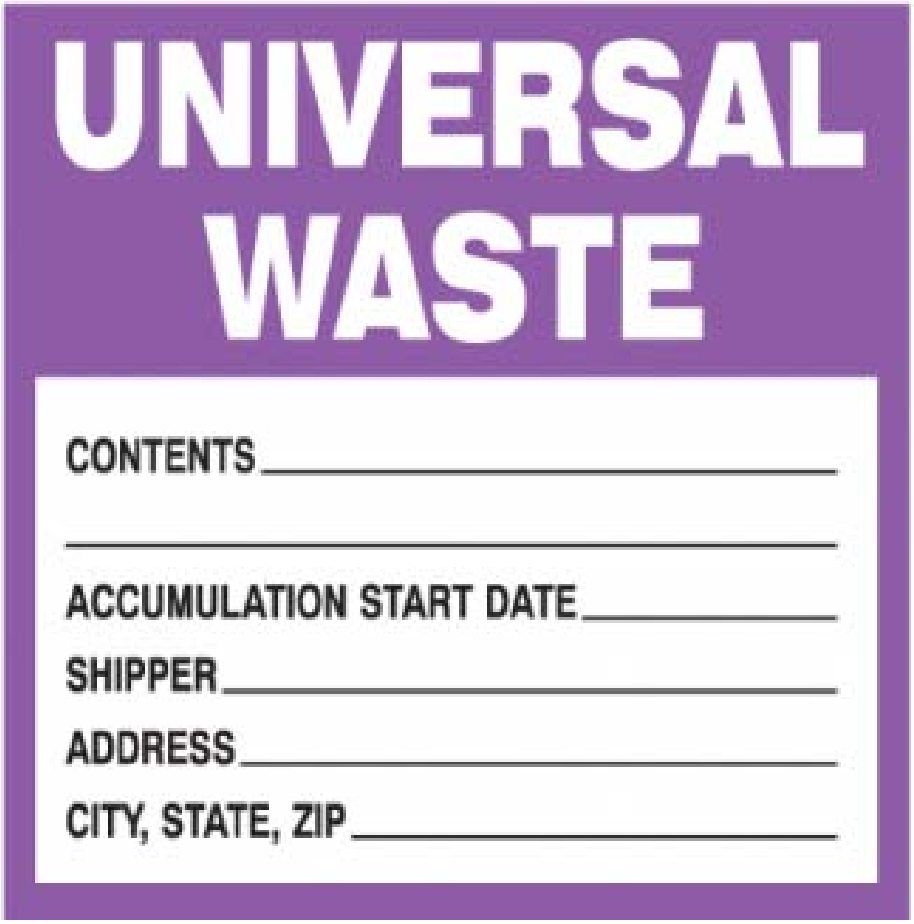
CONTAINS HAZARDOUS OR TOXIC WASTES

CP-3

PRINTED BY: MESA LABEL EXPRESS, INC. SAN DIEGO, CA (858) 693-4987 FAX: (858) 693-1458

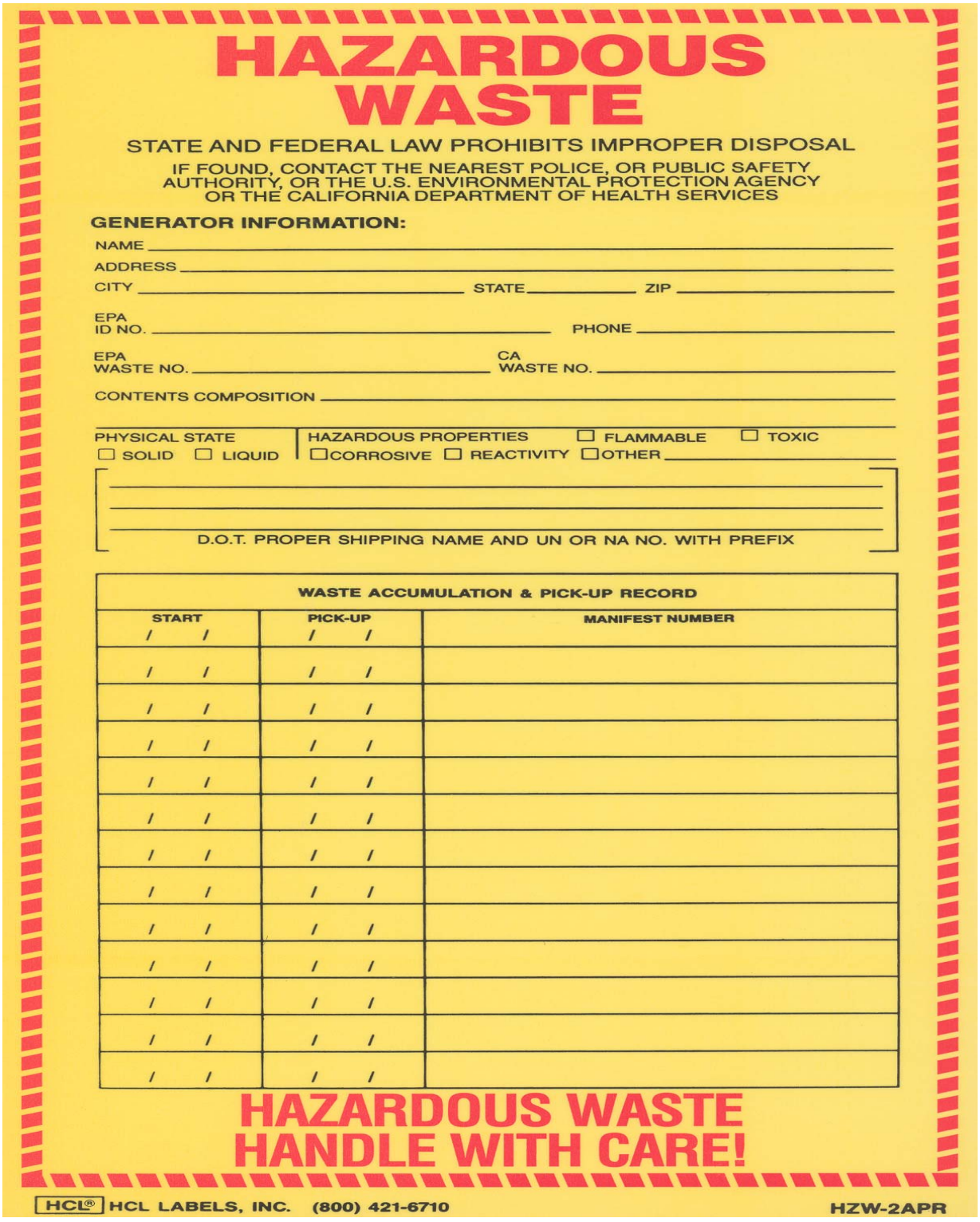
Universal Waste Label

Contact EP&P for the appropriate information that is entered for the type of waste that is being disposed.



Standard Hazardous Waste Label

This label is used for tanks and other stationary storage containers.



HAZARDOUS WASTE

STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE, OR PUBLIC SAFETY AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES

GENERATOR INFORMATION:

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

EPA ID NO. _____ PHONE _____

EPA WASTE NO. _____ CA WASTE NO. _____

CONTENTS COMPOSITION _____

PHYSICAL STATE ☐ SOLID ☐ LIQUID

HAZARDOUS PROPERTIES ☐ FLAMMABLE ☐ TOXIC ☐ CORROSIVE ☐ REACTIVITY ☐ OTHER _____

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

WASTE ACCUMULATION & PICK-UP RECORD

START / /	PICK-UP / /	MANIFEST NUMBER
/ /	/ /	
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HAZARDOUS WASTE
HANDLE WITH CARE!

HCL® HCL LABELS, INC. (800) 421-6710 HZW-2APR

Standard Non-Hazardous Waste Label

This label is used on containers that contain non-hazardous wastes or wastes that have not yet been determined to be hazardous and may be pending laboratory analysis, such as drill tailings.

