COMMANDER, NAVY REGION SOUTHWEST

WASTE MANAGEMENT PLAN
SAN DIEGO METRO AREA

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
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25 January 2007

From: Environmental Program Director
To: Distribution

Subj: WASTE MANAGEMENT PLAN - SAN DIEGO METRO AREA

Ref: (a) OPNAVINST 5090.1B, Environmental and Natural Resources Program Manual

Encl: (1) Waste Management Plan - San Diego Metro Area

1. Pursuant to reference (a) and Federal, state, and local laws and regulations, Navy commands are required to implement programs to properly manage hazardous and other types of wastes.

2. Enclosure (1) is provided as a living document to establish policy, procedures, control, and responsibilities for the proper management of these wastes and to promote the protection of the environment while supporting operational readiness.

3. Please disseminate to all appropriate personnel in your cognizance.

PETER KENNEDY

Distribution:
CO, NAVAL BASE CORONADO
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CHANGES AND UPDATES TO CNRSW WASTE MANAGEMENT PLAN

Change Date	Changes/Notes
(1) June 24, 2005	Complete revision of original document. All sections affected.
(2) July 11, 2005	Page 57: HW Guidance for Fluorescent and HID Lighting Waste. Green-tipped light bulbs are no longer considered non-hazardous. As of 2/9/04, they must be managed as hazardous or universal waste. Pages 68 and 71: HW Guidance for Aerosol Container Mgmt and Pesticide Mgmt. To better reflect the regulations and make the text consistent, text was changed to indicate that all aerosol containers that contain/contained pesticides, regardless of whether they are empty or not, shall be managed as hazardous waste, unless it can be proven they do/did not contain extremely or acutely listed waste.
(3) July 13, 2005	Added Section 20: Waste Tires.
(4) July 14, 2005	Added Section 21: Chemical, Biological & Radiological (CBR) Filters.
(5) August 2006	Minor wording changes to all sections to update with regulatory developments. Part I Section 3.4 subsections .1, .2, and .3 - minor additions on interpretations. Part I Section 3.7(d) - added discussion on annual certification of Business Plans. Part I Section 3.10 subsections b, c, and d - minor corrections and added reference to Appendix with phone numbers. Part I Section 5.2 - minor language improvements and stressing safety during spills. Part I Section 5.3 - minor correction to inspect extinguishers every 30 days, not monthly. Part I Section 5.7 - explained Part B permitted facility. Part I Section 7.2 - revised to include co-generated waste. Part I Appendix 6 - updated contacts. Part I Appendix 9 - added CNRSW Letter to DTSC on Naval Vessels and EPA ID Numbers. Part III Section 16.6 - included >90 day storage if storage area is below 32 degrees F.
(6) January 2007	Minor wording changes to all sections to improve readability and to update with regulatory developments. Part I Section 3.11 & associated appendices - added discussion of hazardous waste generation categories, policy letter, and contractor manifesting procedures. Part IV Section 22 - added Used Cooking Oil guidance. Part IV Section 23 - added Used Copier / Toner Cartridges guidance.
(7) March 2007	Part III extracted as stand-alone document: Medical Waste Management Plan. Part IV (Other Wastes) renamed as Part III of HWMP.
(8) July 2007	Part I Appendix 6 – updated contacts, TWW marine camel photos and profile for ammo boxes, batten boards.
(9) March 2008	Part III Other Wastes – Section 13, Used Tires and Appendices BB and CC. Updated text to reflect that tire manifest and trip log were combined into one document called CA Comprehensive Trip Log and Receipts (Form 203), along with Unregistered Hauler and Comprehensive Trip Log Substitution (Form 204). Part I Appendix – 6 updated contacts.

(10) August 2009	Part I, Page I-iii – added reference links to new HW Guidance documents for Ship-to-Shore Offload Procedures and EPA ID Numbers & Manifest Signature Authority. Part I, Page I9 – removed repeated bullet line item in Section 3.3(3). Part I, HW Guidance for Used Absorbents – lists were consolidated and text was added to clarify labeling, material segregation, and free liquids requirements. Part I, HW Guidance for Spent Dry Cell Batteries – entirely changed/updated to better reflect packaging and transportation requirements. Part I, HW Guidance for Cathode Ray Tubes – minor formatting changes. Part I, HW Guidance for Automotive Type Spent Lead-Acid Batteries – minor wording changes for clarity. Part I, HW Guidance for Expired Chemicals & Materials – added sections regarding chemical segregation and FISC/DRMO review requirements. Part I, HW Guidance for Asbestos-Containing Materials – added section describing wetting and double-bagging of friable asbestos. Part I, HW Guidance for Treated Wood Disposal – rewritten and reorganized to better reflect regulatory guidelines and treated wood types. Part I, HW Guidance for Mercury-Containing Wastes – added section on dental traps and improved section on dental amalgam scraps. Part I, HW Guidance for Discarded Consumer and Industrial Devices – replaced web link to updated DTSC-approved CAR list location. Part I, HW Guidance for Ship-to-Shore Offload Procedures – new HW Guidance document. Part I, HW Guidance for EPA ID Numbers & Manifest Signature Authority - new HW Guidance document. Part I, Appendix 6 – updated CNRSW Points of Contact list. Part I, Appendix 10 – updated hazardous substance fee rates chart. Part II, Section 10.1 – provided clarifications on types of treated wood wastes and provided reference to DTSC fact sheet. Part II, Appendix D – added photo of pressure-treated wood. Part IV – New section describing Medical Waste Management procedures.
(11) October 2009	Part I, HW Guidance for PCBs in Caulk – new HW Guidance document. Part I, HW Guidance for PCB Management – updated to include information regarding PCBs in caulk. Part I, HW Guidance for Construction Debris Containing Lead-Based Paint – updated to include information regarding PCBs in caulk. Part I, Page I-iii – added reference link to new HW Guidance document for PCBs in Caulk.
(12) November 2009	Part III Other Wastes – Section 14, Chemical, Biological & Radiological (CBR) Filters – the metal silver added to text discussion of CBR filters. Part I, HW Guidance for Contaminated Containers – added details regarding pesticide container rinsing and links to HW Guidance for Pesticide Container Management. Part I, HW Guidance for Pesticide Container Management – added clarification regarding management of empty pesticide containers. Part I, HW Guidance for Low Level Radioactive Wastes – updated LLRW internal contacts and clarification regarding tritium exit signs. Part I, HW Guidance Addendum for Paints and Painted Debris – added clarification regarding the rinsing of water-based paint equipment that does not contain fungicides or algaecides. Part I, HW Guidance for Discarded Industrial Devices – added clarification regarding Certified Appliance Recyclers (CAR) and the Sustainable Solid Waste (SSW) Program. Part I, HW Guidance for Automotive Type Lead Acid Batteries – added clarification regarding manifesting and acceptable container types.

(13) March 2010	Minor changes made to all sections of Part IV to improve readability. Part IV, Appendices – Added Appendix B: Flowchart to Determine Disposal Method of Medical Related Products and Supplies, and Appendix C: Navy and Marine Corps Public Health Center Pharmaceutical Waste Management Guidelines. Part IV, Introduction – removed language in paragraph (3) referencing CNRSW and COMPACFLT. Part IV, Introduction – removed language in paragraph (3) addressing specific small quantity generators that dispose of their waste in conjunction with afloat commands. Part IV, Administration, Section 1.1(c) – removed sentence referring to using manifests for future reference. Part IV, Medical Waste Overview, Section 3.1(b) – added section "b" regarding medical waste that meets hazardous waste criteria. Part IV, Medical Solid Waste, Section 3.2(a) – changed examples of medical waste from a paragraph to a list format. Part IV, Medical Solid Waste, Section 3.2(b) – clarified requirements to discard medical products as medical solid waste. Part IV, Medical Solid Waste, Section 3.2(c) – added section "c" regarding disposal of medical products that meet hazardous waste criteria. Part IV, Medical Solid Waste, Section 3.2(e) – clarified that waste must be characterized as non-hazardous before it is disposed into a municipal Class III Landfill. Also added sentence identifying Miramar Landfill as the class III landfill used in San Diego County. Part IV, Biohazardous Waste, Section 3.3(c)(2) – Added sentence listing regulated body fluids. Part IV, Waste Pharmaceuticals, Section 3.5(c) – expanded section "c" from three to four categories of waste pharmaceuticals and added examples. Removed link to Navy Environmental Health Center Pharmaceutical Waste Management Guidelines and added these guidelines as Appendix C. Note: NEHC is now the Navy and Marine Corps Public Health Center (NMCPHC). Part IV, Waste Pharmaceuticals, Section 3.5(e) – added section "e" regarding the EPA's current proposal to add pharmaceutical waste to the Universal Waste Rule. Part IV, Accumulation and Storage, Section 3.6(d) – Added section "d" addressing accumulation time limit for medical waste stored below 32 degrees Fahrenheit. Part IV, Waste Turn-in (Disposal), Section 3.10(c) – removed last sentence stating that shore activities, tenants, or commands desiring medical waste disposal service through the medical waste contract must follow the procedures to be added as a customer.
(14) July 2010	Part I, HW Guidance for Electronic Waste – new HW Guidance document. Part I, HW Guidance for Ozone Depleting Substances (Halons/Freon/CFCs) – new HW Guidance document. Part I, HW Guidance for Pharmaceutical and Personal Care Products – new HW Guidance document. Part I, HW Guidance: Is it Treated Wood Waste? – new HW Guidance document. Part I, HW Guidance for Treated Wood Disposal – Expanded and identification of treated wood waste separated into new HW Guidance document titled "Is it Treated Wood Waste?" Part I, HW Guidance for Low Level Radioactive Wastes (LLRW) – updated contact information. Part I, HW Guidance for Spent Dry Cell Batteries – added updated information reflecting DOT guidance removing requirement to protect spent non-rechargeable dry cell batteries <9V and rechargeable dry cell batteries <9V from short-circuiting during transport. Part I, Section 3.6, added instruction regarding hazardous waste manifest correction letters. Appendix 8, Contractor Manifesting Procedure – Appendix replaced with revised version dated 10 May 2010 and designated as Appendix 8-A.

	Appendix 8-B – new Appendix detailing CNRSW policy regarding hazardous waste manifest error correction letters and generator mailing addresses. Part II, Section 10.1, Treated Woods – Information added regarding varying soft/hard wood constituent absorbencies, utility pole exemption, and specific landfills. Updated Table of Contents to reflect document changes/additions. Hazardous Waste Guidance documents: re-ordered for ease in locating.
(15) June 2012	Part I, HW Guidance for Pharmaceutical and Personal Care Products – Nicotine gum and lozenges added as special management products.

PART I

HAZARDOUS WASTE MANAGEMENT

PART I

TABLE OF CONTENTS

INTRODUCTION 1

SECTION 1 - HAZARDOUS WASTE MANAGEMENT PLAN ADMINISTRATION 2

1.1 PURPOSE 2
1.2 COMMAND RESPONSIBILITIES 2
1.3 CNRSW ENVIRONMENTAL PROGRAM RESPONSIBILITIES 3
1.4 CONTRACTOR OPERATED HAZARDOUS WASTE FACILITIES 3

SECTION 2 - REGULATORY AUTHORITY & REQUIREMENTS 5

2.1 OVERVIEW 5
2.2 RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) 5
2.3 COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION & LIABILITY ACT (CERCLA) 5
2.4 FEDERAL FACILITIES COMPLIANCE ACT (FFCA) 5
2.5 CODE OF FEDERAL REGULATIONS (CFR) 6
2.6 CALIFORNIA HEALTH AND SAFETY CODE (HSC) 6
2.7 CALIFORNIA CODE OF REGULATIONS (CCR) 6
2.8 LOCAL ENVIRONMENTAL REQUIREMENTS 6

SECTION 3 - HAZARDOUS WASTE MANAGEMENT 7

3.1 HAZARDOUS WASTE DETERMINATION 7
3.2 HAZARDOUS WASTE ANALYSIS 7
3.3 HAZARDOUS WASTE CHARACTERISTICS 8
3.4 HAZARDOUS WASTE ACCUMULATION AREAS 10
3.4.1 STORAGE & SEGREGATION 10
3.4.2 CONTAINERS & STORAGE TANKS 11
3.4.3 SATELLITE ACCUMULATION AREAS 13
3.5 HAZARDOUS WASTE COORDINATOR TRAINING 15
3.6 RECORD KEEPING REQUIREMENTS 15
3.7 PERMITS & HAZARDOUS MATERIAL BUSINESS PLANS 16
3.8 HAZARDOUS WASTE TREATMENT 16
3.9 HAZARDOUS WASTE RECYCLING 17
3.10 HAZARDOUS WASTE TURN-IN PROCEDURES 18
3.11 HAZARDOUS WASTE GENERATION CATEGORIES 19

SECTION 4 - UNIVERSAL WASTE MANAGEMENT 21

4.1 OVERVIEW 21
4.2 MANAGEMENT & STORAGE 21
4.3 LABELING & MARKING 22
4.4 TRANSPORTATION & RECORD KEEPING 22

SECTION 5 - EMERGENCY AND NON-EMERGENCY PROCEDURES 23

5.1 PURPOSE.....23
5.2 EMERGENCY NOTIFICATION PROCEDURES.....23
5.3 EMERGENCY SPILL EQUIPMENT.....23
5.4 NON-EMERGENCY NOTIFICATIONS.....24
5.5 ABANDONED & DISCARDED HAZARDOUS SUBSTANCES.....24
5.6 NOTIFICATION PROCEDURES.....24
5.7 TRANSPORTATION & DISPOSAL.....25

SECTION 6 - HAZARDOUS WASTE MINIMIZATION 26

6.1 PURPOSE.....26
6.2 IMPLEMENTATION.....26

SECTION 7 - CONTRACTOR RESPONSIBILITIES 28

7.1 CONTRACTOR GENERATED WASTES.....28
7.2 CO-GENERATED AND GOVERNMENT-GENERATED HAZARDOUS WASTES.....29

APPENDICES

Appendix 1	Letter of Designation
Appendix 2	Weekly Accumulation Inspection Form
Appendix 3	Daily Tank Inspection Form
Appendix 4	Hazardous Waste On-The-Job Training Requirements
Appendix 5	Spill Report Form
Appendix 6	CNRSW Points of Contact
Appendix 7	Policy on Hazardous Waste Generated by Contractors in San Diego Metro Area
Appendix 8-A	Hazardous Waste Manifesting for Contractors Procedure
Appendix 8-B	Hazardous Waste Manifest Error Correction Letters
Appendix 9-A	Sample Hazardous Waste Label
Appendix 9-B	Sample Excluded Recyclable Material Label
Appendix 9-C	Sample Non-Hazardous Waste Label
Appendix 10	CNRSW Board of Equalization Policy Letter
Appendix 11	CNRSW Letter to DTSC on Naval Vessels and EPA ID Numbers with Related Historical Documentation

HAZARDOUS WASTE GUIDANCE DOCUMENTS

EPA ID Numbers & Manifest Signature Authority

Hazardous Waste & Special Waste Manifesting

Dumpster & Landfill Restricted Items

Ship-To-Shore Offload Procedures

Used Oil Management

Drained Used Oil Filters

Oily Rags & Debris

Used Absorbents

Automotive Type Spent Lead-Acid Batteries

Spent Dry Cell Batteries

Asbestos Containing Materials (ACM)

Mercury Containing Wastes

Compressed Gas Cylinders

Ozone Depleting Substances (Halons/Freon/CFCs)

Abrasive Blast Media

Process Ash Residuals

PCB Management

PCBs in Caulk

Discarded Industrial Devices

Scrap Metal Products

Painted Construction Debris

Hazardous Waste Addendum for Paints & Painted Debris

Resins, Urethanes & Epoxy Paints

Latex Paint & Debris

Low Level Radioactive Wastes (LLRW)

Electronic Waste

Fluorescent & H.I.D. Lighting Wastes

Cathode Ray Tubes (CRTs)

Is it Treated Wood Waste?