Standard Uniform Hazardous Waste Manifest

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number: CAD 982 501 421	2. Page 1 of: 1	3. Emergency Response Phone: NRCES 510-749-1390	4. Manifest Tracking Number: 012319154 JJK

GENERATOR

5. Generator's Name and Mailing Address: PORT OF OAKLAND ATTN: JEFF RUBIN; 530 WATER STREET jrubin@portoakland.com; OAKLAND, CA 94607 510-627-1134

Generator's Site Address (if different than mailing address): OAKLAND INTERNATIONAL AIRPORT (OUTSIDE AOA) NORTH FIELD-AIRPORT FACILITIES-8500 Earhart Rd. OAKLAND, CA 94621

6. Transporter 1 Company Name: NRC ENVIRONMENTAL SERVICES — U.S. EPA ID Number: CAR 000 030 114

7. Transporter 2 Company Name: INTRINSIC TRANSPORTATION — U.S. EPA ID Number: CAR 000 165 274

NRC can be used for non-capital work only

8. Designated Facility Name and Site Address: CROSBY AND OVERTON, 1630 WEST 17th STREET, LONG BEACH, CA 90813 562-432-5445 — U.S. EPA ID Number: CAD 028 409 019

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ UN 1263, WASTE RELATED PAINT MATERIALS, 3, PG II (D001)	002	DM	0100	G	331 D001
	2. NON-RCRA HAZARDOUS WASTE SOLID (OILY DEBRIS)	002	DM	0500	P	352
	3.					
	4.					

14. Special Handling Instructions and Additional Information: WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT; JOB#/PO#: 89169; TSO#: 2014-AP-01; PROFILE #'s: 1) 35871 2) 34385 ORACLE CODES: 522115 / 1002 / 33.2 NRC ENVIRONMENTAL SERVICES, 1605 FERRY POINT, ALAMEDA, CA 94501

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: (AGENT ON BEHALF OF PORT OF OAKLAND) Signature: Month 04 Day 29 Year 2016

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Signature: Month Day Year

Transporter 2 Printed/Typed Name: Signature: Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

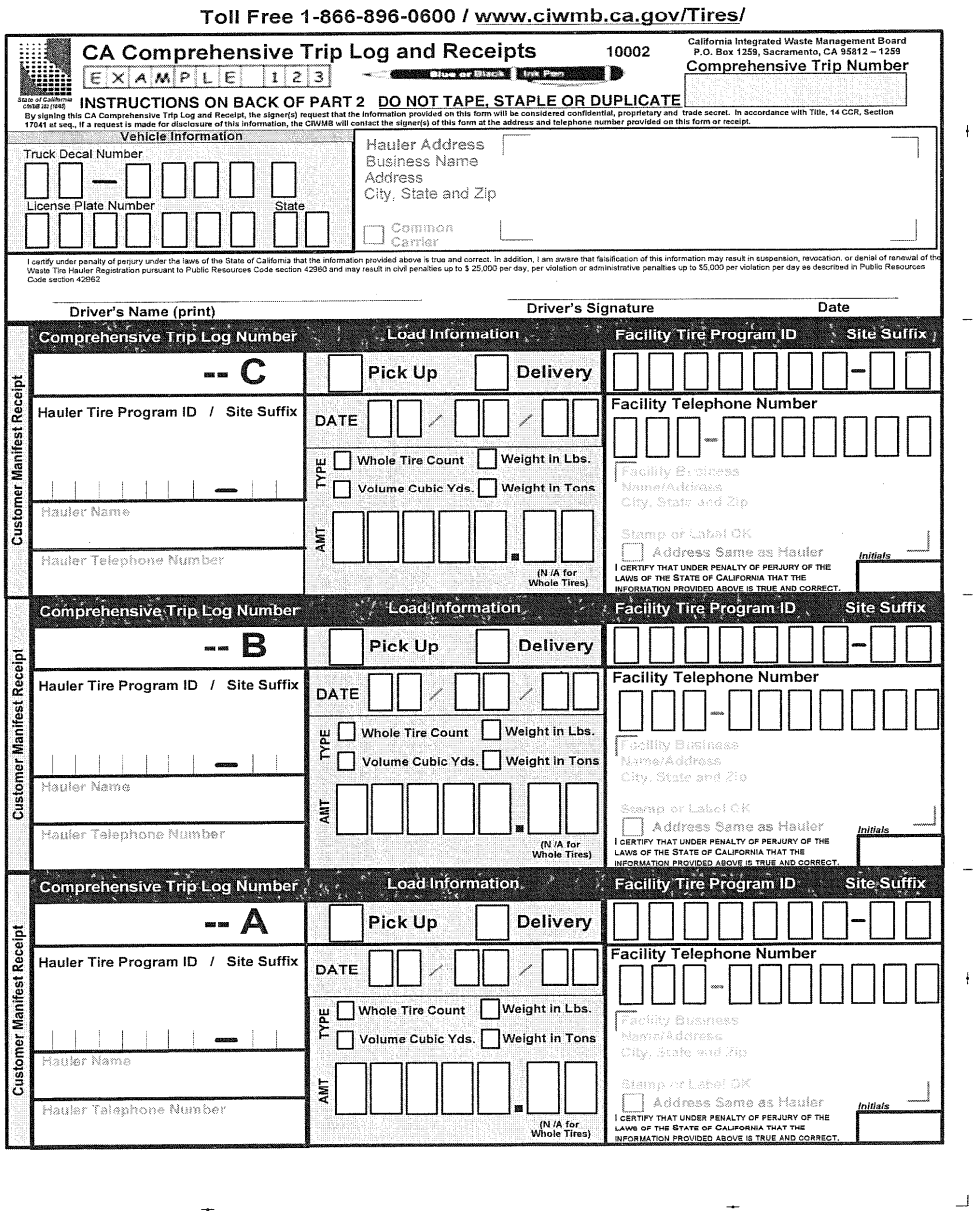
Printed/Typed Name: Signature: Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

A manifest must accompany the shipment of any hazardous waste that is transported.

Hazardous Tire Waste Manifest

(Comprehensive Trip Log and Receipts)



Toll Free 1-866-896-0600 / www.ciwmb.ca.gov/Tires/

CA Comprehensive Trip Log and Receipts 10002

EXAMPLE 123 — Blue or Black Ink Pen

California Integrated Waste Management Board
P.O. Box 1259, Sacramento, CA 95812 – 1259

Comprehensive Trip Number

INSTRUCTIONS ON BACK OF PART 2 DO NOT TAPE, STAPLE OR DUPLICATE

By signing this CA Comprehensive Trip Log and Receipt, the signer(s) request that the information provided on this form will be considered confidential, proprietary and trade secret. In accordance with Title, 14 CCR, Section 17041 et seq., if a request is made for disclosure of this information, the CIWMB will contact the signer(s) of this form at the address and telephone number provided on this form or receipt.

Vehicle Information

Truck Decal Number

License Plate Number State

Hauler Address
Business Name
Address
City, State and Zip

Common Carrier

I certify under penalty of perjury under the laws of the State of California that the information provided above is true and correct. In addition, I am aware that falsification of this information may result in suspension, revocation, or denial of renewal of the Waste Tire Hauler Registration pursuant to Public Resources Code section 42960 and may result in civil penalties up to $ 25,000 per day, per violation or administrative penalties up to $5,000 per violation per day as described in Public Resources Code section 42962

Driver's Name (print) Driver's Signature Date

Customer Manifest Receipt

Comprehensive Trip Log Number	Load Information	Facility Tire Program ID / Site Suffix
-- C	Pick Up / Delivery	–
Hauler Tire Program ID / Site Suffix –	DATE / /	Facility Telephone Number –
Hauler Name	TYPE Whole Tire Count / Weight in Lbs. / Volume Cubic Yds. / Weight in Tons	Facility Business Name/Address City, State and Zip
Hauler Telephone Number	AMT . (N /A for Whole Tires)	Stamp or Label OK / Address Same as Hauler Initials
		I CERTIFY THAT UNDER PENALTY OF PERJURY OF THE LAWS OF THE STATE OF CALIFORNIA THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND CORRECT.