Treated Wood Disposal

Expired Chemicals & Materials

Hazardous Materials Management

Pesticide Container Management

Aerosol Container Management

Contaminated Containers

Pharmaceutical and Personal Care Product Management

INTRODUCTION

Commander Navy Region Southwest (CNRSW) Environmental Program's goal is to be recognized for its leadership and excellence in environmental protection, pollution prevention and compliance while effectively executing fleet support functions and shore based operations for national defense. The CNRSW Environmental Program mission is committed to providing environmental support and technical guidance that maximizes the operational flexibility for command operations in a manner that emphasizes the protection of the environment and compliance with hazardous waste laws.

To accomplish this mission and obtain our goal, the CNRSW Hazardous Waste Program Office provides a personal commitment, resource management, and technical knowledge in order to strive for environmental excellence for the protection of the environment, and provide maximum support to shore based and afloat communities.

Environmental laws and regulations have increased exponentially in recent years. General hazardous waste management requirements are specified in federal, state and local laws and regulations. For example, Title 40, Code of Federal Regulations (CFR), Title 22, California Code of Regulations (CCR), California Health and Safety Code (HSC) and San Diego County Code of Regulatory Ordinances. Because sovereign immunity has been waived for hazardous waste requirements, Commands located on CNRSW are required to comply with these standards. Military installations are routinely inspected for compliance with these requirements by the California Environmental Protection Agency (Cal-EPA) Department of Toxic Substance Control (DTSC), the San Diego County, Department of Environmental Health (DEH), and on occasion, by the U.S. Environmental Protection Agency (U.S. EPA). Each regulatory agency has their specific jurisdiction regarding hazardous waste compliance. In addition, these agencies, through enforcement actions are authorized to issue Notices of Violation (NOV) for issues of non-compliance. If violations occur, fees or fines can by levied against the overall Navy, the specific effected command, or the individual responsible for causing the violation.

Normally, state and local regulatory agencies have more stringent environmental requirements and policies than those established by federal law. To identify and comply with these more stringent requirements, specialized knowledge and expertise are required. CNRSW Hazardous Waste Program Office through the information provided within this Hazardous Waste Management Plan (HWMP) will help your command identify and understand your responsibilities for compliance with hazardous waste requirements.

Compliance with environmental requirements is mandated by the Federal Facilities Compliance Act, signed into law in 1992 by then President Bush. Additionally, operational guidelines are established within OPNAVINST 5090 (series), along with other DoD and DoN Policies. Therefore, compliance with these requirements is mandatory, not only by directive, but also as a good environmental steward in the role of leadership.

SECTION 1 - HAZARDOUS WASTE MANAGEMENT PLAN ADMINISTRATION

1.1 Purpose

a. To provide CNRSW commands and activities military and civilian personnel with an environmental reference document to support overall hazardous waste management by defining your responsibilities "as generators of hazardous waste" relating to hazardous materials/waste accumulation, storage, record keeping, training and disposal issues. Additionally, this document will establish an effective waste management program for hazardous waste compliance for all areas under the cognizance of the Admiral.

b. The requirements specified within part I of this plan only reflect the provisions for non-explosive hazardous waste. **Explosive hazardous waste requirements are identified in the Commander Navy Region Southwest, Explosive Hazardous Waste Management Plan**, or established installation plans and policies.

1.2 Command Responsibilities

a. Commands whose operations or processes generate hazardous waste and or maintain less than 90-day hazardous waste accumulation areas or operate satellite accumulation areas must comply with all federal, state and local hazardous waste laws and regulations.

b. Become familiar with any environmental permits and their provisions that may apply to their operations or processes, and recognize the responsibilities of a hazardous waste generator relating to the "*cradle to grave*" hazardous waste disposal requirements.

c. Appoint in writing, personnel that are designated as the command or shop hazardous waste coordinator, who will be responsible for handling of hazardous waste for that area. These may be collateral duty positions, but their tasking must be prioritized to allow them to serve as a point of contact in matters regarding hazardous waste and related environmental issues.

d. Ensure all command personnel assigned to hazardous waste operations complete a program of classroom instruction or on-the-job training as identified in Section 3-5 within 6 months after being assigned their duties. This training must also include an annual refresher, which addresses the specific duties and responsibilities being performed by the individual.

e. Maintain at each generator location, records for hazardous waste turn-in, waste profile sheets, laboratory analysis, copies of manifests or any other information relating to hazardous waste determination or disposal.

f. Maintain at each generator location, copies of environmental training records, designation letters and waste handler certificates for personnel currently and previously involved in

hazardous waste operations. These records shall also include annual Hazardous Material Business Plan (HMBP) training and any other documented hazardous waste training.

g. Coordinate with the CNRSW Environmental Program and the Navy On-Scene Coordinator (NOSC) immediately after a spill to provide all necessary clean-up, disposal and /or reporting information to ensure proper compliance with applicable hazardous waste laws and regulations.

1.3 CNRSW Environmental Program Responsibilities

Shall research, develop and disseminate hazardous waste instructions and guidance, serve as the primary point of contact to regulatory agencies, and provide oversight for the overall management of hazardous waste. This includes, but is not limited to:

a. Advise commands on changing environmental laws, regulations or other requirements that will effect or potentially adversely impact command specific hazardous waste operations or processes.

b. Request funding from higher echelon commands for containerized hazardous waste disposal, storage area permits, hazardous waste analysis and hazardous waste generation fees.

c. Submit documentation for hazardous waste accumulation area permits and Hazardous Materials Business Plans, including plan or site map modifications or site closures to the DEH.

d. Develop and disseminate appropriate guidance and instructions on the proper management, storage and handling of hazardous waste.

e. Act as liaison to address CNRSW specific questions or concerns on hazardous waste management issues, CNRSW policy or guidance, Unified Facility Permits, Tiered Permitting or other issues relating hazardous waste operations.

f. Coordinate submittal information for required environmental reports or data calls such as: EPCRA, P2ADS and biennial reports to the appropriate regulatory agencies or naval activities.

g. Conduct oversight inspections for host and tenant commands relating to specific areas of environmental compliance under applicable hazardous waste standards.

1.4 Contractor Operated Hazardous Waste Facilities

a. The Naval Facilities Engineering Command Southwest (NAVFAC-SW) is the primary contracting organization responsible for the proper operation, transportation, storage and disposal of hazardous waste via the permitted hazardous waste facilities at CNRSW Metro installations. These operations have been outsourced under Navy contract to various public waste management companies. This includes the operation of RCRA permitted

hazardous waste storage facilities, an accredited analytical laboratory, and several bilge and oily waste treatment systems (BOWTS).

b. To the maximum extent feasible, all hazardous wastes or substances should be disposed of through the NAVFAC-SW operated hazardous waste facilities in accordance with their waste acceptance requirements. Hazardous waste turn-in procedures are provided in Section 3.10.

c. Any customer services issues that arise associated with analysis/transportation/storage/ treatment/disposal of hazardous waste should be addressed directly to the appropriate NAVFAC-SW Subject Matter Experts (SME). See Appendix 6 for contacts and phone numbers.

SECTION 2 - REGULATORY AUTHORITY & REQUIREMENTS

2.1 Overview

CNRSW military and civilian personnel must be aware of the environmental laws and regulations which pertain to their specific process or operation which generate, store, treat or dispose of hazardous wastes. These requirements have been established and mandated by federal, state or local law and are not discretionary. Cited below are the environmental laws and requirements that outline the major components of overall hazardous waste management program.

2.2 Resource Conservation and Recovery Act (RCRA)

A 1976 amendment to the first federal solid waste legislation, the Solid Waste Disposal Act of 1965. In RCRA, Congress established initial directives and guidelines for U.S. EPA to regulate and manage solid waste, including hazardous waste. RCRA established a regulatory system to track hazardous substances from the time of generation to final disposal. The law requires safe and secure procedures to be used in treating, transporting, storing and disposing of hazardous waste. RCRA also addresses "cradle to grave" hazardous waste management, establishes the duties and responsibilities of hazardous waste generators regarding the storage, treatment and disposal of hazardous waste, and authorizes the EPA to issue corrective actions clean-up orders for hazardous waste releases.

2.3 Comprehensive Environmental Response, Compensation & Liability Act (CERCLA)

Federal law authorizes U.S. EPA to manage and respond directly to releases of hazardous substances that may endanger public health or the environment. Imposes strict liability for environmental clean-up on persons whose actions caused the release, and requires immediate reporting to the National Response Center on hazardous substances or chemical releases exceeding the Reportable Quantity (RQ) limitations. The Superfund Amendments and Reauthorization Act (SARA) were enacted in 1986 to amend the provisions of CERCLA. SARA Title III, is the Emergency Planning and Community Right-to-Know Act of 1986 or (EPCRA). **EPCRA** requires each state to have an emergency response plans, and any company that produces, uses or stores more than certain amounts of listed chemicals must meet emergency planning requirements, including release reporting. EPCRA also focuses on hazards associated with toxic chemical usage and release data, and includes notifications of listed chemical usage to federal, state and local regulatory agencies.

2.4 Federal Facilities Compliance Act (FFCA)

Enacted by presidential proclamation in 1992 this law expands the enforcement authority of Federal, State and local regulators with respect to hazardous waste management and other relevant areas of environmental compliance at federal facilities. Requires the payment of fees for service, assessed in connection with hazardous waste regulatory inspection programs, or

for the amount of hazardous waste generated at the facility. Waives government sovereign immunity, allowing regulatory agencies to issue fines and penalties for violations on issues of non-compliance.

2.5 Code of Federal Regulations (CFR)

Title 40, CFR is formed from the requirements of RCRA, CERCLA, TSCA and several other specific environmental legislation. 40 CFR is overseen and enforced throughout the U.S. and its territories by the U.S. EPA, and by most state and local regulatory agencies. From these regulations, come the management standards applicable for hazardous waste, spill notification and required reporting, including exclusion and exemptions from hazardous waste management requirements.

2.6 California Health and Safety Code (HSC)

As with RCRA being federal law, the Health and Safety Code is state law. Within the aspects of state law, or statute, each state, has the ability to meet or exceed the standards specified by federal law. California has far more stringent environmental requirements than the federal regulations. In addition, under the HSC an entire classification of hazardous waste exists. These state specific hazardous waste classifications are known as Non-RCRA, meaning the waste or series of wastes are not addressed or enforced under the previsions of RCRA, but are hazardous waste none the less within California, and must be managed accordingly.

2.7 California Code of Regulations (CCR)

Title 22, CCR is the state equivalent of 40 CFR, but only specifically addresses hazardous waste management, and some aspects of hazardous materials that are improperly labeled or stored. Again, Title 22 is far more stringent than the federal counterpart, to the point, if compliance is achieved under Title 22, most, if not all of the federal regulations governing hazardous waste management will also be achieved. Title 22 also addresses California specific waste determination testing, storage and inspection requirements, presumed wastes, and waste management requirements.

2.8 Local Environmental Requirements

San Diego County, Department of Environmental (DEH) acts as the Certified Unified Program Agent (CUPA) under authorization from Cal-EPA to implement state environmental requirements. Under these aspects city/county ordinances were enacted to manage hazardous waste/materials, medical waste, underground tanks, etc. In some cases these ordinances exceed state requirements or require special requirements such as the Unified Facility Permits for hazardous waste accumulation areas.

SECTION 3 - HAZARDOUS WASTE MANAGEMENT

3.1 Hazardous Waste Determination

a. Once a hazardous material, substance or residue is discarded, abandoned, or is no longer usable for its intended purpose, it becomes classified as a waste. The waste classification is contingent on the properties of the material and any associated hazard obtained during the process or usage. Hazardous waste is any hazardous material, substance or residue, which is spent, off-specification, expired, retrograde or non-recyclable or due to the concentration, toxicity, physical or chemical characteristics meets or exceeds the threshold limitation levels identified in environmental regulations, or any waste substance that may cause or significantly contribute to death, serious irreversible illness or pose a substantial present or potential hazard to human health or the environment.

b. Hazardous wastes are identified and classified under several different and distinct sets of waste streams, and waste management requirements. The Federal hazardous waste classification system uses specific listing (F, K, P, and U) and characteristic testing to determine if a waste is **RCRA** hazardous waste. California has additional listing and testing criteria that captures more wastes. These are identified as **Non-RCRA** hazardous wastes. All hazardous waste generators in California must comply with both RCRA and Non–RCRA hazardous waste requirements. This waste classification is important based on the disposal process and waste acceptance criteria of the receiving facility. Furthermore, several wastes may be managed as Universal Wastes (UW) and some non-hazardous wastes must be managed under the requirements of Special Waste (SW), as identified in Part II of the HWMP. Based on waste determinations, all wastes must be classified into one of these categories, or be managed as non-hazardous solid waste (trash) under the requirements of RCRA Subtitle D.

3.2 Hazardous Waste Analysis

a. The *generator* must determine either by laboratory analysis or user (generator) knowledge that the waste or expired substance or material is to be managed as a hazardous or non-hazardous waste. The EPA publication, SW-846, entitled, Test Methods for Evaluating Solid Waste Physical/Chemical Methods provides test procedures and guidance for making waste determinations. Based on volume and variability, a minimum of *four* representative samples of the waste substance or waste must be analyzed to determine with statistical significance, if the specific waste can be classified and non-hazardous. In addition to the SW-846 testing methods, waste analysis specific to California standards include the Total Threshold Limit Concentration (TTLC), and Solubility Threshold Limit Concentration (STLC), and a 96-hour acute bioassay. After performing the hazardous waste determination and characterizations, summarized in a “profile”, the generator must properly treat, store, recycle or dispose of the waste in accordance with all applicable environmental laws and regulations.

b. Applying user knowledge for waste determination is adequate if the suspected waste is to be managed and disposed of as hazardous waste. However, for a waste to be managed as non-hazardous, the application of this type of waste determination, or management practice must have a scientific or analytical backing, or other means of being quantifiable. Waste determination and classification without foundation, or another form of defensible position or other clinical data is subject to extreme scrutiny from regulatory agencies. In cases where waste classification and management is questionable, the regulatory agency can, and will, sample the suspected waste for analysis.