Customer Manifest Receipt

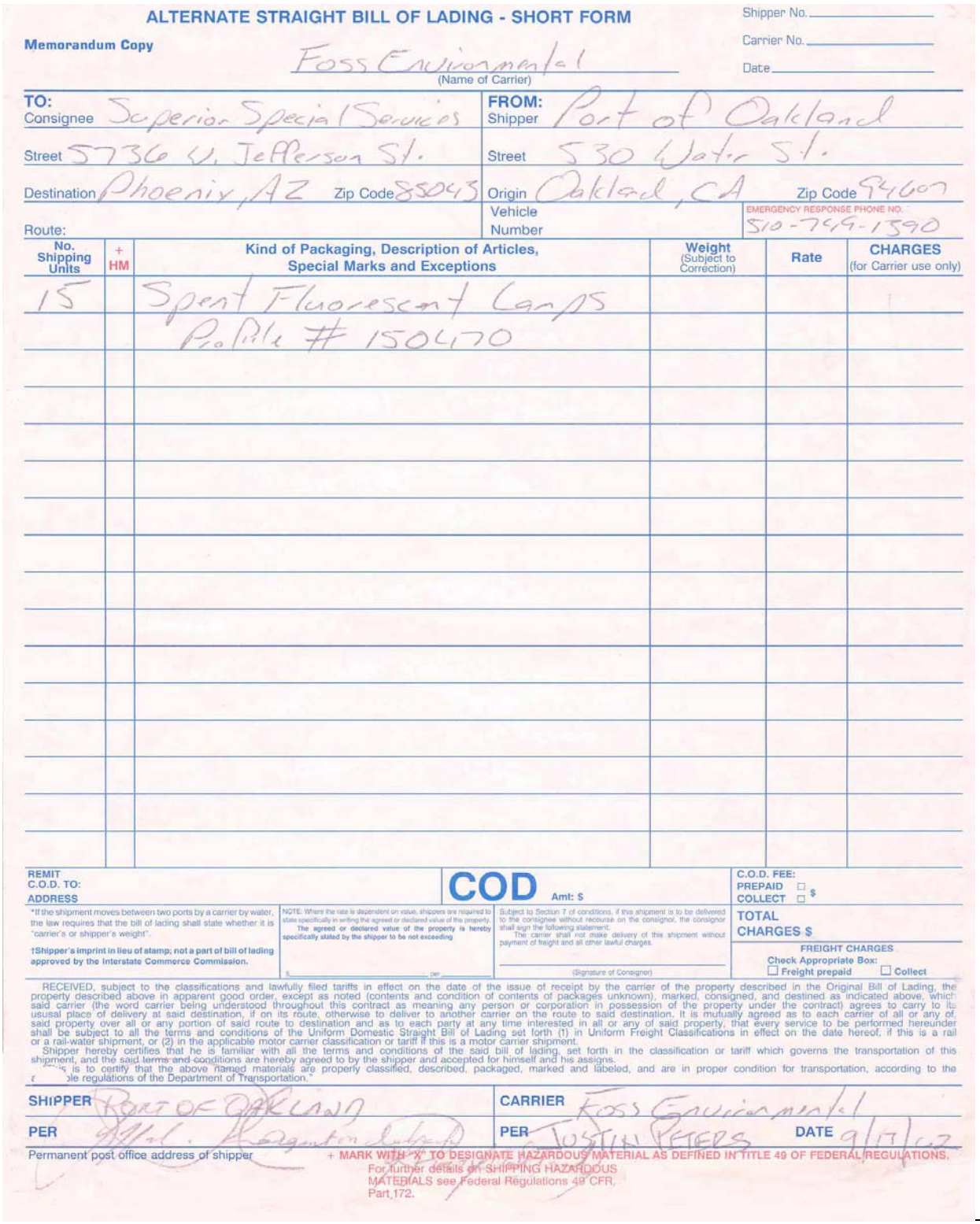
Comprehensive Trip Log Number	Load Information	Facility Tire Program ID / Site Suffix
-- B	Pick Up / Delivery	–
Hauler Tire Program ID / Site Suffix –	DATE / /	Facility Telephone Number –
Hauler Name	TYPE Whole Tire Count / Weight in Lbs. / Volume Cubic Yds. / Weight in Tons	Facility Business Name/Address City, State and Zip
Hauler Telephone Number	AMT . (N /A for Whole Tires)	Stamp or Label OK / Address Same as Hauler Initials
		I CERTIFY THAT UNDER PENALTY OF PERJURY OF THE LAWS OF THE STATE OF CALIFORNIA THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND CORRECT.

Customer Manifest Receipt

Comprehensive Trip Log Number	Load Information	Facility Tire Program ID / Site Suffix
-- A	Pick Up / Delivery	–
Hauler Tire Program ID / Site Suffix –	DATE / /	Facility Telephone Number –
Hauler Name	TYPE Whole Tire Count / Weight in Lbs. / Volume Cubic Yds. / Weight in Tons	Facility Business Name/Address City, State and Zip
Hauler Telephone Number	AMT . (N /A for Whole Tires)	Stamp or Label OK / Address Same as Hauler Initials
		I CERTIFY THAT UNDER PENALTY OF PERJURY OF THE LAWS OF THE STATE OF CALIFORNIA THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND CORRECT.

Bill of Lading

A bill of lading must accompany the shipment of any waste (non-hazardous or specific) that is transported.



ALTERNATE STRAIGHT BILL OF LADING - SHORT FORM

Shipper No. _____
Carrier No. _____
Date _____

Memorandum Copy

Foss Environmental
(Name of Carrier)

TO:
Consignee Superior Special Services
Street 5736 W. Jefferson St.
Destination Phoenix, AZ Zip Code 85043
Route:

FROM:
Shipper Port of Oakland
Street 530 Water St.
Origin Oakland, CA Zip Code 94607
Vehicle Number
EMERGENCY RESPONSE PHONE NO. 510-749-1590

No. Shipping Units	+ HM	Kind of Packaging, Description of Articles, Special Marks and Exceptions	Weight (Subject to Correction)	Rate	CHARGES (for Carrier use only)
15		Spent Fluorescent Lamps P.O. Ple # 150470			

REMIT C.O.D. TO:
ADDRESS

COD Amt: $

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ $

TOTAL CHARGES $

FREIGHT CHARGES
Check Appropriate Box:
☐ Freight prepaid ☐ Collect

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight".

†Shipper's imprint in lieu of stamp; not a part of bill of lading approved by the Interstate Commerce Commission.

NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ _____ per _____

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
_____
(Signature of Consignor)

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of receipt by the carrier of the property described in the Original Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.
Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.
The purpose is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation.

SHIPPER Port of Oakland
PER _____

CARRIER Foss Environmental
PER Justin Peters DATE 9/17/12

Permanent post office address of shipper

+ MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIAL AS DEFINED IN TITLE 49 OF FEDERAL REGULATIONS.
For further details on SHIPPING HAZARDOUS MATERIALS see Federal Regulations 49 CFR, Part 172.

Appendix J - Current List of Hazardous Waste ID Numbers

HW ID #	AIRPORT	COMMENT
CAD982501421	North Field, Oakland Int'l Airport ***(Outside AOA)*** Oakland, CA 94621	**RCRA** for all North Field locations, **outside AOA only**
CAD982463614	North Field, Oakland Int'l Airport ***(Inside AOA)*** Oakland, CA 94621	**RCRA** for all North Field locations, **inside AOA only**
CAL000128338	South Field, Oakland Int'l Airport, Bldg. M-104 & Vicinity Airport Drive & Earhart Road Oakland, CA 94621	**Non-RCRA** for all South Field locations
HW ID #	**CRE**	**COMMENT**
CAR000001842	Port of Oakland **&** Monsanto Co. Dennison Street and Embarcadero Street Oakland, CA 94607	**RCRA** for Embarcadero State Superfund Site only (D001 and F027 wastes)
CAL000170612	77 Jack London Square Oakland, CA 94607	**Non-RCRA** for the Jack London Square area
HW ID #	**MARITIME**	**COMMENT**
CAL000015571	209 Brush Street Oakland, CA 94607	**Non-RCRA** for the Brush Street facility and vicinity
CAD981430465	1 Market Street Oakland, CA 94607	**RCRA** for the area in the vicinity of Howard Terminal
CAL000213100	1407 Middle Harbor Road Oakland, CA 94607	**Non-RCRA** for the area in the vicinity of the former UP Roundhouse
CAL000172845	1717 Middle Harbor Road Oakland, CA 94607	**Non-RCRA** for the UP Railroad area
CAR000083022	1749 Middle Harbor Road Oakland, CA 94607	**RCRA** for Harbor Facilities
CAL000174897	2277-7th Street Oakland, CA 94607	**Non-RCRA** for the area at the intersection (SW corner) of Maritime Street and 7th Street (former Ringsby area) and for Harbor Facilities
CAL000268097	Transbay Container Terminal (TBCT) 2500 7th Street Oakland, CA 94607	**Non-RCRA** for Berth 25 and Outer Harbor area
CAL000266385	Former Oakland Army Base 10th and Maritime Streets Oakland, CA 94607	**Non-RCRA** for former Oakland Army Base in the vicinity of 10th and Maritime Streets
CAR000163790	Oakland Army Base – Port Side 1 Corregidor Avenue Oakland, CA 94607	**RCRA** for former Oakland Army Base Project in the vicinity of Corregidor Avenue

NOTE: RCRA HW ID #s can be used for disposal of non-RCRA California hazardous waste; however, non-RCRA HW ID #s cannot be used for disposal of RCRA hazardous waste, unless the amount is less than 100 kilograms per month

Appendix K - Refrigerant Management Program

REFRIGERANT MANAGEMENT PROGRAM

PURPOSE

The California Air Resources Board ("CARB") approved the Regulation for the Management of High Global Warming Potential Refrigerants for Stationary Sources, generally referred to as the Refrigerant Management Program ("RMP") in December 2010 under the California Global Warming Solutions Act of 2006 (Chapter 488; Health and Safety Code sections 38500 et seq.). The regulation, which appears at sections 95380 to 95398 of Title 17, California Code of Regulations, is a set of rules that establish a limit on statewide GHG emissions from stationary facilities with refrigeration systems with more than 50 pounds of a high GWP refrigerant. Provisions of the regulation also pertain to companies and facilities that distribute and reclaim refrigerants and persons that service refrigerant containing appliances. The main focus of the CARB regulations was to setup a record keeping, reporting system, and fee structure for refrigeration facilities (i.e., ice production, cold storage, large "big box" stores, and grocery stores) that use large quantities of refrigerants.

A review of the Port operations has determined that the Port refrigeration equipment is relegated to comfort cooling systems. Air-conditioning systems are subject to the required service practices provisions of the regulation (Section 95390). These provisions include 1) no venting of refrigerant to the atmosphere, 2) no additions of refrigerant to a refrigeration system known to have a refrigerant leak, 3) evacuation of any remaining refrigerant from a non-refillable cylinder prior to disposal, and 4) proper certification of persons conducting servicing and leak repairs to system.

PROGRAM

The Port's Refrigerant Management Program identifies management, monitoring, tracking, and internal reporting measures that must be implemented by Port employees and contractors to restrict release of refrigerants identified as High Global Warming Potential Refrigerants ("HGWPR"). **A monthly checklist is provided in Appendix K - A to assist staff in complying with refrigerant regulations.** The checklist is required to be completed monthly by a Port ESE, signed by the ESE, and emailed on a monthly basis to Eric Englehart, Associate Port Environmental Scientist at eenglehart@portoakland.com or faxed to 510-465-3755.

Requirements

- **Certification**

  Port ESE's and outside contractors may service only equipment for which they are certified. **A list of Port technicians and their certifications numbers are provided in Appendix L - B.**

- **Labeling Refrigerant Recovery Equipment**

  The following label or its equivalent must be present on all refrigerant recovery equipment:

  "THIS EQUIPMENT HAS BEEN CERTIFIED BY ARI/UL TO MEET EPA'S MINIMUM REQUIREMENTS FOR RECYCLING AND/OR RECOVERY EQUIPMENT INTENDED FOR USE WITH [APPROPRIATE APPLIANCE CATEGORY]"

Recordkeeping

Section 608 of the CAA requires specific information related to refrigerant use to be documented and retained for a minimum of 3 years. If equipment has been removed or is no longer in use, hard copies of refrigerant management records must be kept on file by Airport, CRE, and Maritime Facility Maintenance Departments for 3 years. Purchase records of refrigerants used in units with over 50-pound charge must be retained for 5 years.

Because the Port uses refrigerants across all sizes of units, any refrigerant purchased and used must be tracked. All refrigerant-containing equipment and cylinders must be identified with a unique identification (ID) number and the refrigerant type and charge quantity. The identification number must appear on all documentation related to the specific piece of equipment or cylinder, and is used to track the refrigerant.

The following is a list of appendices and information that will be documented during monthly inspections:

- Monthly Checklist in **Appendix K - A**.
- A list of Port technicians and their certifications in **Appendix K - B**.
- A complete and current inventory of refrigerant-containing equipment. **An inventory of equipment is provided in Appendix K - C.** ESE's should review the list of refrigerant-containing equipment on a monthly basis to ensure it is up-to-date and accurate.
- A complete and current inventory of all refrigerant-containing cylinders or other refrigerant containers that are on site shall be conducted on a monthly basis. **Use the Cylinder Input form in Appendix K - D (one form for each cylinder) to collect the information.** All cylinders associated with the refrigerant management program shall be stored in a central location so that an audit of the cylinders can be completed in an orderly manner. It is advisable to have a dedicated room for the storage of cylinders and refrigerant recovery equipment.
- Records of all ESE's and outside contractors who perform any service, maintenance, repair, or disposal on refrigerant-containing equipment. **Use the Refrigerant Service Order form to collect the information**, **Appendix K - E**
- Recovery and recycle unit information and maintenance history. **Use the Recover/Recycling Unit Input form to collect the information, Appendix K - F.**

The following information is also provided in the appendices:

- **Consistent with Section 608 of the CAA, CARB has identified specific service practices that apply to any person installing or servicing any appliance that uses a high-GWP refrigerant. See Appendix K - G for the regulations and frequently asked questions.**
- High Global Warming Refrigerants are listed in **Appendix K - H.**

Refrigerant Inventory

Port ESE's that purchase, use, or store refrigerants must conduct and document inventory at these times:

- Using the **Refrigerant Cylinder Input Form,** on a monthly basis, complete a current inventory of all refrigerant-containing cylinders or other refrigerant containers that are on site.
- Annually – Perform a thorough physical audit of refrigerants, and reconcile any discrepancies between the quantity purchased, disposed, and inventoried.

Leak testing

Refrigerant-containing equipment must be leak tested using EPA-approved methods and documented at these times:

- Perform leak testing on all new refrigeration equipment (factory charged, field charged, spilt system, packaged equipment, or field constructed system) prior to acceptance and operation.
- After equipment repairs, conduct leak testing before recharging the repaired unit with refrigerant.

- Perform leak testing annually for each system with greater than 50 pounds of refrigerant as part of scheduled preventative maintenance inspections.
- After a known leak, conduct a 30-day leak test verification on repaired equipment with over 50 pounds of charge capacity.

Leaking systems

"Allowed" leak rate:
The "allowed" leak rate is different based on the use of the equipment. Specifics can be found at 40 CFR 82.156. Failure to make the required leak calculation or promptly document the leak and subject equipment is a violation of federal law

Known leaks

A refrigerant system has a "known" leak when any of the following conditions apply:

- Review of the available documentation determines the system has a leak,
- A Port technician or contractor has added refrigerant to the same system during a recent visit of less than 1 year,
- The service technician readily determines the system has a refrigerant leak.

Leak response

If a refrigerant unit cannot be shut down for repairs and refrigerant must be charged into the leaking system, the technician must first obtain documented authorization from their supervisor.