3.3 Hazardous Waste Characteristics

a. A waste becomes classified as a RCRA or non-RCRA hazardous waste when the characteristic or hazardous property of the waste meets or exceeds the regulatory limits set for ignitability (flash-point), corrosivity (pH), reactivity or toxicity (heavy metals or bioaccumlative substances).

b. Hazardous wastes are identified, classified, and segregated by characteristics or hazardous class. Although most wastes have only a single characteristic, some wastes exhibit multiple hazards, such as being both ignitable and reactive or toxic and corrosive.

c. It is important to know what the waste characteristic or hazards are when handling, selecting containers, placing the waste into storage, or selecting a location for your accumulation area. The following standards apply to both RCRA and non-RCRA hazardous wastes, except when specified otherwise.

(1) Ignitability: (D001) When a wastes, substance, residue or spent material exhibit any of the below characteristics, it becomes classified as ignitable hazardous waste.

- Is a liquid (other than an aqueous solution containing less than 24% alcohol by volume) and has a flash point of less than or equal to 140 degrees Fahrenheit.
- Is non-liquid and is capable under standard temperature and pressure to cause fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard;
- Is an ignitable compressed gas as defined in 49 CFR (Department of Transportation)
- Is classified as an oxidizer, as defined in 49 CFR (Department of Transportation).

(2) Corrosivity: (D002) When a waste, substance, residue or spent material exhibits any of the below characteristics, it becomes classified as corrosive hazardous waste.

- Is an aqueous substance and has a pH of less than 2 or greater than 12.5.
- Is liquid that corrodes steel at a rate greater than ¼ inch per year.
- Is a solid that when mixed with equal parts of water, produces a solution with a pH

of less than 2 or greater than 12.5.

- Is not a liquid and when mixed with equal parts of water, produces a solution that corrodes steel at a rate greater than ¼ inch per year.

(3) Reactivity: (D003) When a waste, substance, residue or spent material exhibits any of the below characteristics, it becomes classified as a reactive hazardous waste.

- Is normally unstable and readily undergoes violent change without detonating;
- Reacts violently with water;
- forms potentially explosive mixtures with water;
- Forms potentially explosive mixtures when mixed with water.
- When mixed with water produces toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;
- Is capable of detonation or explosive reaction when subjected to an ignition source, in heated confinement or under standard (normal) temperature and pressure.
- The substance or waste is a forbidden explosive, a Class A explosive or a Class B explosive as defined by the Department of Transportation 49 CFR.

(4) Toxicity: (D004-D043) When a waste, substance, residue or spent material exhibits any of the below characteristics, it becomes classified as a toxic hazardous waste.

- Meets or exceeds, by laboratory analysis, the standards for specific compounds known to be persistent and bioaccumulative. These compounds are specific heavy metals, organic compounds and pesticides. The federal analytical testing for these compounds is known as the Toxicity Characteristic Leachate Procedure (TCLP). In California testing is performed to compare results to the Total Threshold Limit Concentration (TTLC) and the Soluble Limit Threshold Concentration (STLC).
- Meets or exceeds, the lethal dose (LD) or lethal concentration (LC) standards under acute oral, acute dermal, acute inhalation, or acute aquatic toxicity testing.
- Contains any of the sixteen known human carcinogens in a single or combined concentration, equal to or greater than 0.001% by weight or 10 parts per million (ppm).
- Contains substances as shown by experience or testing, to pose a hazard to human health or the environment when released, discarded or disposed of (such as Freon).

(5) Mixture Rule and Derived-From Rule and Dilution: The “Mixture Rule” requires that mixtures of solid waste and federally-listed hazardous waste, must be regulated as hazardous

waste. The resulting mixture becomes classified as hazardous waste for the highest waste characteristics classification of which the mixture previously contained, even if the resulting mixture falls below hazardous testing. Wastes generated from the treatment, storage, or disposal of hazardous waste is referred to as "Derived-From" hazardous waste. These types of wastes include spill residues, sludges, and ash from incinerators. The Mixture and Derived-From rules do not apply if the listed waste was listed solely for failing the characteristics of ignitability, corrosivity or reactivity. Regardless, mixing or diluting wastes may also fall under the criteria as hazardous waste treatment, and are subject to treatment standards, which are expanded upon in Section 3. 8.

3.4 Hazardous Waste Accumulation Areas

Hazardous Waste or Excluded Recyclable Materials may be accumulated at the generator location for up to *90 days* or *1 year* at an authorized satellite accumulation area.

3.4.1 Storage & Segregation

Each 90-day accumulation area should, at the minimum, be constructed or utilize the following waste management practices.

a. Impervious Base: The foundation of the waste accumulation areas should be impervious to spills or leaking waste, constructed of concrete, plastic or metal and be compatible with the waste being stored, with all cracks or gaps repaired or sealed.

b. Containment Capacity: A containment system should be incorporated and designed to have the capability of containing the contents of the largest container of liquid waste plus 10% to prevent the release of hazardous waste into the environment.

c. Drains: Storm or floor drains adjacent to, or drainage valves located within the accumulation area, should be covered, closed or sealed to avoid any possible release of waste, or contaminated rain water, into the storm drains, sewer system or surrounding environment. Also, identify where these drains will discharge in the event there is a release.

d. Aisle Space: Adequate aisle space (2-3 feet minimum) shall be maintained between rows of pallets or containers to allow for inspections, container identification, spill clean up or emergency response personnel.

e. Inspections: Personnel managing a 90-day waste accumulation area must conduct and document inspections of their facility at least *weekly*. Any hazardous waste storage tanks under their control must have documented *daily* inspection records identifying the tank and piping conditions, secondary containment or leaking substances. Leaking tanks or piping or containers must be repaired, replaced or over-packed immediately upon discovery.

- "*Weekly Inspection*" is an inspection that is conducted at some point within every calendar week or about every 5-7 days. The weekly accumulation area inspection form in Appendix 2 shall be used to conduct weekly inspections

- "*Daily Inspection*" means each operating day. An operating day is any day that personnel are in the work place conducting operations, or actually doing work, regardless if hazardous waste is being generated. The daily tank inspection form in Appendix 3 shall be used to conduct daily inspections

f. Waste Segregation: Do not place ignitable, oxidizers, and corrosive wastes on the same tank pallet or storage bay without a separation device. These wastes must be separated to avoid chemical or physical reactions if they become mixed. If possible separate waste by hazard class (wastes that pose the same type of hazard). Ignitable and reactive wastes must be stored at least 50 feet from the base property line. In general, incompatibles should be physically segregated from each other during storage and marked with appropriate warning signs. Check with Occupational, Safety and Health (OSH) Departments for other applicable workplace safety practices for incompatible chemical storage.

g. Security: Waste storage areas must be controlled, with limited access to unauthorized personnel. Warning signs should be posted identifying that location as a hazardous waste accumulation area.

h. Housekeeping: Spills, leaking containers/tanks, piping systems or puddles on top of drums must be contained and cleaned-up immediately. All trash, absorbent materials or other debris must be collected and disposed of properly.

3.4.2 Containers & Storage Tanks

a. Labels: Hazardous wastes labels must be placed on containers or tanks as soon as the first drop of hazardous waste is placed inside. An example of a completed hazardous waste label is provided in Appendix 9-A. Ensure each section of the label is properly and completely filled out with a water-resistant marker with the information indicated below.

- Generator name & address
- The word "Hazardous Waste"
- Hazardous properties (ignitable, corrosive, toxic...)
- Composition (oil &water, paint debris, solvent contaminated rags...)
- Physical state (liquid, solid, gas..)
- Accumulation start date

b. Storage Time: Monitor the accumulation start date. Hazardous waste in containers or tanks *must not exceed the 90-day storage limit* unless they meet the requirements of a satellite accumulation area.

c. Markings/Stenciling: Ensure all piping associated with hazardous waste storage tanks or piping systems associated with waste transfer operations are properly identified.

d. Closed Containers: All containers or tanks must be *closed* unless waste is being added or removed. Ensure the containers have proper fitting and tightly secured lids, rings or bungs. Screw type funnels may be left attached if they have a one way check or ball valves or another type of securing cover to prevent spillage if the container tips over.

e. Protect Against Accidental Ignition (Bonding/Grounding): In addition to eliminating obvious sources of ignition, to protect against electrostatic discharge (ESD) as an ignition source, storage areas that contain ignitable wastes (paints, solvents or fuels) must have these containers or tanks grounded during storage with bonding equipment available and used during liquid transfer operations. Bonding is the process of connecting two or more conductive objects with a conducting wire (i.e. copper), that equalizes the potential charge between them. Note that bonding does not eliminate the static charge. Grounding is connecting one or more conductive objects directly to the earth using ground rods, cold water copper pipes, or building steel. Unlike bonding, grounding drains the static charges away as quickly as they are produced. Consult with your federal fire representatives to ensure all bonding and grounding procedures meet the fire code.

f. Empty Containers: Containers that held acutely or extremely hazardous material (P or U listed), regardless of size, must always be disposed of as hazardous waste. Used empty containers greater than *5 gallons* must be marked or labeled "empty" along with the date that the container became empty and managed (dispose or recycle) within one year of that date. Used empty containers less than 5 gallons may be placed in scrap metal or plastic bins. For more details, refer to (Contaminated Container Guidance)

g. Waste Bulking/Consolidation: Bulking is defined as the process of consolidating various quantities of the same type of waste by placing them into a single, larger container. During such operations, ensure that waste being consolidated or transferred is compatible with the container the waste will be consolidated or transferred into. Allow 2-3 inches for liquid expansion when temperatures rise and clean up any spills or puddles remaining on the top or sides of containers.

h. Compatibility: Ensure the waste that is placed into the containers will not react or cause damage to the container. Avoid placing corrosives into metal containers or using containers which previously contained an unknown substance.

i. Damaged Containers: Use only containers that are structurally sound, in good condition and for substances for which the container was intended, preferably containers that meet DOT performance-based standards. Avoid using old, rusted or damaged containers. Waste in these types of containers must be repackaged. All containers holding hazardous waste must be managed in a manner to prevent leakage or spillage with secure fitting cap, lids or bungs and that is compatible with the type of waste that it is holding.

j. Containment Sumps: Sumps, and catch basins that contain or store hazardous waste are required to be managed as hazardous waste storage tanks, except if these containment devices are managed in accordance with the "emergency containment systems" requirements. Such devices systems must remain clean, empty and dry free of trash or other substances. Any accumulated rainwater, spilled or released hazardous waste, materials or substances must be removed in an expeditious manner, typically within 24 hours.

k. Tank Certifications: All hazardous waste tank systems that accumulate, treat, or store hazardous waste must have an engineering assessment certification from an independent third party professional engineer registered in California. This assessment can be valid no longer than 5 years, upon which time a new assessment must be performed. The only exception are above ground used oil or waste antifreeze tank systems meeting specific criteria with a written request sent to the Certified Unified Program Agency (CUPA). The Federal Fire Department inspects the installation, usage and design and the CNRSW-HQ Environmental Office submits the appropriate forms to the CUPA for concurrence. An approved request is good for three years and the approval letter must be readily available for presentation during inspections.

3.4.3 Satellite Accumulation Areas

Satellite accumulation areas must be managed under the same requirements of 90-day sites with the exception of weekly inspections. In addition, *ALL* of the following apply:

a. Hazardous waste must be accumulated in containers only, with volumes not exceeding *55 gallons* of a hazardous waste or *1 quart* of acute or extremely hazardous waste, per waste stream. On February 11, 1987, EPA clarified that normally only one RCRA waste shall be accumulated at each satellite area. However, DTSC allows a location to have one or more Non-RCRA waste streams in the same satellite area.

b. The waste must be stored at the initial accumulation point, which must be at or near the area where the waste was generated.

- Initial accumulation point: waste cannot be stored at any other location prior to being stored in the satellite area. However, temporary storage may be allowed if the storage is necessary to that waste generation process, and if that waste is placed into the satellite accumulation storage area prior to the end of the work shift by the person that generated the waste.

- At or near: the process generating the waste and the satellite accumulation area must be in the same or adjacent room or work area.

c. The initial accumulation point must be under the control of the operator of the process generating the waste.

- Operator of the process: the “hands-on” operator of the machinery or process that generates the hazardous waste, not the overall operator of the generator site or facility as a whole.
- Under the control: containers must be stored in the line of sight of the operator of the process generating the waste or in a locked room or compartment to which the operator can control the access.

d. The initial accumulation start date must be clearly visible on the hazardous waste label for each container used to stored waste in the satellite area.

- Initial start date: the date that the first amount of hazardous waste was placed into the container.

e. Wastes shall not be accumulated at the satellite area for any longer than 1 year or until the maximum volume limitation (55 gallons or 1 quart) has been reached. However, the 1-year time period must not be exceeded.

f. After reaching the applicable storage volume or time limitation (55 gallons, 1 quart, or 1 year) the container must be marked with the date that the limitation was reached.

- There will be 2 dates on the container or label, the initial start date (when the waste was first placed into the container) and the end date (when the time or volume limit was reached).

g. Within 3 days after reaching the applicable volume, the waste container must be transferred or relocated to a 90-day hazardous waste storage area, or to an onsite or offsite RCRA-permitted storage facility. The total storage time limitation from initial accumulation start date to the disposal of hazardous waste from the generator location (entire installation) shall not exceed *1 year*, regardless of the volume in the container.

- If the container is transferred to a 90-day storage area before the 1-year time period expires, the container must be re-labeled, so the accumulation start date is the date the container reached its specified volume in the satellite storage area (the second date indicated on the container or label).

h. All containers holding hazardous waste must be in good condition and not leaking, with no excess rust or damage that would potentially compromise the containers’ integrity.

i. All containers shall remain closed, except when waste is being added or removed and have secure fitting caps, lids, bungs or rings to avoid spillage if the container was tipped over.

- Screw in type funnels may be used in place of caps or bungs if the funnel is equipped with a one-way check valve.

j. To avoid any physical or chemical reactions the container used to accumulate waste must be compatible with the waste that it will be containing.