- Document authorization on the **Refrigerant Service Order Form** and describe why repairs are delayed.
- Promptly enter the information in the **Refrigerant Service Order Form**.

Eliminate known or suspected leaks as quickly as practicable. If a leak exceeds the regulatory leak rate as determined by the rules in 40 CFR or supervisor, the Port is required to:

- Complete leak repairs in 30 days,

- Develop a detailed and specific plan for equipment retrofit or replace the equipment within 1 year of the earliest leak identification

Outside Contractor Requirements

Contractors are responsible and accountable for compliance with EPA regulations, 40 CFR 82 et al, the Clean Air Act (CAA), Section 608, and any state and local codes when performing refrigerant-related work for The Port or its subsidiaries. Contractors must verify their employees are properly certified and comply with these regulations.
The Port ESE should complete the **Refrigerant Service Order Form** whenever a contractor works on Port equipment.

The Port will stop work under any contract at any time if the work fails to meet federal, state, local or Port requirements.

Disposal of refrigerants, lubricants, and equipment

Disposal of refrigerants, oils, and associated equipment is regulated as hazardous waste. Removal of refrigerant liquids or equipment from Port property must be performed by either the Port's Environmental Programs and Planning Division (EPP) or a certified, approved refrigerant contractor.

- Port technicians: See Intranet Hazardous Waste Disposal for more information. http://intranet/divisions/engineering/ehsc/Health%20&%20Safety/Safety/Safety%20Manual/safety_manual.htm#hazmat

- Contractors: Contact Eric Englehart in the Port's EPP Division at (510) 627-1187 or eenglehart@portoakland.com for assistance.

Ensure disposal information is properly documented

- Enter disposal information in the Refrigerant Service Order Form
- Provide printed copies of manifest documents to Douglas Herman in EPP.

FACILITY CONTACT INFORMATION

The following Port personnel are responsible for the proper management of refrigerants in their specific area of the Port, and required to submit monthly checklist or designate a Port employee to submit the checklist.

Maritime

Bill Morrison : 510-627-1500

Designee : Jeff Friend 510-627-1651

530 Water Street

Jim Brown : 510-627-1115

Designee : Tim Sullivan 510-627-1116

North Airport

Michael Henning : 510-563-3962

Designee : Mauro Bucio 510-750-7042

South Airport

Ted Getchell : 510-563-2956

Designee : Hans Miller : 510-563-2958

APPENDICES

- **APPENDIX K - A – MONTHLY CHECKLIST**
- **APPENDIX K - B – TECHNICIAN CERTIFICATIONS**
- **APPENDIX K - C – EQUIPMENT INVENTORY**
- **APPENDIX K - D - REFRIGERANT CYLINDER INPUT FORM**
  This form is used whenever a purchase is made of a new cylinder of refrigerant, disposal of a cylinder, or recycling a full cylinder of refrigerant.
- **APPENDIX K - E - REFRIGERANT SERVICE ORDER FORM**
  This form is used whenever a contractor services equipment including disposal of refrigerant.
- **APPENDIX K - F - RECOVERY/RECYCLING UNIT INPUT FORM**
  This form is used to identify refrigerant recovery equipment owned by the Port.
- **APPENDIX K - G - REGULATIONS AND FREQUENTLY ASKED QUESTIONS**
- **APPENDIX K - H – REGULATED REFRIGERANTS**

Appendix K - A

Monthly Checklist

Port of Oakland
Refrigerant Management Program
Monthly Compliance Checklist
Departments and Contacts:
OAK South Field: Ted Getchell, Equipment Systems Superintendent, X 32956**OAK North Field:** Mauro Bucio and Niles Jackson, Equipment Systems Engineers, and Michael Henning, Utilities Supervisor, X 33942
530 Water Street: Jim Brown, Chief Building Engineer, X 71115, and Tim Sullivan, Building Engineer, X 71116
Maritime: Ernest Richmond, Port Utilities Supervisor X 71413
Refrigerant Management Program Coordinator: Eric Englehart, Associate Environmental Scientist, X 71187

The checklist provided below is required to be completed and submitted to the Port Environmental Programs and Planning Division on a monthly basis in accordance with the California Air Resources Board, California Global Warming Solutions Act of 2006, Chapter 488; Health and Safety Code sections 38500 et seq.).

Scan and email the document to Eric Englehart at: eenglehart@portoakland.com

REFRIGERANT CYLINDER INPUT FORM (APPENDIX D)
Over the past month has your department purchased, disposed of, or recycled a cylinder of refrigerant?

☐ Yes
☐ No

Has the Refrigerant Cylinder Input Form in **Appendix D** been completed? This form is used whenever a purchase of a new cylinder of refrigerant is made, a cylinder is disposed of, or a full cylinder of refrigerant is recycled.

☐ Yes
☐ No
☐ NA

REFRIGERANT SERVICE ORDER FORM (APPENDIX E)
Over the past month has a Port Equipment Systems Engineer or has a contractor come to your department to service equipment and recovered or added refrigerants or identified an equipment leak?

☐ Yes
☐ No

Has a Refrigerant Service Order Form in **Appendix E** been completed that documented the maintenance of the equipment?

☐ Yes
☐ No
☐ NA

RECOVERY/RECYCLING UNIT INPUT FORM (APPENDIX F)
Does your department have refrigerant recovery and recycling equipment?

☐ Yes
☐ No

Has a Recovery/Recycling Unit Input Form in **Appendix F** been completed for each piece of refrigerant recovery and recycling equipment in your department?

☐ Yes
☐ No
☐ NA

_____ _____
ESE Printed Name Signature Date

APPENDIX K -B

Technician Certifications
South and North Fields- OAK

<u>SOUTH FIELD</u>

Technician Name	Hans Miller		Technician Name	Danny Osalbo
Certification Level	Universal		Certification Level	Universal
Identification Number	1664		Identification Number	A720-0010
Testing Agency			Testing Agency	
Testing Agency EPA Approval Date	8/13/2012		Testing Agency EPA Approval Date	2/22/1995

Technician Name	Joe Nguyen		Technician Name	Rick Martin-Cortes
Certification Level	Universal		Certification Level	Universal
Identification Number	2800		Identification Number	1224
Testing Agency			Testing Agency	
Testing Agency EPA Approval Date	12/28/1993		Testing Agency EPA Approval Date	12/28/1993

Technician Name	Thai N. Phan		Technician Name	Courtney Elder
Certification Level	Universal		Certification Level	Universal
Identification Number	6333		Identification Number	0573
Testing Agency			Testing Agency	
Testing Agency EPA Approval Date	10/27/1993		Testing Agency EPA Approval Date	12/28/1993

Technician Name	Paul Markey		Technician Name	Leonard P. Rose
Certification Level	Universal		Certification Level	Universal
Identification Number	4651		Identification Number	1310
Testing Agency			Testing Agency	
Testing Agency EPA Approval Date	1/1/1991		Testing Agency EPA Approval Date	1/1/2008

Technician Name	Jose Alonga		Technician Name	Philip Stewart
Certification Level	Universal		Certification Level	Universal
Identification Number	8738		Identification Number	C21928MVAC
Testing Agency			Testing Agency	
Testing Agency EPA Approval Date	unknown		Testing Agency EPA Approval Date	5/21/2006

Technician Name	Don Gonzaga		Technician Name	Alonzo D. Lobaton
Certification Level	Universal		Certification Level	Universal
Identification Number	2408		Identification Number	7414
Testing Agency			Testing Agency	
Testing Agency EPA Approval Date	8/5/2002		Testing Agency EPA Approval Date	1/1/1997

NORTH FIELD

Technician Name	Mauro Bucio		Technician Name	Niles Jackson
Certification Level	Universal		Certification Level	Type I & II
Identification Number	P10198DOC57FA3981		Identification Number	1030651
Testing Agency			Testing Agency	American Trainco Englewood, CO
Testing Agency EPA Approval Date	06/25/2014		Testing Agency EPA Approval Date	10/02/2014