3.5 Hazardous Waste Coordinator Training

a. Coordinators and Handlers: All personnel that handle or manage hazardous waste are required to successfully complete either formal classroom training or a *supervised* on-the-job training program, (Appendix 4) coordinated and overseen by qualified hazardous waste personnel within 6 months of being assigned their tasks or assignments. This is to be followed by an annual refresher program.

b. Business Plan: Documented training for Hazardous Materials Business Plans is required for any newly assigned personnel and reviewed by all shop personnel annually. This review is to update personnel on emergency procedures, spill response and notification requirements, along with any waste or material storage locations that may have changed and information on materials that are used in the shop area. The CNRSW also submits an annual certification to the CUPA on all Business Plans within their area of responsibility.

c. Shop Specific: Along with the coordinator / handler training, personnel that handle or manage hazardous waste shall have shop specific training, outlining any specific waste-streams processes, permit requirements, record keeping, or other hazardous waste issues.

d. Designation Letters: Environmental coordinators and waste handlers are required to have designation letters outlining their job title for their position. This includes a written job description for their duties and responsibilities in managing hazardous waste at their location. The designation letter is prepared by the individual's supervisor or chain of command. Appendix 1 is an example designation letter provided by CNRSW Environmental staff.

3.6 Record Keeping Requirements

The following information must be available for review and maintained at the generator location for a minimum of 3 years.

a. Disposal Receipts: Waste turn-in forms, copies from manifests, bills of lading, receipts from recycled oils or other substances, Safety Kleen change outs, lead acid battery turn-ins or other items turned in or disposed of as a hazardous waste, universal waste or excluded recyclable material. CNRSW policy on when manifest error correction letters are to be prepared is provided in Appendix 8-B. This policy also gives specific instructions regarding generator mailing addresses.

- Waste Analysis: Lab analysis, waste profile sheets, test results or other documentation regarding the waste sent for treatment, storage or disposal.

- Training Records: Current and previous personnel (from the date they departed) who handle or manage waste must have copies of their environmental training

records, letters of designation, job descriptions, diplomas, training certificates or any other environmental training documents.

- Inspections: Daily inspection records for hazardous waste storage tanks and ancillary piping.

- Hazardous waste accumulation area inspection records shall be maintained at the generator location for *1 year*.

3.7 Permits & Hazardous Material Business Plans

a. Permits: A copy of the CUPA "Unified Facility Permit" or other type of permit issued by an authorized agency shall be current, readily available and posted in a conspicuous location.

b. Business Plans: Hazardous Material Business Plans are required at any location that generates hazardous waste or stores hazardous materials at any time through the year in quantities greater than or equal to 500 pounds of solid, 55 gallons a of liquid or 200 cubic feet of compressed gas. Business Plans identify material and/or waste storage locations, emergency points of contact, emergency and safety procedures, site maps and other information to assist emergency personnel in the event of a spill or release. A copy of the Hazardous Material Business Plan must be maintained at the generator location and must be updated within 30 days whenever there is a change to:

- The emergency contact person or phone numbers.

- A significant increase or decrease (50%) in the amount of hazardous material or waste that is used or stored.

- The physical relocation of waste or material storage areas.

- Installation of waste or material storage tanks

- Any other pertinent information relating to hazardous waste or materials management.

c. Documented training must be conducted annually or whenever newly assigned personnel arrive at the shop, work center, or generator location.

d. After initial submittal, annual certification is required regardless of changes. A certification form is sent to the CUPA by the installation Environmental Office for all Business Plans under their area of responsibility.

3.8 Hazardous Waste Treatment

a. Treatment is defined as any method, process or technique that is designed to change the physical or chemical composition, remove or reduce the toxic or hazardous effects, properties or characteristics of a hazardous waste.

b. Hazardous waste may be treated at the generator location in lieu of or in conjunction with disposal. Environmental regulations require generators that treat hazardous wastes at their location to apply for permits that relate to the type, the amount, and toxicity of the waste being treated.

c. Treatment permits are categorized in a process known as Tiered Permitting. Each tier has a very specific permit application, specific requirements, notifications, record keeping requirements, and operating procedures, in additional to those of hazardous waste generators. Refer all questions and provide notification prior to conducting any new treatment process to the installation Environmental Office for additional information regarding hazardous waste treatment and permitting requirements.

3.9 Hazardous Waste Recycling

a. Generators may classify and manage some of their hazardous wastes as Excluded Recyclable Material (ERM). Recyclable material is defined as a hazardous waste that is capable of being recycled, including residues, spent materials, contaminated materials, retrograde materials, and specific byproducts. The recycling exclusions or exemptions are conditional, and in general apply to on-site recycling; at unpermitted facilities and for non-RCRA hazardous waste.

b. ERM are subject to all regulations that apply to hazardous waste generators, including *90-day* storage limits, and shall not be excluded from the classification as a waste and be used or reused as specified below.

- The material is used or re-used in an industrial process to make a product not being reclaimed, or is used or reused as a safe and effective substitute for commercial products if the material is not being reclaimed or returned to the original process from which the material was generated, without first being reclaimed.

- The material is recycled and used at the same facility that generated the material.

- The material is recycled within the accumulation time of 90 days from when the material was first generated.

- The tank or container used to accumulate the recyclable material shall be labeled, and marked in accordance with the applicable hazardous waste generator requirements. Except that the container or tank must be labeled or clearly marked with the words "*Excluded Recyclable Material*" instead of "Hazardous Waste". A sample Excluded Recyclable Material label is provided in Appendix 9-B.

c. Generators that recycle more than 100 kilograms per month (35 gallons) of recyclable material shall every two years provide in writing the following information to the local authorizing agency on a official agency form. This does not apply to generators who recycle anti-freeze or solvents since CNRSW requested and the CUPA agreed to this exemption.

- The name, site address, mailing address, and telephone number of the owner or operator of any facility that recycles the generator's material.
- The name and address of the generator of the recyclable material.

d. Regardless of paragraphs (a) or (b) all of the following recyclable materials are hazardous waste and subject to full hazardous waste regulations even if the recycling involves use, reuse or return to the original process.

- Materials used in a manner constituting disposal or used to produce products that are applied to the land including, but not limited to fertilizers, herbicides, soil amendments or agricultural minerals.
- Used or spent etchants, stripping or plating solutions that are transported to an offsite facility operated by a person other than the generator.
- Used oil - (See Guidance for Used Oil Management)
- Materials accumulated speculatively – Means a material or waste that is accumulated with the intent of recycling, however less than 75% of the waste onsite at the beginning of the calendar year is actually recycled by the end of the calendar year.

e. Any person who manages hazardous waste as a recyclable material shall maintain adequate records to demonstrate that there is a known market or disposition for the material and that any exemptions or exclusions are met.

f. Refer all questions and provide notification prior to conducting any new recycling processes to the installation Environmental Office for additional information regarding hazardous waste recycling and reporting requirements. A biennial report must be submitted to the CUPA for the ERM.

3.10 Hazardous Waste Turn-in Procedures

a. This subsection outlines the requirements for CNRSW commands regarding the turn-in (disposal) of hazardous waste regardless if the turn-in is to NAVFAC-SW contractor hazardous waste operations or a private hazardous waste transporter.

b. The contractor is required to adhere to an existing pickup schedule and coordinate non-routine pickups based on customer requests. To schedule a hazardous waste pick-up, contact the NAVFAC-SW hazardous waste facility at your installation**. Refer to** Appendix 6

for the current list of service locations and phone numbers. Ensure all hazardous waste containers are properly labeled, and the containers are not leaking. For items such as closed and sealed cans, aerosol cans or non-saturated rags, plastic bags or boxes may be used in lieu of drums. However, all non-identical waste must have individual labels or markings.

c. Submit supporting documentation that identifies the type and concentration of the waste that is being disposed. This documentation is normally a waste profile sheet used in conjunction with a MSDS for known or non-mixed waste. Laboratory analyses may also be required for unknown wastes or consolidated known waste-streams. The environmental laboratory located at North Island, Building M-9, can be reached at (619) 545-8431.

d. All hazardous waste going out on the EPA identification numbers owned by CNRSW shall have only authorized personnel sign the hazardous waste manifests. The NAVFAC-SW operations staff and CNRSW staff who have completed and maintained the required DOT training may sign manifests. Additionally, ensure that a copy of the manifest is maintained at the generator location for three years and the original copies are submitted to NAVFAC-SW contractors' hazardous waste operations for proper management and tracking.

3.11 Hazardous Waste Generation Categories

There are three categories of hazardous waste generation for accountability which are described below and described in further detail in the "Policy on Hazardous Waste Generated by Contractors", Appendix 7. Determining the category of hazardous waste generation must be resolved before pursuing any disposal option.

a. **Government Generated Hazardous Waste**: Hazardous waste generated solely by the physical actions of military forces or Federal government employees shall only bear a generator EPA identification number issued to the installation where the waste was generated. Contractors removing such waste must obtain concurrence with the hazardous waste profile as Government generated, before completion of the manifest. The manifest shall be presented to the NAVFAC-SW service provider contractor for review and upon approval, the service provider shall sign the manifest, representing the installation as the generator of the hazardous waste. For more information on "Hazardous Waste Manifesting Procedures for Contractors", see Appendix 8-A.

b. **Contractor-Generated Hazardous Waste**: Hazardous waste generated solely by the physical actions of contractors that is not identified under the contract terms *shall not* be turned-in to the government hazardous waste facilities. Examples of these wastes are excess hazardous substances purchased by the contractor for a job, and wastes generated by a contractor working on non-government buildings or equipment (i.e. contractors servicing their own or leased vehicles, emergency diesel generators, painting contractor-owned or leased equipment, etc.). In these cases, the contractors will need to obtain either a permanent or a temporary EPA identification number that belongs only to the contractor. Pursuant to 6.5 HSC 25163.3, some contractors may be eligible to take the waste offsite and consolidate it at their other facilities.

c. **Co-Generated Hazardous Waste**: Hazardous waste generated by contractors working on government owned property, such as buildings, equipment and vessels, may be turned-in to the government hazardous waste facilities under specific conditions. Examples of hazardous waste that are acceptable at these facilities include building demolition, asbestos abatement, lead abatement, contaminated soil removal, spent sandblast grit, paint chip debris, oil/lubricants and hazardous substances found when cleaning-out government spaces. Under these circumstances, the installation EPA identification number would be used and the contractor would receive a "waste turn-in form" for billing, tracking and data collection purposes. Prior to being provided with a government hazardous waste facility pickup (or delivery for industrial and oily wastes) appointment, the contractor must establish funding for the services and provide a waste profile. Regardless of whether the contractor uses the government hazardous waste facilities or private hazardous waste hauler and disposal facility, the government service provider shall sign the manifest, representing the installation as the waste generator. For more detailed information, see Appendix 7. For more information on manifesting for contractors, see Appendix 8-A.

SECTION 4 - UNIVERSAL WASTE MANAGEMENT

4.1 Overview

a. Universal wastes, are a frequently generated classification of Hazardous Waste, which are commonly used by wide ranging community from the general public to industrial processes or operations. These wastes have been granted less stringent waste management and storage requirements than other types of regulated hazardous waste. This less stringent approach allows the generator longer accumulation time to promote proper recycling, treatment or disposal of larger amounts of the specific wastes.

b. Currently in California, universal wastes are comprised of the following classifications of used, spent, or discarded.

- Batteries: The full range of dry cell batteries regardless of size. This does not include spent lead-acid automotive type batteries managed under the provisions of the hazardous waste requirements.

- Lamps: All lamps, except incandescent lamps are included. All high intensity discharge, neon, mercury vapor, high-pressure sodium and metal halides lamps. Broken lamps shall be collected, containerized and managed as hazardous waste.

- Mercury Containing Items: All control devices, thermostats, dental amalgams, appliance switches, or any other type of devices or switches that contain mercury or ampoules of metallic mercury.

- Cathode Ray Tubes: Intact computer monitors, vacuum tubes, television picture tubes or similar type items that contain lead or any other regulated metal. Computer monitors should be returned to DRMO vice managed as hazardous or universal waste. However broken monitors shall be collected, containerized and managed as hazardous waste.

- Consumer Electronic Devices: Anything with a printed circuit board.

- Aerosol Containers: Although aerosol containers are classified as universal waste, these items shall continue to be managed as hazardous waste with the exception for transportation from off-site locations to a waste disposal facility or another universal waste handler.

4.2 Management & Storage

a. To maintain consistent hazardous waste management practices throughout CNRSW, and to simplify the waste management and training process for ashore commands hazardous

waste personnel, universal waste generators should continue to properly manage and dispose of their universal waste through the CNRSW hazardous waste facilities.

b. Universal wastes must be recycled at an authorized facility, taken to a CNRSW hazardous waste facility or otherwise managed as hazardous waste and may not be placed or discarded in solid waste (trash) containers. This includes fluorescent tubes broken or intact, thermostats or other switches that contain mercury ampules or any type of wet or dry cell batteries.

c. All universal wastes shall be segregated and stored under the requirements for hazardous waste management, and not be accumulation for longer than *6 months* at the generator location.

d. Broken lamps, tubes, thermometer or other universal wastes items shall be containerized and managed under hazardous waste requirements of Section 3.4.

4.3 Labeling & Marking

a. Each universal waste item that is not in a container and/or each container shall be labeled. Each label shall be identified as "*Used*", "*Waste*" or "*Universal Waste*" followed by the type of universal waste being disposed (i.e. "Used Batteries", "Waste Lamps", Universal Waste-Cathode Ray Tube").

b. Each label shall also have the accumulation start date placed on it, identifying the date that the waste became a Universal Waste.

c. Hazardous waste labels shall ***not*** be used when labeling universal wastes for transportation or disposal.

4.4 Transportation & Record Keeping

a. Universal wastes may be transported to another universal waste handler or authorized disposal facility without using a hazardous waste manifest. However, the transporter must comply with Department of Transportation DOT shipping requirement for hazardous materials by using a bill of lading or other approved shipping document. In addition, universal wastes shall not be classified as hazardous waste or waste on the shipping document.

b. Shipping documents shall be maintained at the generators location for three years from the date of shipment, to include the following information:

- Name & address of generator.
- Quantity and type of each universal waste shipped.
- Date of shipment from the facility.

SECTION 5 - EMERGENCY AND NON-EMERGENCY PROCEDURES

5.1 Purpose

To inform CNRSW personnel on the process in which hazardous materials or waste spills are handled and reported. Upon discovery of *any* spill or release either in or outside the work area, which meets or exceeds the below criteria, follow the procedures outlined in Section 5.2. The command that has responsibility for the area where the spill or release occurred or was discovered shall coordinate all initial notifications.

- Any spilled substance that is greater than 5 gallons in total volume.
- Spilled substance(s) that enters a storm drain, sewer system or body of water (bay).
- The spill is not easily controlled or contained.
- Spills that threaten human health, safety, or the environment.

5.2 Emergency Notification Procedures

a. BE SAFE. If you do not know what the spill is, STAY AWAY and simply notify the emergency responders. Do NOT try to rescue any downed personnel.

b. Notify: Federal Fire at 9-911 or Central Dispatch at (619) 524-2001 and notify the installation Environmental Office (Refer to Appendix 6), and installation Safety Office. Provide the required information as outlined in Internal Spill Report Form, Appendix 5.

c. Secure: Limit the access of personnel to where the spill or release has occurred. Use barrier tape from the spill kit, warning cones or other warning items or signs to restrict access to the surrounding area.

d. Identify: Find out what type substance was spilled or released and if possible obtain an MSDS, lab analysis or other information pertaining to that substance.

e. Isolate: If safe, prevent the spill from spreading, cover or dike any nearby floor, storm, or sewer drains.

f. Follow all the specified response, notification or evacuation requirements outlined within your shops Hazardous Materials Business Plan.

5.3 Emergency Spill Equipment

All shops that generate or accumulate hazardous waste shall maintain the following emergency equipment and inspect these every thirty days:

a. Spill Control: Spill kits containing absorbent materials (socks, pads, absorbent clay aka: kitty litter) must be located near the storage/work areas to clean up and control leaking or spilled substances or wastes.

b. Communication Devices: Telephone, two-way radio, alarms must be located at or near the waste storage area to notify emergency response personnel (fire, security) in case of a spill, release or injury.

c. Fire Fighting: Portable fire extinguishers or other fire suppression equipment designed to extinguish the specific waste or material being stored must be available at or near the storage area.

d. Decontamination: Eyewash and or shower stations (required for all corrosives being handled) shall be located at or near the storage location or operating process.

e. Equipment Maintenance: Ensure that all communication, fire fighting, and other emergency equipment is regularly inspected, tested and maintained in proper operating condition.

5.4 Non-Emergency Notifications

All hazardous substance spills that occur outside of the work area, on roadways, common areas or building must be reported as soon as practical to the installation Environmental Office, regardless of whether the spill meets or exceeds the thresholds specified in Section 5.1.

5.5 Abandoned & Discarded Hazardous Substances

The following procedures are for CNRSW personnel who discover abandoned or discarded hazardous waste, medical waste or hazardous materials at unauthorized locations, common areas, outlying Navy property (housing areas) or that has been inadvertently placed into solid waste (trash) containers or dumpsters. In addition, this section identifies the steps necessary for the proper reporting, recovery, transportation and disposal of these wastes or materials.

5.6 Notification Procedures

a. In the event of the discovery of abandoned or discarded hazardous substance the discovering person shall notify 9-911 and report the incident *only* if the abandoned substance poses an immediate threat to human safety or is being released into the environment

b. If the discovered substance poses no immediate danger as indicated above, then notify the installation Environmental Office as soon as possible.

c. If the abandoned item is a compressed gas cylinder and located on a pier contact Port Operations.

5.7 Transportation & Disposal

a. A licensed and fully trained hazardous waste hauler shall be the only entity authorized to transport Navy owned abandoned, discarded or recovered hazardous waste or materials from off-site locations.

b. All recovered abandoned or discarded hazardous waste, medical wastes or hazardous materials, along with all corresponding documentation (manifests, if applicable), shall be transported to a Navy owned, RCRA Part B-permitted, hazardous waste storage facility (TSDF), authorized to receive offsite hazardous waste.

c. All abandoned or discarded wastes or materials that have been recovered shall be managed and disposed of as hazardous waste even if the material could be deemed "usable" or recycled.

d. Any recovered medical wastes shall be held at the permitted, waste storage facility until arrangements can be made for transportation and disposal to an authorized medical waste disposal facility.

NOTE: If CNRSW personnel are notified by a regulatory or other official agency that hazardous waste or materials from their organization have been recovered from a landfill or other location, immediately notify the installation Environmental Office.

SECTION 6 - HAZARDOUS WASTE MINIMIZATION

6.1 Purpose

The Hazardous Waste Source Reduction and Management Review Act, requires generators of hazardous waste to reduce the waste they generate. Additionally, the Pollution Prevention Act established the national policy that affects all operations or processes that generate pollutants, hazardous or toxic waste, stating "pollution should be prevented or reduced at the source whenever feasible, pollution that cannot be prevented should be recycled or treated in an environmentally safe manner, with disposal being the last option." To reduce the amount of hazardous waste generated, commands need to evaluate which processes or operations cause the generation of waste and what steps, process changes, chemical substitutes or modifications can be implemented to reduce or eliminate the generation of hazardous waste.

6.2 Implementation

Pollution reduction and prevention can be accomplished by specific process review or operational improvement measures commonly known as Source Reduction. Outlined below are specific waste minimization measures that may be implemented to reduce the amount of hazardous waste generated and to reduce the overall waste disposal cost.

a. Operational Controls: Command personnel should minimize the use of hazardous materials or use less hazardous products or substances whenever possible, and incorporate operational improvements, chemical/material substitution or process modifications, thus potentially reducing or eliminating the generation of hazardous waste at the source or at the initial point of generation. Substitution of raw materials or chemicals may offer the greatest opportunity for waste reduction. Replace materials that generate large amounts of hazardous waste with materials that produces little or no waste.

b. Administrative Controls: Implementing best management practices or centrally managed material inventory controls can reduce the amount of expired, excess or retrograde materials from being disposed of as a hazardous waste. Procedural changes can be implemented in many areas of the operational process such as chemical change-out timeframes. Since these procedures only affect the operating parameters they can be implemented at no or low cost to the activity. Additionally, implementing a strict and thorough maintenance program that stresses corrective and preventive maintenance will reduce the risk of releasing hazardous materials due to equipment break down or failure.

c. Recycling/Re-use: Numerous types of hazardous waste (e.g. oils, solvents) may be re-used or recycled at the process, command hazardous waste site, or by a contractor at an offsite location. Metal or plastic containers less than 5 gallons in capacity, holding hazardous material may also be recycled as scrap, pending *ALL* the material or residue has been removed. Solvents could be re-used in cleaning or degreasing process, which may only require surface preparation prior to another cleaning or stripping process. Review Section 3. 9 for the specific requirements regarding hazardous waste recycling.

d. Treatment: Treating wastes can be effectively used to reduce the volume of hazardous waste generated and waste disposal cost by converting the waste to a non-hazardous or less toxic state. However, hazardous waste treatment requires permitting and specialized treatment units, which could potentially offset any saving in waste disposal cost. For additional information on hazardous waste treatment refer to Section 3.8.

e. Training: Educating command personnel on basic material handling practices can result in immediate and direct reductions of waste generation and cost savings. This can involve taking steps as basic as complying with existing hazardous material or waste management regulations, the operational capacity and capabilities of different types of equipment (presses, conveyers, forklifts, etc.) to prevent spills or overfills during maintenance, to keeping containers closed to prevent the deterioration or spillage of the material.

SECTION 7 - CONTRACTOR RESPONSIBILITIES

7.1 Contractor Generated Wastes

a. The Government will not provide any support, containers, technical assistance, equipment, or storage at a Government facility for contractor-generated HW. All contractors conducting operations or processes located at CNRSW that produce "contractor generated" hazardous waste shall, label, segregate, accumulate, containerize, dispose and overall manage their waste as "the generator of the hazardous waste" in accordance with all Federal, state and local environmental laws or regulations including but not limited to the following.

- Hazardous waste shall be placed into Department of Transportation (DOT) shipping containers.
- All wastes shall be compatible with the containers used to store the waste.
- Inspect container storage area weekly, checking for open or leaking containers, missing labels, and or deterioration of containers or containment system.
- Ignitable and/ or reactive waste must be stored at least 50 feet from the base property line or from the closest inhabitable building.
- All containers shall be kept closed during storage except when adding or removing contents.
- All waste/material must be compatible if they are mixed or consolidated.
- All containers must have a clearly and properly filled out label with the accumulation start date.
- All waste must be properly disposed within 90 days from the initial accumulation start date.
- Hazardous waste/material shall not be placed or disposed in dumpsters or other solid waste (trash) containers.
- All hazardous waste/material spill or releases regardless of quantity must immediately be reported to the Federal Fire Department at 9-911. Cost of the clean-up and disposal of the spilled or released material shall be the sole responsibility of the contractor.

b. Contractor hazardous waste may not use the government EPA identification number for purposes of waste disposal, and shall apply for a permanent or temporary EPA identification number specific to their operations. Contractors working on Naval vessels

shall not name the vessel but are directed to provide the installation name and pier where the vessel is berthed for purposes of providing the generating site information. Reference Appendix 11 for the CNRSW policy on this topic. Under no circumstances shall contractors applying for EPA identification numbers identify the government as owner of the number.

c. Contracting officers or their representatives shall obtain a copy of the EPA ID number application submitted to DTSC by the generating contractor. It is their responsibility to confirm that the Navy is NOT listed as the generator of the waste. For any application found to list the Navy as the generator, the contracting officer shall immediately contact the contractor to remove the Navy as the generator and get the application corrected to list the contractor as the generator.

7.2 Co-Generated and Government-Generated Hazardous Wastes

a. CNRSW commands using contractors that generate navy owned hazardous waste shall be responsible for the proper management of their waste in accordance with the provisions of the CNRSW Hazardous Waste Management Plan. For HW that the contracting officer has provided an e-mail stating that the HW is to be designated Government generated or Co-generated waste, the waste may be disposed of using the installation EPA identification number and the manifests must be signed by the CNRSW environmental services provider.

b. The contractor is required to characterize the waste, which includes any analytical testing necessary to develop a waste profile to be used for disposal. Containers are not provided to any contractor unless the HW is being turned in to the government hazardous waste facilities. The contractor must establish a Job Order Number (JON) for any environmental services. The contractor must contact the NAVFAC-SW staff (see Appendix 6) to set up this line of accounting prior to any services provided.

c. Additional fees for waste disposal may need to be secured for waste disposal payment to the California Board of Equalization. These fees are paid twice each year in various amount based on the volume of waste manifested for disposal. Refer to Appendix 10, CNRSW Policy Letter for additional information.

NOTE: Contractors should refer all questions or comments regarding this section to their respective Contract Office or NAVFAC-SW environmental point of contact. Refer to Appendix 6 for a list of contacts.

PART I

APPENDICES

Appendix 1	Letter of Designation
Appendix 2	Weekly Accumulation Area Inspection Form
Appendix 3	Daily Tank Inspection Form
Appendix 4	Hazardous Waste On-The-Job Training Requirements
Appendix 5	Internal Spill Report
Appendix 6-A	CNRSW Points of Contact
Appendix 7	Policy on Hazardous Waste Generated by Contractors in San Diego Metro Area
Appendix 8-A	Hazardous Waste Manifesting for Contractors Procedure
Appendix 8-B	Hazardous Waste Manifest Error Correction Letters
Appendix 9-A	Sample Hazardous Waste Label
Appendix 9-B	Sample Excluded Recyclable Material Label
Appendix 9-C	Sample Non-Hazardous Waste Label
Appendix 10	CNRSW Board of Equalization Policy Letter
Appendix 11	CNRSW Letter to DTSC on Naval Vessels and EPA Identification Numbers with Related Historical Documentation

Hazardous Waste Handler/Coordinator

Appointment Letter & Job Description

From:

To:

Subj: APPOINTMENT AS HAZARDOUS WASTE HANDLER/COORDINATOR

Ref: (a) Title 40, Code of Federal Regulations, Part 260 – 265
(b) Title 22, California Code of Regulations, 66265.16
(c) OPNAVINST 5090.1 Series

1. You are hereby appointed Hazardous Waste Handler/Coordinator for _____. As the Hazardous Waste Handler/Coordinator you are responsible for being familiar and ensuring compliance with the "cradle to grave" provisions as a "generator of hazardous waste". You are responsible for the proper disposal, storage and overall hazardous waste management for your work center within your area of responsibility as specified by the Federal, State and local hazardous waste regulations, references (a) & (b) and Navy Environmental Policy, Guidance and Instructions. Your duties include but are not limited to the following:

a. Maintain records for the Hazardous Waste Program, including, letters of designation, personnel environmental training documentation, hazardous waste turn-in documents, storage area and tank inspection records, business plans, waste profile sheets, lab analysis, and copies of manifests and bills of lading. This documentation shall be maintained at the generator location for three years.

b. Ensure storage/accumulation area is inspected weekly with adequate aisle space between rows of containers (2 feet minimum). Maintain at or near the waste storage/accumulation area sufficient spill control equipment able to absorb or contain the amounts and types of waste being stored and have available a properly functioning communication or alarm system to notify emergency personnel incase of injury, spills or releases.

c. Ensure all hazardous waste and or recyclable materials are properly identified, labeled, containerized, segregated by hazard class and turned-in for proper hazardous waste disposal prior to the 90-day storage limit or other applicable waste storage limits.

d. Ensure all containers are kept closed (with proper fitting lids, bungs or caps), are in good condition with no severe rust or dents, are compatible with the waste they contain, have no accumulated waste or residues on the tops of containers and are stored at least 50 feet from the property line. Flammables must be grounded during waste consolidation operations.

e. Ensure all hazardous waste tanks have documented daily inspections, check for leaks, spills or other signs of release around the tank, piping and in the secondary containment, check the tank, piping and foundation for cracks gaps or other structural damage. Check the tanks alarm system for proper operation, and annual certification (if applicable). Ensure tank and or piping are properly labeled with secure fitting covers, tanks with no covers must have a minimum 2 feet of freeboard.

f. Attend formal or supervised on-the-job training as provided by the installation Environmental Office within six months from being appointed to this position with annual hazardous waste refresher training as required.

g. Ensure training is conducted for work center personnel on emergency procedures for spills or releases, spill clean-up, fire suppression and safety equipment and locations, waste/material storage and handling requirements or any other specific environmental requirements that apply to your shop.

h. Notify emergency response personnel @ 9-911, and the installation Environmental and Safety Offices whenever there is a spill of hazardous waste/material that meets or exceeds the report thresholds or if any amount of waste or material enters storm drains, sewer system or is released into a body of water.

i. Notify the installation Environmental Office whenever there are: changes to the business plan site map, change in emergency contact person or phone number, or upon the installation or modification of any hazardous waste tanks, or any other work center changes that affect the hazardous waste program.

2. I have read and understand my position and job description as Hazardous Waste Handler/Coordinator and that I will be held accountable to fully comply with all applicable environmental regulations and Navy environmental policies.