Appendix K -C
Equipment Inventory

BUILDING	ADDRESS	EQUIPMENT AND QUANTITY AND TYPE OF REFRIGERANT	DATE OF INSPECTION	DATE OF LEAK REPAIR AND CERTIFICATION OF TECHNICIAN	PURCHASES AND RECLAMATION OF REFRIGERANTS
M-164	1 Airport Drive	1 Trane Chiller (2012) Model: CVHF410 Serial# L12L04542 750 LBS R-123 FIXED LEAK DETECTION	20-Jun-14		**Building M-128** 1-30 lb recovery tank - empty 1-30 lb recovery tank -empty 1-25 lb product tank (R-407c) 1/2 Full 1-25 lb product tank (R-407c) Full 1 -25 lb product tank (R-22) Full
M-164	1 Airport Drive	#2 TRANE CHILLER (2003) MODEL CVHF049GA SERIAL #L03D04098 1500# OF R-123 FIXED LEAK DETECTION	20-Jun-14		**Building M-128** 1 - 30lb recovery tank - empty 1-25 lb product tank (R-134a) - Full
M-104	1 Airport Drive	1 Carrier Heat Pump for Lighting Vault Model: Serial #: R-22			
M-104	1 Airport Drive	2 Heat Pumps (provide Air Conditioning and Heat in Winter) Model: Serial #:			
Various Portable Trailers in the Vicinity of M-104, South Field Parking Office, and Long Term Parking	1 Airport Drive	Approximately 30 Heat Pumps Model: Serial #: 4-10 ibis			
M-114- Rooftop Systems	1 Airport Drive	1 York HP (1995) Model: Serial #: 15lbs R-22			
M-114- Rooftop Systems	1 Airport Drive	1 York HP (1996) Model: Serial #: 13 lbs R-22			

M-114- Rooftop Systems	1 Airport Drive	1 York HP (1995) Model: Serial #: 8 lbs R-22			
M-147	Old Air Traffic Control Tower- 10th Floor	1 Trane Chiller (1973) Model: Serial# 24 LBS R-22			
M-147	Old Air Traffic Control Tower- 10th Floor	1 Trane Chiller (1973) Model: Serial# 24 LBS R-22			
M-147	Old Air Traffic Control Tower- 10th Floor	2 Heat Pumps Model: Serial# 4-10 LBS R-22			
M-102	1 Airport Drive, 2nd Floor Balcony	2 Hips Model: Serial# 4-10 LBS R-22			
M-130- M-367	1 Airport Drive	Approximately 28 Heat Pumps Model: Serial #: 4-10 lbs			
M-101 - Serves Carousel 4	1 Airport Drive	1 McQuay Chiller (1999) Model:RP3030BW Serial#: 3XZ02352 19 38lbs R-22			
M-363 Terminal 2	1 Airport Drive	1 Govenair Chiller (2005) Model:RP3030BW Serial#: 3XZ02352 19 40lbs HFC R-410A	20-Jun-14		
M-371	1 Airport Drive	1 Carrier Chiller (2005) Model: 70474 Serial#: 19XRV 840lbs HFC R-134A	20-Jun-14		
M-371	1 Airport Drive	1 Carrier Chiller (2005) Model: 70475 Serial#: 19XRV 840lbs HFC R-134A BOTH UNTIS HAVE LEAK DETECTION	20-Jun-14		

South Field Ramp at Southwest	1 Airport Drive	Approximately 25 FMC PC Air Units(2007) Model: Serial #: 30 lbs R-407 c			
M-911 at ARFF Facility	Air Cargo Road	Carrier Chiller 57 lbs R-22			
M-106 Air Cargo Building FedEx Building Southwest Concession Building	Refrigerants Managed by Tenants				

Appendix K - D

Refrigerant Cylinder Input form

Refrigerant Cylinder Input Form

Department:

Cylinder ID:

Refrigerant Type:

Refrigerant Condition: ☐ New ☐ Contaminated ☐ Reclaimed ☐ Recycled ☐ Recovered

Cylinder Size: Lbs.

Tare Weight: Lbs. oz.

Current Quantity: Lbs. oz.

Cylinder Type: ☐ Refillable ☐ Returnable ☐ Disposable

Cylinder Assigned to: ☐ Facility ☐ Recycling Ctr ☐ Vehicle ☐ Location ☐ Technician ☐ Vendor

Assigned to Name:

Purchased Date: **Inspection Date:**

Inactive Date:

Notes

Appendix K - E

Refrigerant Service Order Form

Refrigerant Service Order Form

Service ID:	**Owner:**
Work Order #:	**Building:**
Date: Issued: **Completed:**	**Equipment ID:**
Technicians:	**Location:** **Model:**
	Manufact: **Serial #:**
	Refrigerant Type: **Charge:** **lbs** **oz**

Service Request – Why dispatched

Service Description

☐ Confirm Charge ☐ Upgrades Installed ☐ Minor Maintenance Recovery Vacuum: _____Inches

☐ Dispose of Unit ☐ Refrigerant Conversion ☐ Major Maintenance Isolated Leak ☐

Refrigerant	**Cylinder ID**	**Type**	**Condition**	**Quantity**
Recovered				**Lbs** **oz**
				Lbs **oz**
				Lbs **oz**
	Recovery Unit ID # :			
Added				**Lbs** **oz**
				Lbs **oz**
				Lbs **oz**
	☐ **Startup Charge**		**Net Refrigerant Added:**	**Lbs** **oz**

Parts Used

Parts No	Description	Quantity

Material Notes

Total Hours on this Service: _____

Leaks

☐ Leak Found Date: _____

☐ Leak Repaired Date: _____

☐ Initial Leak Verification Test Date: _____

Test done after repair before charging Method: _____

☐ Follow-up Verification Test Date: _____

Test done with unit running under normal load Method: _____

Leak Notes:

☐ Trace Gas Used Type: _____ Cylinder ID _____ Quantity _____ Lbs _____ oz

☐ Accidental Release Occurred Description:

Estimated Amount Released _____ lbs _____oz

Appendix K - F

Recover/Recycling Unit Input Form

Recovery/Recycling Unit Input Form

Department:

Unit ID:

Manufacturer:

Model:

Serial Number:

Registration Number:

Date Purchased: **Date Inactive:**

Unit Type: ☐ Active ☐ Passive ☐ Other

Vacuum Level: ☐ Inches ☐ Microns

Internal Filter:

External Filter:

Equipment Assigned to: ☐ Facility ☐ Technician ☐ Vehicle ☐ Location

Assigned to Name:

Notes

Maintenance History

Date	Serviced By	Internal Filter	External Filter	Description

Appendix K - G

REGULATIONS

(Section 95390)

Consistent with existing federal regulations covering ozone-depleting refrigerants, required service practices apply to any person installing or servicing any appliance that uses a high-GWP refrigerant.

Beginning January 1st, 2011

A person performing any installation, maintenance, service, repair, or disposal of stationary appliances that could release refrigerant must satisfy all of the following:

- Must not intentionally discharge refrigerants into the atmosphere – must make a recovery attempt using certified refrigerant recovery or recycling equipment.
- Must not add any refrigerant to a refrigeration or air-conditioning appliance unless:
  - it is a class I or class II substance (section 602 of Clean Air Act)
  - it is an alternative found acceptable under the Significant New Alternatives Policy (SNAP, section 612 of Clean Air Act) for that specific system
  - Has been approved by the California Air Resources Board for use in that specific system
- Must not add any refrigerant to any appliance known to have a leak except when required to maintain operations while preparing or conducting a leak repair.
- Must hold a current, valid USEPA certificate and must use proper procedures
- Must make a recovery attempt using certified refrigerant recovery or recycling equipment for that type of appliance before opening the appliance to atmospheric conditions. Attempts to recover refrigerant must be made even if the person believes that all refrigerant has been removed or has previously leaked from the appliance. Refrigerant may be returned to the appliance from which it is recovered or to another appliance owned by the same person without being recycled or reclaimed
- Must employ procedures for which the certified refrigerant recovery or recycling equipment was approved by the U.S. EPA
- must use certified refrigerant recovery or recycling equipment as specified by the certified refrigerant recovery or recycling equipment manufacturer, unless the manufacturer's specifications conflict with the procedures approved by the U.S. EPA or the Executive Officer for the certified refrigerant recovery or recycling equipment
- Must evacuate refrigerant from a non-refillable cylinder to a vacuum of 15 inches of mercury, relative to standard atmospheric pressure of 29.9 inches of mercury, before to recycling or disposal

§ 95390. Required Service Practices for Stationary High-GWP Appliances.