_____ Date_____
Hazardous Waste Handler/Coordinator

_____ Date_____
Supervisor

Hazardous Waste Accumulation Area
Weekly Inspection Form

	YES	NO
1. STORAGE AREA		
All trash or debris disposed of properly.	O	O
Any sign of spills or releases.	O	O
Adequate aisle space and clear access.	O	O
2. CONTAINERS		
Are any containers leaking.	O	O
Lids and bungs securely closed.	O	O
Are any containers damaged or bulging.	O	O
Ignitable containers grounded (during transfer operations).	O	O
Are non-compatible waste segregated.	O	O
Are empty containers > 5 gallons labeled and dated when emptied.	O	O
3. LABELS		
Are all containers labeled.	O	O
Are labels properly and completely filled out and readable.	O	O
Is accumulation date less than 90 days.	O	O
4. SECONDARY CONTAINMENT		
Are there any cracks, gaps or splitting.	O	O
Are floor drains/valves plugged or closed.	O	O
Any accumulated liquid or waste in the containment area.	O	O
5. EMERGENCY EQUIPMENT		
Fire extinguishers in operating condition.	O	O
Safety shower/eyewash operating correctly.	O	O
Spill kits or absorbent material available.	O	O
Communication or alarm system is operational.	O	O

Comments/Corrective Action_____

Inspector_____ Date_____

Hazardous Waste
Daily Tank Inspection Form

The operator shall inspect at least once each operating day:

	SAT	UNSAT	N/A
1. Overfill/ spill control equipment, waste feed cutoff or drainage system to ensure that is in good working order.	O	O	O
2. Aboveground portions of the tank system (valves, hoses, piping) to detect any corrosion, cracks or leaks.	O	O	O
3. Data on monitoring/leak detection equipment to ensure the tank system is operated according to design.	O	O	O
4. Surrounding areas of the tank system, and foundation to cracks, dead vegetation, erosion or signs of release.	O	O	O
5. Ensure that tanks with no covers have a minimum of 2 feet of freeboard.	O	O	O
6. Ensure that the hazardous waste label is properly filled out and is readable.	O	O	O
7. Ensure the tanks secondary containment system has no cracks, deterioration, accumulated liquids or sludge.	O	O	O

COMMENTS/CORRECTIVE ACTION _____

Inspector _____ Date _____

Hazardous Waste

On-The-Job Training Requirements

1. Personnel that manage hazardous waste shall successfully complete an on-the-job or formal classroom training program that teaches them to perform their duties in a way that ensures the compliance with hazardous waste requirements (See Section 3-5).

2. This training program must be directed by a person trained in hazardous waste management procedures and shall include instructions which teaches personnel hazardous waste management operations, emergency procedures, and compliance requirements relevant to the positions in which they are assigned.

3. At a minimum, this program shall be designed to ensure those personnel:

- Are able to respond effectively to emergencies by familiarizing themselves with emergency procedures, equipment and systems that are specific to your shop.
- Are able to identify, separate and segregate hazardous waste by hazardous class and/ or compatibility of the wastes.
- Are able to properly containerize, manage and label hazardous waste.
- Conduct hazardous waste accumulation area inspections by identifying deficiencies
  and performing corrective actions.
- Take part in an annual review of the initial hazardous waste training as it applies to their assigned duties.
- Comply with all requirements identified within this Hazardous Waste Management Plan.

4. All training shall be in a written format and have documentation of personnel receiving the training, and shall be provided to the inspecting agency upon request.

Spill Report

1. Name of the person reporting. _____
2. Command reporting spill. _____
3. Phone number of the person reporting. _____
4. Date and time that the spill occurred. _____
5. Exact address or location of the spill. _____

   _____
6. Type of hazardous material or waste spilled. _____
7. The amount of hazardous material or waste spilled. _____
8. Describe the conditions at the spill location. _____

   _____
9. Describe control and containment. _____

   _____
10. Describe samples taken._____
11. What notifications were made? _____

    _____
12. Disposition of spilled substance. _____

    _____

NAVY REGION SOUTHWEST
POINTS OF CONTACT

CNRSW-HQ HAZARDOUS WASTE PROGRAM OFFICE

CNRSW HW Program Manager	532-3840
Alternate HW Program Manager	532-2278

CNRSW INSTALLATION ENVIRONMENTAL OFFICE DIRECTORS

NBC	545-3429
NBSD	556-1532
NBPTLOMA	553-0526

NAVFAC-SW HAZARDOUS WASTE FACILITY OPERATIONS

Subject Matter Expert Funding/Data Calls/CST	532-2058
Alternate Subject Matter Expert Funding/Data Calls/CST	532-4326
Alternate Subject Matter Expert Funding/Data Calls/CST	532-3323
Subject Matter Expert for Bulk Waste	571-4175
Subject Matter Expert for Laboratory Services	532-1524
Shaw IWOW Manager	279-9195
Shaw/Clean Harbors Containerized Waste Manager	545-6520
Shaw Laboratory Storefront Manager	954-8404
NAVSTA Containerized Waste Facility	556-9600
NASNI Containerized Waste Facility	545-6520
SUBASE Containerized Waste Facility	553-1303

Contractor Hazardous Waste Policy

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
Ser N45JHB.cg/0311
September 19, 2006

From: Commander Navy Region Southwest (N45)

Subj: POLICY ON HAZARDOUS WASTE GENERATED BY CONTRACTORS IN SAN DIEGO METRO AREA

Ref: (a) OPNAVINST 5090 Series
(b) CFR, Title 40, Part 260, et. seq.
(c) CFR, Title 49, Part 171, et. seq.
(d) USC, Title 10, Part 7311, et. seq.
(e) CA HS&C, Chapter 6.5, et. seq.
(f) CCR, Title 22, Division 4.5, et. seq.
(g) Shaw SOP HW-05-003, Hazardous Waste Turn-In Procedure for Forces Afloat
(h) Shaw SOP HW-05-004, Hazardous Waste Turn-In Procedures for Shore Activities
(i) Shaw SOP HW 05-006, Hazardous Waste Manifesting Services
(j) Shaw SOP HW 05-021, Hazardous Waste Characterization
(k) Shaw SOP HW 05-022, Hazardous Waste Pre-Acceptance
(l) Shaw SOP IWOW-021, IW/OW Waste Waste Acceptance Procedure and Criteria

1. Purpose: To provide for better control over hazardous waste that the government is liable for and that is generated by contractors providing services to military installations within the San Diego area. This policy should also provide for some cost efficiencies as related to the EPA Identification Verification fees, manifest fees, BOE fees, annual reporting and other such indirect hazardous waste management costs.

2. Scope: This policy applies to all Naval activities, including their contractors and subcontractors, in the San Diego metro area.

3. Background: CNRSW is the owner of several EPA identification numbers for various installations within the San Diego metro area. CNRSW is also the owner of RCRA permitted hazardous waste treatment, storage, and disposal facilities within the San Diego area, including some tiered permitted facilities and 90-day storage facilities. Collectively all these

locations are referred to as Hazardous Waste Facilities (HWFs). Operation of the HWFs, including management of the EPA ID numbers, manifesting services and signatory authority for hazardous waste manifests has been delegated to service providers hired by the Naval Facilities Engineering Command Southwest (NAVFAC SW). Effective April 1, 2005, the San Diego area service provider is Shaw Infrastructure and their team subcontractors, Clean Harbors and E-Max. The service providers are collectively referred to as Shaw. CNRSW and installations are required to adhere to the requirements in references (a-f).

4. Policy: There are three categories of hazardous waste generation for accountability. Determining the category of hazardous waste generation must be resolved before pursuing any disposal option.

a. Government Generated Hazardous Waste: Hazardous waste generated solely by the physical actions of military forces or federal government employees shall only bear a generator EPA identification number issued to the installation where the waste was generated. Contractors removing such waste must obtain concurrence with the hazardous waste profile as Government-generated, before completion of the manifest. The manifest shall be presented to Shaw Infrastructure for review and upon approval, Shaw shall sign the manifest, representing the installation as the generator of the hazardous waste.

b. Contractor-Generated Hazardous Waste: Hazardous waste generated solely by the physical actions of contractors that is not identified under the contract terms ***shall not*** be turned into the HWFs. Examples of these wastes are excess hazardous substances purchased by the contractor for a job, and wastes generated by a contractor working on non-government owned buildings or equipment (i.e. contractors servicing their own or leased vehicles, emergency diesel generators, painting contractor-owned or leased equipment, ...etc). In these cases, the contractors will need to obtain either a permanent or a temporary EPA identification number that belongs only to the contractor. Pursuant to 6.5 HSC 25163.3, some contractors may be eligible to take the waste offsite and consolidate at their other facilities.

c. Co-Generated Hazardous Waste: Hazardous waste generated by contractors working on government owned property, such as buildings, equipment and vessels, may be turned-in to the HWFs, under specific conditions. Examples of hazardous waste

that are acceptable at the HWFs include building demolition, asbestos abatement, lead abatement, contaminated soil removal, spent sandblast grit, paint chips debris, oil/lubricants and hazardous substances found when cleaning out government spaces. Under these circumstances, the installation EPA ID number would be used and the contractor would receive a waste "turn-in" form for billing, tracking and data collection purposes.

Prior to being provided with a Container, Storage, and Treatment (CST) facility pickup appointment or an Industrial Waste/Oily Waste (IW/OW) facility delivery appointment, the contractor must establish funding for the services. Contractors should contact NAVFAC SW Residual Organization (RO) team member Minnie McGriffin at (619) 921-7457 for assistance with this step. The funding step creates a line of accounting referred to as a Job Order Number (JON). To create an appropriate JON, the customer must submit an estimate of the type and amount of hazardous waste to be turned-in. The NAVFAC SW RO staff will provide an estimate on the amount of funding needed (i.e. 500 lbs of lead based paint chips are currently $1.75/lb as a containerized waste disposal commodity rate.) NAVFAC SW RO Team members will periodically communicate with the customer whether excess funding is to be returned upon job completion or whether additional funding is necessary based on actual volumes turned-in.

5. HWF Supplementary Information: Shaw Infrastructure and their team subcontractors do not provide manifesting services for infectious medical wastes, non-hazardous waste, unknown materials, or any solid wastes to be disposed in a Class III landfill. The HWFs are not permitted to receive radioactive waste nor Class I, II and III explosives and these must be manifested off-site directly from the originating location. References (d-l) provide additional details on hazardous waste manifesting services and hazardous waste turn in procedures.

The HWF permits for the Container Storage and Treatment locations prohibit hazardous waste delivery to the CST, therefore, hazardous waste must be picked up by the service provider. Although a pick-up schedule exists for the piers and some shore activities, customers must contact the CST to schedule a pickup service. The HWF permits for IW/OW locations are permitted to receive specified liquid hazardous waste streams in bulk (i.e. vacuum truck). Before delivery, contractors must contact the IW/OW Scheduler for waste acceptance. Contractors are required to package the waste in accordance with DOT requirements and provide hazardous waste characterization

Subj: POLICY ON HAZARDOUS WASTE GENERATED BY CONTRACTORS IN SAN DIEGO METRO AREA

information, such as Material Safety Data Sheets and/or representative analytical test results. Questions on hazardous waste packaging, characterization acceptance at the HWFs and scheduling must be directed to (619) 545-6520.

6. Request widest dissemination possible, including tenant activities and stand alone commands, auxiliary commands and all commands with contracting authority.

PETER A. KENNEDY
Program Director Environment

Distribution:

CO, Naval Base San Diego
CO, Naval Base Point Loma
CO, Naval Base Coronado
CO, Naval Facilities Engineering Command, Southwest
CO, Fleet and Industrial Supply Center, San Diego
CO, Puget Sound Naval Shipyard
CO, Military Sealift Command, Pacific
CO, Southwest Regional Maintenance Center
CO, Space and Naval Warfare Systems Center, San Diego
CO, Naval Medical Center, San Diego
Dave Young, Fitness and Recreation Program Manager
Roland Santos, Navy Exchange District Manager

Contractor Manifesting Procedure

SOP No.	HW-05-006
Date	03/09/05
Date of Revision	05/10/10
Page	1 of 11

UNCONTROLLED
WHEN REPRODUCED

STANDARD OPERATING PROCEDURE

Subject: **Hazardous Waste Manifesting**

References:
(a) Code of Federal Regulations, Title 49
(b) Code of Federal Regulations, Title 40
(c) California Code of Regulations, Title 22
(d) U.S. Navy Environmental and Natural Resources Program Manual – OPNAVINST 5090.1 (Series)

Enclosures:
(1) CSW-017 (EPA ID Number List)
(2) CSW-018 (Waste Acceptance Form)
(3) CSW-019 (Uniform Hazardous Waste Manifest)
(4) CSW-020 (Discrepancy Letter)
(5) CSW-021 (Exception Report)
(6) CSW-022 (Vehicle Inspection Form)
(7) CSW-006 (Hazardous Waste Profile Sheet)
(8) CSW-023 (Completing the Manifest)
(9) CSW-024 (Manifest Tracking Log)
(10) CSW-025 (Management Method Codes)
(11) CSW-026 (Manifest Flow Chart)
(12) CSW-027 (Completing/Reviewing the LDR)
(13) CSW-082 (Manifest Data Sheet)

1.0 PURPOSE

The purpose of this procedure is to establish a Standard Operating Procedure (SOP) for personnel providing manifesting services under contract N68711-03-D-4302.

2. BACKGROUND

The Service Provider manages EPA Identification Numbers (Enclosure 1) for Naval and Marine Corps activities in the San Diego area and provides manifesting services for Hazardous Waste (HW) generated by those activities. Manifesting services are provided for:

a) Waste generated by federal activities and transported by a private hauler under government contract.

b) Waste generated by federal activities and transported by employees of the Service Provider.

c) Waste generated by a private company that is providing services to a Naval or Marine Corps activity under a government contract if the contract states that the Navy is the generator or co-generator of the waste.

The HW manifested includes such items as gasoline, solvent, paint thinner, asbestos, oil, fuel, spent abrasive blast media, Safety Kleen solvent, and bulk pumping waste. The Service Provider does not manifest infectious medical wastes, non-HW, unknown materials, or any solid wastes to be disposed in a Class III landfill (explosives may not be received at any HWF and must be manifested off-site directly from the generator's location).

3. SCOPE

This procedure defines manifest preparation and distribution, signature authorizations, transporter vehicle inspections, and other certification requirements.

Reference: Contract ID # N68711-03-D-4302

The SOP describes the duties and responsibilities of personnel associated with the manifesting process and includes procedures for customers to obtain manifesting services. The step-by step procedure for preparing a Uniform Hazardous Waste Manifest (UHWM-Enclosure 3) is included in this SOP, however, references (a), (b), and (c) and the manifest preparation procedures detailed on the back of the last copy of any UHWM contain additional clarification.

4. ACTION

This document applies to all Service Provider personnel in the San Diego area, who are manifesting HW as authorized by the contract and CNRSW.