(a) *Required Service Practices.* A person performing any installation, maintenance, service, repair, or disposal of a stationary appliance that could reasonably be expected to release refrigerant from the appliance into the environment must satisfy all of the following requirements:

(1) In preparing an appliance for recycling or disposal, the person must not intentionally disrupt the refrigerant circuit of the appliance resulting in a discharge of refrigerant into the atmosphere, unless an attempt to recover the refrigerant is made using certified refrigerant recovery or recycling equipment; and

(2) The person must make a recovery attempt using certified refrigerant recovery or recycling equipment for that type of appliance before opening the appliance to atmospheric conditions. Attempts to recover refrigerant must be made even if the person believes that all refrigerant has been removed or has previously leaked from the appliance. Refrigerant may be returned to the appliance from which it is recovered or to another appliance owned by the same person without being recycled or reclaimed; and

(3) The person must not add any additional refrigerant to a refrigeration or air-conditioning appliance during manufacture or service, unless such refrigerant: (A) consists wholly of a class I or class II substance, as identified by section 602 of the federal Clean Air Act; or (B) is an alternative that has been found acceptable, under the Significant New Alternatives Policy (SNAP) program pursuant to section 612 of the federal Clean Air Act, for the specific refrigeration or air-conditioning end-use in which it is being employed; or (C) has been approved by the Executive Officer for the specific refrigeration or air-conditioning end-use in which it is being employed; and

(4) The person must not add an additional refrigerant charge to any appliance known to have a refrigerant leak, except that it is permissible to add an additional refrigerant charge for seasonal adjustment or an additional refrigerant charge required to maintain operations while preparing or conducting a leak repair pursuant to and in compliance with section 95386; and

(5) The person must hold a current, valid, and applicable certificate issued in accordance with Title 40 of the Code of Federal Regulations, Part 82, §82.161; and

(6) The person must employ procedures for which the certified refrigerant recovery or recycling equipment was approved by the U.S. EPA or Executive Officer; and

(7) The person must use certified refrigerant recovery or recycling equipment as specified by the certified refrigerant recovery or recycling equipment manufacturer, unless the manufacturer's specifications conflict with the procedures approved by the U.S. EPA or the Executive Officer for the certified refrigerant recovery or recycling equipment; and

(8) The person must evacuate refrigerant from a non-refillable cylinder to a vacuum of 15 inches of mercury, relative to standard atmospheric pressure of 29.9 inches of mercury, before recycling or disposal; and

(9) The person must satisfy job site evacuation of refrigerants during recycling, recovering, reclaiming, or disposing in accordance with Title 40 of the Code of Federal Regulations, Part 82, §82.156 (as amended January 11, 2005).

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562, 38563, 38580, 38597, 39600, 39601, and 41511, Health and Safety Code. Reference: Sections 38501, 38505, 38510, 38560, 38562, 38563, 38580, 38597, 39600, 39601, and 41511, Health and Safety Code

APPENDIX K - H

REGULATED REFRIGERANTS

Regulated Refrigerants

Refrigerants regulated under the Refrigerant Management Program include any refrigerant that is an ozone depleting substance (ODS) as defined in Title 40 of the Code of Federal Regulation, Part 82, or any compound with a global warming potential (GWP) value equal to or greater than 150. The table below summarizes common high-GWP refrigerants regulated under the Refrigerant Management Program (highlighted in yellow) as well as alternative substitute refrigerants that are not regulated under the Refrigerant Management Program. **The table only provides common refrigerants; it does not list all possible refrigerants that are regulated under the Refrigerant Management Program or all possible alternatives to these refrigerants**.

Any refrigerant not listed MUST be checked elsewhere to see if it has GWP 150 or above.

Refrigerant Name	Trade or Common Name	CAS Name	Required to Report?	Global Warming Potential (100 yr.)
R-717	Ammonia	Ammonia	no	0
R-744	CO_2	Carbon dioxide	no	1
R-290	Propane	Propane	no	4
R-600a	Isobutane	Isobutane	no	5
R-170	Ethane	Ethane	no	6
R-601	Pentane	Pentane	no	11
R-161	HFC-161	Fluoroethane	no	12
R-123	HCFC-123	2,2-Dichloro-1,1,1-trifluoroethane	yes	77
R-225ca	HCFC-225ca	3,3-Dichloro-1,1,1,2,2- pentafluoropropane	yes	122
R-152a	HFC-152a	1,1-Difluoroethane	no	124
R-225cb	HCFC-225cb	1,3-Dichloro-1,1,2,2,3- pentafluoropropane	yes	595
R-124	HCFC-124	2-Chloro-1,1,1,2-tetrafluoroethane	yes	609
R-32	HFC-32	Difluoromethane	yes	675
R-141b	HCFC-141b	1,1-Dichloro-1-fluoroethane	yes	725
R-365mfc	HFC-365mfc	1,1,1,3,3-Pentafluorobutane	yes	794
R-245fa	HFC-245fa	1,1,1,3,3-Pentafluoropropane	yes	1030
R-416A		R-134a/R-124/R-600 (59/39.5/1.5)	yes	1084.33
R-401A	MP39	R-22/R-152a/R-124 (53/13/34)	yes	1182.48
R-401B	MP66	R-22/R-152a/R-124 (61/11/28)	yes	1288.26
R-414B	Hot Shot	(50/39/1.5/9.5)	yes	1362.035
R-449	Opteon XP40	R-32/R-125/R-1234yf/R-134a (24.3/24.7/25.3/25.7)	yes	1397
R-134a	HFC-134a	1,1,1,2-Tetrafluoroethane	yes	1430
R-414A	GHX4	R-22/R-124/R-600a/R-142b (51/28.5/4.0/16.5)	yes	1478.015
R-409A	FX-56	R-22/R-124/R-142b (60/25/15)	yes	1584.75
R-4310mee	HFC-43-10mee, HFC-4310mee, R-43-10mee	decafluoropentane	yes	1640
R-407C		R-32/R-125/R-134a (23/25/52)	yes	1774
R-437A	MO49 Plus	R-32/R-125/R-600a/R-601 (78.5/19.5/1.4/0.6)	yes	1805.186
R-22	HCFC-22, Freon	Chlorodifluoromethane	yes	1810
R-407F		R-134a/R-125/R-32 (40/30/30)	yes	1824.5
R-406A		R-22/R-600a/R-142b (55/04/41)	yes	1942.8