5. DEFINITIONS

a) **HWF Facility** – (HWF) a consolidation, storage, and transfer facility for HW and HM.

b) **CSW-** Containerized Solid Waste

c) **Hazardous Waste (HW)** – is any waste as defined in 40 CFR Part 261.3 and CCR Title 22 Part 66261.3.

d) **Hazardous Material (HM)** – is any material or substance, which even in normal use poses a risk to health, safety, or the environment.

e) **Service Provider –** The company or entity operating HWF facilities and providing Containerized Solid Waste (CSW) management services to the Navy under contract N68711-03-D-4302.

f) **Uniform Hazardous Waste Manifest (UHWM)** – is a shipping paper required by CFR, Title 40 and CCR, Title 22 to document shipment of HW or non-RCRA HW.

g) **Waste Turn-In Form** - is an accounting document used to bill activities accounts for management of their HW.

6. RESPONSIBILITIES

6.1 CSW Manager (CM)

a) Ensure that Supervisors are kept informed of customer/contractor manifesting issues that may result in command level attention.

b) Maintains this SOP and incorporates changes and revisions.

c) Ensures that manifest policy changes are communicated, in writing, to Service Provider personnel providing manifesting services prior to implementation.

d) Ensures that Service Provider personnel who provide manifesting service are properly trained and authorized to sign manifests on behalf of CNRSW.

6.2 HWF Supervisor (Supervisor)

a) Ensures Disposers/Leaders receive required training prior to being authorized to sign manifests.

b) Ensures Disposers/Leaders receive required training prior to being authorized to sign manifests.

c) Ensures Disposers/Leaders training and signature authorization requests, and material requisitions for manifesting supplies are processed in a timely manner.

Reference: Contract ID # N68711-03-D-4302

d) Ensures Disposers/Leaders follow provisions of this SOP and that any necessary changes be proposed to the CM for approval prior to implementation.

e) Ensures that "facility copies" of UHWMs are filed, kept on site, and are readily available for examination during regulatory inspections (this requirement only applies to the permitted TSDFs at NBSD and NBC).

f) Ensures that the CM is kept informed of manifesting issues that may come to Business Line level attention (including Exception and Discrepancy Reporting requirements).

6.3 HWF Disposers (Disposers)

a) Prepare UHWMs in accordance with this SOP and references (a), (b), and (c).

b) Adhere to the requirements of the SOP, submitting proposed changes or revisions to the supervisor as necessary.

6.4 HWF Leaders/Record Keeper (Leader)

a) Immediately notify the CM or Compliance Manager when a situation arises that may require a Manifest Exception Report or a Manifest Discrepancy Report for major discrepancies.

b) Report questions about manifest tracking requirements of this SOP which may require communication with federal, state and local regulatory agencies, transporters and owners/operators of Treatment, Storage and Disposal Facilities (TSDF) to the Compliance Manager or CM.

c) Initiate and complete the entries into the manifest tracking database to track the flow of manifests from initiation to final destination. Perform manifest filing as required.

d) Obtain and post the required copies of manifests to the State of California Department of Toxic Substance Control.

e) Maintain a stock of blank manifests on hand to fulfill CSW manifesting requirements.

f) Adhere to the requirements of this SOP, submitting proposed changes or revisions to the CM as necessary.

g) Maintain a secure filing system for UHWMs and Land Disposal Restriction Notifications. Ensure that the files are organized to accommodate quick search capabilities. Maintain all copies indefinitely.

h) Participate, as the manifest files expert, in regulatory agency inspections and environmental compliance evaluations as necessary to provide requested manifest copies and to describe the filing system.

6.5 CSW QC/Compliance Manager (Compliance Manager)

a) Resolve questions regarding the manifest tracking requirements of this SOP by communicating with federal, state and local regulatory agencies, transporters and owners/operators of Treatment, Storage and Disposal Facilities (TSDF), as required regarding manifesting concerns. Brief CM as necessary to ensure communication with outside parties is authorized at the appropriate level.

b) Audit manifest preparation, tracking, and filing operations periodically to ensure compliance with this SOP and references (a), (b) and (c).

Reference: Contract ID # N68711-03-D-4302

c) Assist in the preparation, review, authorization and distribution of Manifest Exception, Manifest Discrepancy or Un-manifested Waste Reports.

6.6 CSW Profile Specialist (Profile Specialist)

a) Assists in the review or creation of waste determinations, profiles and LDRs in preparation for shipment of hazardous waste.

7.0 PROCEDURES

7.1 Obtaining Service

HWF clients can obtain manifesting services, Monday through Friday, from 0730-1600, by calling (619)545-6520. There may be an additional charge for this service for non-Navy organizations as authorized by the RO. Off-base manifesting will not be scheduled after 1400. If there is a manifest service request, the Manifest Data Sheet(Encl 13) should be provided to the person requesting service for completion. The Manifest Data Sheet will be used to record the below information and shall be retained with the manifest for filing.

a) Contract, task order or job order number (JON) the service will be billed to
b) Name and contact information of the person requesting manifest
c) If the waste is generated by a contractor, the name of the contracting officer and phone number, the name of the prime contractor and contract manager.
d) Location of the waste
e) Name of generating activity and activity code and EPA ID#
f) Name, address, EPA ID#, and facility phone# of the designated TSDF.
g) Name and EPA ID# of the transporter(s).
h) Waste determination or waste profile information.
i) Who is responsible for generating the manifest and LDR form?
j) Place and time of shipment.

7.2 Pre-Manifest Requirements

Manifest requests are normally received from government contractors, staff civil engineering offices, FEAD (Facilities Engineering & Acquisition Division) offices or the Contracting office. Manifesting requests from government contractors must be approved, in writing, by the applicable government contracting office.

a) Upon receipt of a request, the Service Provider determines if CSW personnel have manifesting authority (refer to Enclosure 1). If not, the requestor is directed to the proper manifesting authority.
b) If the waste will be shipped to a Navy TSDF, verify funding for the JON.
c) If the manifesting services are being requested for bulk pumping then a Waste Acceptance Form must be initiated (Enclosure 2) for waste destined to the Industrial and Oily Waste Treatment Plant.
d) Verify the names and EPA ID#s of the Generator, Transporter and TSDF. If the EPA ID#s are not found in enclosure (1), get assistance from the Profile Specialist or Compliance Manager to verify them.

e) Verify waste determination or profile information with the assistance of the Profile Specialist.

f) A UHWM (Enclosure 3) is initiated in accordance with this SOP and references (a), (b) and (c).

g) When preparing manifests, the name of the actual waste generating activity and location (building number or street address) must be included in Box #5 under Generator's site address.

h) The following address is used in Block #5 under Generator's name and mailing address if the Service Provider is the manager of the EPA ID number.

Commander, Navy Region SW
P.O. Box 181470
Coronado, CA 92178-1470
619-545-6520

i) For waste transported by the Service Provider:

Block 6 (left) reads: Clean Harbors Environmental Services, Inc.
Block 6 (right) reads: MAD039322250
Emergency Contact: 619-545-6520 (used for transport issues beginning and ending same day during normal working hours).
Emergency Contact: 800-483-3718 (for transport before or after normal working hours, response must be coordinated with the CM in advance).

j) For Navy Facilities receiving the waste, generator name should read:

NASNI HW Facility Complex or NBSD HW Facility Complex

k) Block 13 of all UHWMs must contain federal and state waste codes to describe each waste stream (up to six). State waste codes are not to be redundant with federal waste codes.

l) California Code of Regulations part 66268 and 40 CFR 268 describe written notifications generators, transporters and TSDFs are required to communicate about the land disposal restrictions (LDR) which apply to the waste they ship. The generator or TSDF is required to determine if the waste can be landfilled without additional treatment, what treatment standards must be met and if there is a specific treatment technology required for the waste. In general, a one-time notification is required with copies maintained by both the generator and TSDF. If the waste or TSDF change, a new notification must be sent and maintained. Enclosure 12 contains additional clarification and direction on how to complete or review the LDR form. The LDR must comply with references (b) and (c). The shipment of a new waste stream necessitates a LDR with the first shipment. The regulations have changed significantly over time. Please contact the Profile Specialist with questions about how to properly complete an LDR. The person signing the manifest cannot assume an LDR already exists and must check before the manifest is signed.

7.3 Manifesting Process

Enclosure 8, "Completing the Manifest", describes the specific tasks to complete the UHWM. Where the Service Provider does not complete the manifest, this enclosure can be used to guide the review of the manifest prior to signature.

7.4 Actions at the Time of Shipment Prior to Signing the Manifest

a) Inspect the driver's license to ensure it is current and has a hazardous materials endorsement (H or X).

b) Inspect the DOT medical certificate to ensure it is current.

c) Ensure the generator, transporter and TSDF EPA ID #s are valid (see Enclosure 1).

d) Ensure the transporter has a current California DMV Motor Carrier Permit, State of California Hazardous Materials Transportation License, Department of Toxic Substances Control Hazardous Waste Transporter Registration, US DOT Hazardous Materials Certificate of Registration and Hazardous Materials Safety Permit, and Certificate of Liability Insurance.

e) Ensure the vehicle and container(s) conform to the applicable DOT regulations. (ex.vehicle must be lockable and driver must have two-way communications).

f) For any waste streams not already verified, review the profiles (see Enclosure 7 for example) and lab analyses to ensure proper waste determination.

g) If the HW pick-up requires bulk pumping, a Waste acceptance form must be completed. (See Enclosure 2)

h) After the waste is loaded, it must be inspected to ensure proper segregation and the containers are secure IAW reference (a).

i) Verify that the container count; container labeling and the manifest(s) are the same.

j) Any discrepancies observed during the inspection will be rectified prior to signing the manifest.

k) If the waste will be transported by the Service Provider, follow SOP HW-05-003 or HW-05-004.

7.5 Manifest Distribution at the Time of Shipment

a) The Service Provider manages the EPA ID#, is the transporter and manages the TSDF (Enclosure 1).

- The driver will sign the manifest (if authorized) as the generator and the transporter.
- The driver will sign the LDR (if authorized).
- The driver will provide a photocopy of the manifest to the local environmental officer and will take all copies of the original manifest and transport the waste to the designated TSDF.
- A legible copy of the "Generator initial copy" is delivered to NBC building 1606 within 48 hours.

b) The Service Provider does not manage the EPA ID #, but is the transporter and TSDF (Enclosure 1).

- The driver will sign the manifest (if authorized) as the transporter.

Reference: Contract ID # N68711-03-D-4302

- The "Generator initial copy" will be left at the local environmental office and the driver will take the remaining manifest copies with the waste to the TSDF.

c) The Service Provider manages the EPA ID#, but is not the transporter or TSDF (enclosure 1).

- The Service Provider employee will sign the manifest and LDR as the generator (if authorized).
- The Service Provider employee will provide a photocopy of the manifest to the local environmental officer and deliver a legible copy of the "Generator initial copy" to NBC building 1606 within 48 hours. The manifest data sheet and if applicable, the Land Disposal Restriction Notification and copies of analyses must be filed with the manifest
- The remaining copies are given to the driver.

d) If the shipment is not described above, the Service Provider employee will discuss proper procedure with the CM prior to manifest signature.

7.6 Manifest Distribution After Shipment

The distribution of manifests depends largely on the role that the Service Provider plays in the generation, transportation, and disposal of the subject HW. The Manifest Flow Chart (Enclosure 11) describes how manifests are handled after shipment has started.

a) The Record Keeper ensures the manifest has been filled out completely, including the Hazardous Waste Report Management Method Codes (Enclosure 10) in box 19 and enters the manifest information on the Manifest Tracking Log (Enclosure 9).

b) Manifests will be reviewed by designated personnel weekly and prior to distribution and filing. Discrepancies are directed to the Compliance Manager or CM for resolution prior to distribution and filing.

c) The Record Keeper records the subsequent filing and distribution status for each manifest on the Manifest Tracking Log. Enclosure 9 shows an example of how the data is organized.

- Manifest # Manifest Tracking Number in block 4 of the manifest
- Date Signed Generator's/Offeror's Signature Date in block 15
- Date Declared Designated Facility Signature Date in block 20
- Location Notes Description of manifest distribution

d) The Generator Initial manifest copy is maintained in a three-ring binder organized by date of shipment until the TSDF returned copy is received. The Record Keeper matches the TSDF returned copy to the Generator initial copy and files them together in the completed manifest file cabinet. Completed manifests are filed in the manifest file cabinet in folders by EPA ID# and month.

e) The Record Keeper reviews the three-ring binder with Generator initial copies of manifests weekly to ensure the TSDF returned copies are received within 30 days. If not, the Record Keeper calls the receiving TSDF after 30 days. If not received within 40 days, the CM is notified. An exception report (Enclosure 5) is written to the DTSC if not received within 45 days. This document is reviewed by the RO and the Appropriate Base Environmental Office prior to being sent.

f) Waste shipments into and out of HWF's are entered in the EWBATTS database by the Record Keeper.

7.7 Discrepancy Letters

a) Manifest discrepancies are differences in quantity or type of HW designated on the manifest, and the quantity or type of HW a facility actually receives.

b) Significant discrepancies in quantity are variations greater than 10 percent in weight for bulk waste and any variation in piece count for containerized shipments.

c) Significant discrepancies in waste type are obvious differences, which can be discovered by inspection or waste analysis, such as solvent substituted for acid, or toxic constituents not reported on the manifest.

d) Other discrepancies (such as improper EPA ID number, missing signatures, incorrect dates, etc.) that appear on a manifest must be corrected before the manifest is considered complete.

e) Upon discovery of a discrepancy, an attempt shall be made to reconcile it by telephone or written correspondence with the generator, transporter, or TSDF as applicable. Corrections to manifests following the shipment must be changed on all copies. When a manifest is corrected after shipment, documentation describing how that change was authorized and who was contacted is maintained with the manifest. If the discrepancy has not been corrected prior to distribution of one of the copies to DTSC, a Manifest Discrepancy letter (Enclosure 4) shall be sent to DTSC describing the discrepancy and attempts to reconcile it. Copies of correction letters are filed with the manifest.

f) Upon discovering a discrepancy involving a HW of concern, as defined in Title 22, Section 66261.111(a), if the waste at issue represents a reportable quantity or a reportable difference in type, as specified in Section 6626.111(b) and (c), the Service Provider shall attempt to reconcile the issue with the generator or transporter. If the issue is not reconciled within 24 hours, after discovery, the Service Provider shall immediately notify the RO and CNRSW Environmental and the DTSC will be notified by calling 1-800-698-6942 and providing the following information:

- Facility name and EPA ID number
- Generator name and EPA ID number
- Transporter name, EPA ID number and registration number
- Manifest number, information from line 9, 10, 11, 12 and 13 of the manifest (including proper shipping name, hazard class, identification number, packing group, number of containers, container type, quantity or volume at issue, weight or volume units, and waste codes)
- Potential location or transportation routes where the HW of concern may have become missing.

g) The Base Environmental Office must review all draft agency correspondence prior to sending to the agencies, and a hard copy must be given to the RO and Base Environmental Office at the time the agency letter is sent out.