R-413A	MO49	R-218/R-134a/R-600a (9/88/3)	yes	2053.25
R-410A	Puron, AZ-20	R-32/R-125 (50/50)	yes	2088
R-407A	KLEA 60	R-32/R-125/R-134a (20/40/40)	yes	2107
R-427A		R-32/R-125/R-143a/R-134a (15/25/10/50)	yes	2138.25
R-438A	MO99	R-125/R-134a/R-32/R-600a (45/44.2/8.5/2.3)	yes	2264.55
R-423A	39TC	R-134a/R-227ea (52.5/47.5)	yes	2280.25
R-142b	HCFC-142b	1-Chloro-1,1-difluoroethane	yes	2310
R-417A	MO59, NU22	R-125/R-134a/R-600 (46.6/50.0/3.4)	yes	2346.17
R-402B	HP-81	R-125/R-290/R-22 (38/2/60)	yes	2416.08
R-424A	RS-44	R-125/R-134a/R-600a/R-600/R-601a (50.5/47/.9/1/.6)	yes	2440
R-422B	NU-22B	R-125/R-134a/R-600a (55/42/3)	yes	2525.75
R-421A		R-125/R-134a (58/42)	yes	2630.6
R-422D	MO29	R-125/R-134a/R-600a (65.1/31.5/3.4)	yes	2729.12
R-402A	HP-80	R-125/R-290/R-22 (60/2/38)	yes	2787.88
R-407B		R-32/R-125/R-134a (10/70/20)	yes	2803.5
R-422C	One Shot	R-125/R-134a/R-600a (82/15/3)	yes	3084.65
R-422A		R-125/R-134a/R-600a (85.1/11.5/3.4)	yes	3143.12
R-227ea	HFC-227ea	1,1,1,2,3,3,3-Heptafluoropropane	yes	3220
R-408A	FX-10	R-125/R-143a/R-22 (7/46/47)	yes	3431.9
R-125	HFC-125	Pentafluoroethane	yes	3500
Isceon MO89		R-125/R-218/R-290 (86/9/5)	yes	3804.9
R-404A	HP-62	R-125/R-143a/R-134a (44/52/4)	yes	3900
R-507	AZ-50	R-125/R-143a (50/50)	yes	3985
R-403B		R-290/R-22/R-218 (5/56/39)	yes	4457.5
R-143a	HFC-143a	1,1,1-Trifluoroethane	yes	4470
R-502		R-22/R-115 (48.8/51.2)	yes	4656.72
R-11	CFC-11	Trichlorofluoromethane	yes	4750
R-113	CFC-113	1,1,2-Trichlorotrifluoroethane	yes	6130
EP-88			yes	6427.375
R-13b1	Halon 1301	Bromotrifluoromethane	yes	7140
R-115	CFC-115	Chloropentafluoroethane	yes	7370
R-14	PFC-14, CF4	Tetrafluoromethane	yes	7390
R-500		R-12/R-152a (73.8/26.2)	yes	8077
R-218	PFC-218	Octafluoropropane	yes	8830
R-236fa	HFC-236fa	1,1,1,3,3,3-Hexafluoropropane	yes	9810
R-114	CFC-114	1,2-Dichlorotetrafluoroethane	yes	10000
R-12	CFC-12	Dichlorodifluoromethane	yes	10900
R-116	PFC-116	Hexafluoroethane	yes	12200
R-508B		R-23/R-116 (46/54)	yes	13396
R-13	CFC-13	Chlorotrifluoromethane	yes	14400
R-503		R-23/R-13 (40.1/59.9)	yes	14560
R-23	HFC-23	Trifluoromethane	yes	14800

If your refrigerant is not on this list, please call CARB helpline at 916-324-2517 for assistance.

Appendix L - Transite Pipe/Conduit Management Memo

TO: Valerie Zabb-Parmley, Port Utilities Supervisor

FROM: Derek Lee, Port Associate Environmental Scientist

DATE: July 7, 2016

RE: **Transite Pipe/Conduit Management**

This memo describes the Port's transite pipe/conduit removal and waste management practices, and the procedure for requesting support from Environmental Programs & Planning.

Pipe Removal Practices

- Work on transite pipe (Figure 1) or conduit does not require an Asbestos Abatement License C-22, but the workers are required to have a minimum 4 hours training specific to transite removal, PPE and dust controls.
- Manual means of pipe/conduit removal includes wrapping a connection in 6-mil plastic and breaking the connection with a hammer. In this manner, one keeps fragments from falling to the ground and any airborne release. After it is broken, one should burrito-wrap (Figure 2) the pipe/conduit and bag the loose chips. Take care to ensure that the plastic wrapping is relatively intact during hammering. It is also a recommended practice to mist the air above the work area (e.g., with a mist spray bottle).
- Pipe-cutting methods that involve applying pressure to the pipe/conduit (Figure 3) to break it creates jagged edges. Since this practice typically does not result in friable asbestos, a respirator is not needed during work. Nevertheless, it is still recommended to mist the air during work and one should also line the bottom of the excavation with 6-mil plastic to catch any resultant pipe fragments.
- Saw-cutting of transite pipe/conduit needs to be performed while wearing a respirator and a Tyvek suit (Figure 4). Regular work gloves and boots can be worn. The work area needs to be lined with 6-mil plastic in order to contain any scattered fragments or dust. Alternatively, a high-efficiency particulate air (HEPA) vacuum must be used. There must be a means to capture the spray even if a wet concrete saw that utilizes water to suppress airborne dust is used.

  Respirator Requirements

  - Everyone using a respirator must be fit-tested annually. Prior to fit-testing, a physical evaluation must be performed and it cannot be more than five years old.
  - A seal check must be performed each time a respirator is used.
  - A respirator can be used multiple times for an extensive period of time. However, it must be kept in a clean plastic bag and the filters taped over (to prevent the release of trapped asbestos particulates) between uses.

Transite Waste Management

- Transite waste is considered Category II non-friable, non-hazardous waste and needs to be disposed of within 90 days, regardless of the Port's hazardous waste generator status.
- Transite waste needs to be double-wrapped with 6 mil plastic prior to transport for offsite disposal. It is recommended that Port utility staff only wrap short pipe sections and leave the long sections to the hauler.
- Transite waste should be temporarily stored at the job site but, to the extent feasible, kept out of public sight.
- Disposable PPEs worn during abatement work must be disposed of together with the rest of the transite waste.

Pipe Removal Notification Procedure

- Port staff should only employ manual methods of transite pipe/conduit abatement. Even if equipped with the proper PPEs and a HEPA vacuum, staff is still strongly advised to contact the Environmental Programs & Planning group to mobilize the Port's contractor, Sterling, for transite abatement work, if mechanical means such as saw-cutting are needed. Please contact either [Angela Clapp at x71194, Tracy Fidell at x71134 or Eric Englehart at x71187] for assistance.
- Contact either [Angela, Tracy or Eric] immediately to arrange for waste disposal even if the abatement is performed in-house.

CC: Desmond DeMoss

Diane Heinze
Colleen Liang

Figure 1 – Transite pipe

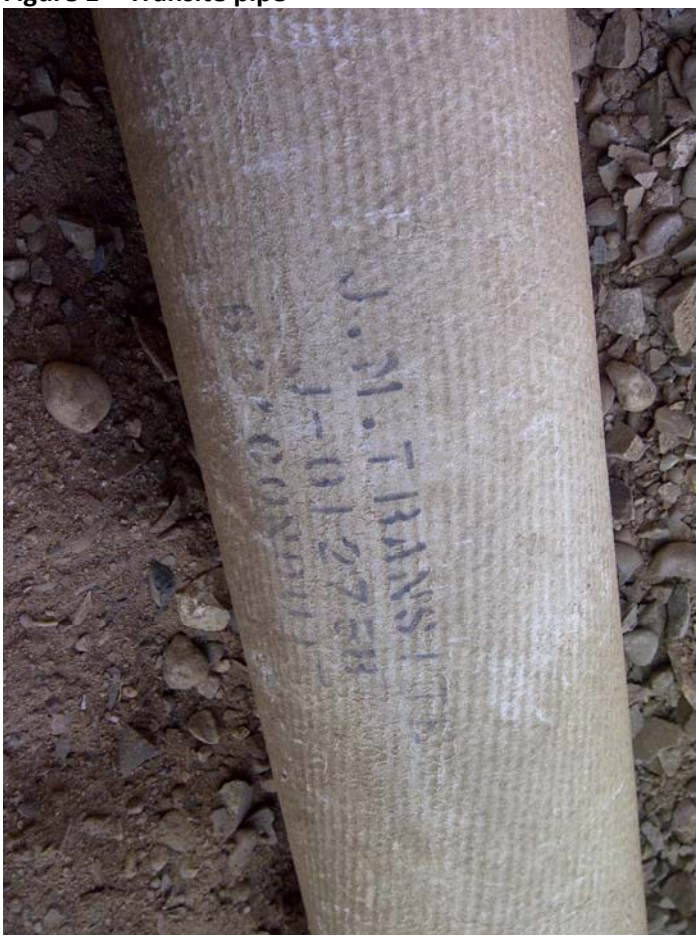


Figure 2: Burrito-Wrapping of Pipe

Figure 3: Pipe Cutting by Applying Pressure

Figure 4: Required PPEs when Saw-Cutting