7.8 Exception Reports

a) If the Navy is the generator of the manifested HW and does not receive a copy of the manifest with the hand written signature of the owner or operator of the designated facility within 30 days of the date the waste was accepted by the initial transporter, the Service Provider shall contact the transporter and/or the designated TSDF to determine the status of the HW.

b) If 45 days passes from the date the original transporter accepted the HW and the Service Provider has not received a copy of the manifest with the handwritten signature of the owner/operator of the designated TSDF, an Exception Report shall be submitted to DTSC. Copies of Exception Reports shall be kept on file in the HWF Office. The Exception Report (Enclosure 5) shall include:

- A legible copy of the manifest for which the generator does not have confirmation of delivery.
- A cover letter signed by the CH or designated representative that explains the efforts taken to locate the HW and the results.

c) The RO and/or Base Environmental Office must review the draft Exception Report prior to sending to the agencies, and a copy must be given to the RO and Base Environmental Office at the time the report is sent out.

7.9 Un-manifested Waste Report

a) If off-site waste is received at the TSDF without a manifest, an "Un-manifested Waste Report" must be prepared in accordance with CCR, Title 22, 66264.76.

b) The Base Environmental Office must review the letter before it is sent to DTSC. The RO and Base Environmental Office are given a copy of the letter sent to DTSC.

7.10 Manifest Training Requirements

a) The tasks related to preparing HW manifests and efficiently managing a manifesting service requires a great deal of knowledge and skill. A working knowledge of federal and state regulations regarding the transportation and handling of HW, as well as local policies and practices is essential to be an effective manifester. In addition, knowledge and experience in subjects such as HW identification and management, government contract management, correspondence preparation, Occupational Safety and Health issues, and HWF permits are necessary.

b) The following are the minimum requirements that must be completed by employees assigned to manifesting duties:

- Occupational Safety and Health training which meets the requirements of 29 CFR 1910.120. (24-hour initial and 8 hour annual refresher).

Reference: Contract ID # N68711-03-D-4302

- Basic manifest training includes 49 CFR 172.704 (every three years), 40 CFR and Title 22, CCR requirements (annual refresher required).
- HWF operations – permit restrictions and requirements.

c) Regardless of training and experience, personnel must be explicitly authorized to sign manifests on behalf of CNRSW per section 7.11 before doing so.

7.11 Manifest Signature Requirements

a) UHWMs are prepared and signed by the generators of the HW or a designated representative. Command Navy Region South West (CNRSW) has given authority to the Service Provider for signing and managing of manifests.

b) When signing manifests, the manifester is acting for the Commanding Officer. With that in mind, and in accordance with reference (d), each HW generator signatory must be authorized, in writing, by the installation commander or permit holder, as appropriate (this may be signed by the Supervisor).

c) In order to receive a signatory authorization from the Commanding Officer, the following steps must be taken:

- Complete manifester training
- Supervisors prepare and submit a written request for signatory authorization. Include in the request a statement that the prospective manifester has completed all required training and is recommended to receive the signatory authorization.

8.0 Temporary EPA ID# Acquisition

It may be necessary for Service Provider personnel to acquire a temporary EPA ID # for an off base generator. These occurrences are one time events and the temporary ID # will allow for the movement of a certain amount of waste. The following steps must be followed:

a) Temporary EPA ID numbers (90-day numbers) can be obtained form the DTSC by calling (800) 618-6942. Issuing hours are Monday through Friday 8:15 to 4:45, closed during the lunch hour.

b) Have in hand the following information before calling DTSC for a temporary EPA ID #:

- Actual location street address from where waste is to be manifested
- Type of waste to be manifested
- Estimated amount of waste in pounds or gallons or # of pallets

c) Generator mailing address information will <u>always</u> be:

Commander, Navy Region SW
P.O. Box 181470
Coronado, Ca 92178-1470

d) Navy contact phone number will always be: **619-545-6520**

Reference: Contract ID # N68711-03-D-4302

9.0 REVIEW AND APPROVAL

Reviewed by:

05/10/10

Tara Lester, CSW Manager — Date

Approved by:

05/10/10

Dave Cochran, Technical Services General Manager — Date

Reference: Contract ID # N68711-03-D-4302

Hazardous Waste Manifest Error Correction Letters

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
Ser N45JHB.cg/0148
21 June 10

From: Commander, Navy Region Southwest (N45)
To: Commanding Officer, Naval Facilities Engineering Command, Southwest Division (NAVFACSW)

Subj: HAZARDOUS WASTE MANIFEST CORRECTION LETTERS AND GENERATOR MAILING ADDRESS POLICY

Ref: (a) Ser N45JHB.cg/0112 (Mar 21, 2005) Hazardous Waste Manifest Signature Authority to Shaw Infrastructure and Clean Harbors Environmental under NAVFACSW Contract
(b) Ser N45JHB.cg/0076 (Feb 25, 2008) Hazardous Waste Manifest Signature Authority to Fleet Readiness Command (FRC)
(c) Ser N45JHB.cg/0287 (Sept 11, 2008) Reissue of Hazardous Waste Manifest Signature Authority to Puget Sound Naval Shipyard and Portsmouth Naval Shipyard (PSNS)
(c) HW-05-006 (rev121009) Hazardous Waste Manifesting Standard Operating Procedure (SOP)

1. The Commander Navy Region Southwest (CNRSW) Hazardous Waste Program maintains ownership of several U.S. EPA Generator Identification Numbers for commands that generate and dispose of hazardous waste (HW). The CNRSW is therefore identified as the HW generator and is responsible for ensuring proper management of the HW tracking documents.

2. The NAVFACSW has a contract to operate the Hazardous Waste Facilities (HWF) using a private contractor. The contractor is responsible for managing all the EPA identification numbers and associated manifests. References (a) thru (c) are the CNRSW delegated signature authorities issued to date. Reference (d) is the Standard Operating Permit specific to the manifest signature authority granted to the HWF operator. The HWF contractor obtained a post office box specifically to handle all the manifests and correspondence associated with the operations.

3. The EPA Identification Number verification and the HWF Site Identification Form (8700-23) lists three addresses; the permit owner, the legal owner and the facility operator. The permit owner and legal owner addresses identify the CNRSW while the facility operator address identifies a post office box. It is important to note that the Site Address is almost unlimited due

to the extensive amount of geographic property associated with the CNRSW EPA identification numbers.

4. There have been numerous occasions in which unauthorized individuals have applied for EPA identification numbers using the CNRSW name or Navy property. There are also numerous occasions in which unauthorized individuals have signed uniform hazardous waste manifests using the CNRSW EPA identification numbers. CNRSW has not found a successful means of eliminating these unauthorized actions and works with the HWF operator to identify the root cause of manifesting errors.

5. There is a misconception that the generator mailing information must exactly match the Department of Toxic Substances Control (DTSC) Hazardous Waste Tracking System (HWTS). CNRSW consulted with the DTSC Generator Information Services office to discuss the situation. CNRSW finds that no manifest error correction letters are necessary provided the generator mailing address used meets the permit owner, legal owner or operator as shown on the 8700-23 form. However, it is preferred that the operator's mailing address be listed on the uniform HW manifest to ensure proper document processing.

6. As a matter of policy, the CNRSW will only accept the HWF operator phone number in the generator address block. This policy addresses only the generator mailing address block. All other legally recognized errors will continue to require a manifest correction letter.

7. CNRSW Environmental, Hazardous Waste Program Staff are available to assist you with any compliance issues related to this matter. Hazardous Waste Program may be reached at (619) 532-3840 or myself at (619) 532-2274.

Sincerely,

Christina Graulau

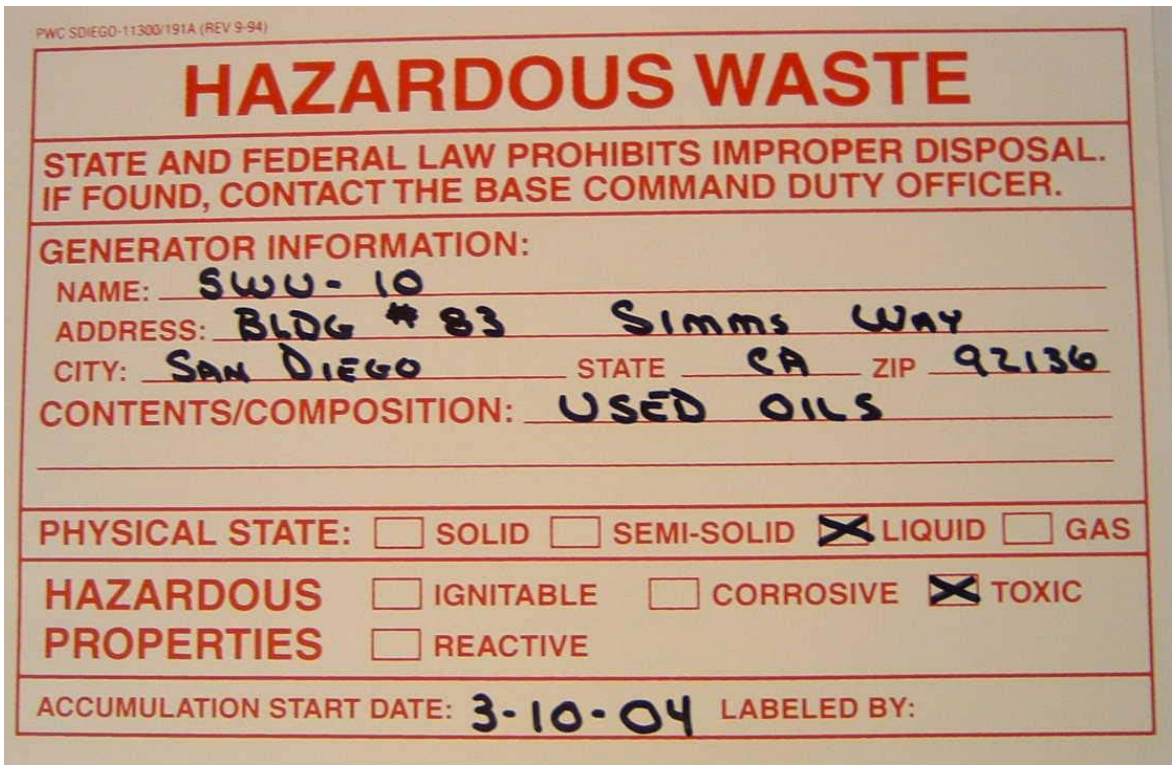
C. GRAULAU
By direction

Copy to: Bonnie Amoruso, DTSC GIS
Cindy Riley, DTSC GIS
Joseph Kohler, PSNS
Larry Lai, FRC

2

Environmental Labels

Sample Hazardous Waste Label



PWC SDIEGO-11300/191A (REV 9-94)

HAZARDOUS WASTE

STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL.
IF FOUND, CONTACT THE BASE COMMAND DUTY OFFICER.

GENERATOR INFORMATION:
NAME: SWU-10
ADDRESS: BLDG #83 Simms Way
CITY: San Diego STATE CA ZIP 92136
CONTENTS/COMPOSITION: USED OILS

PHYSICAL STATE: ☐ SOLID ☐ SEMI-SOLID ☒ LIQUID ☐ GAS

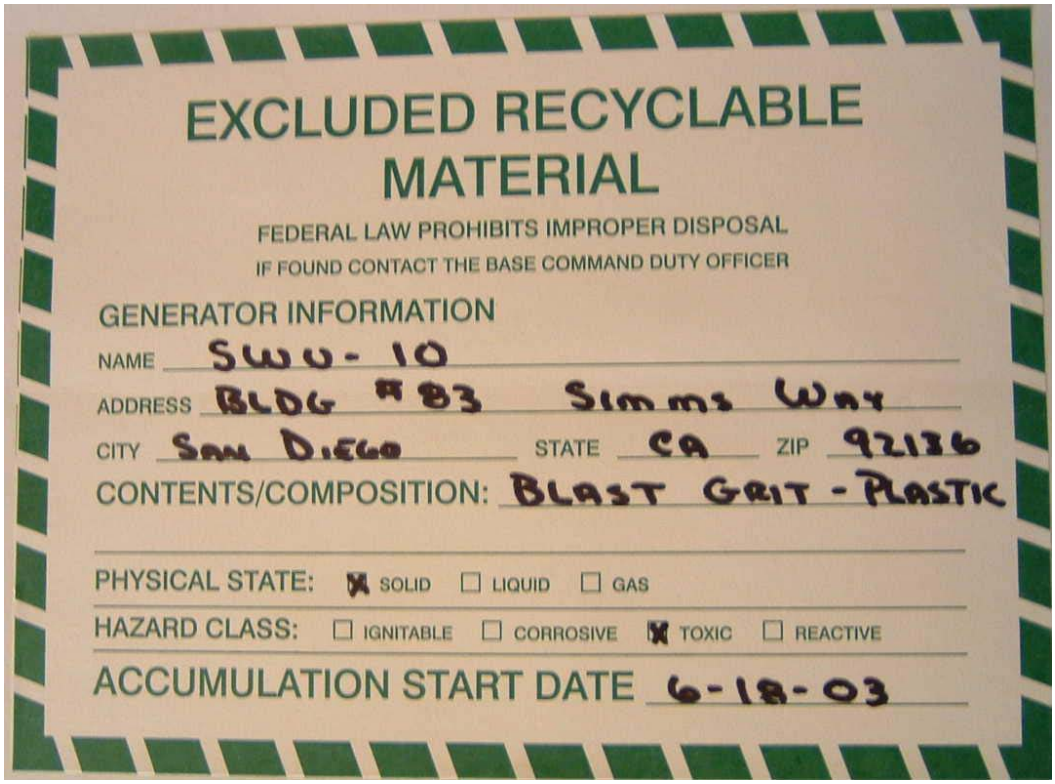
HAZARDOUS PROPERTIES ☐ IGNITABLE ☐ CORROSIVE ☒ TOXIC ☐ REACTIVE

ACCUMULATION START DATE: 3-10-04 LABELED BY:

Ensure all required sections are completed, legible and marked in indelible ink.

Environmental Labels

Sample Excluded Recyclable Material Label



EXCLUDED RECYCLABLE MATERIAL

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND CONTACT THE BASE COMMAND DUTY OFFICER

GENERATOR INFORMATION

NAME SWU-10

ADDRESS BLDG #83 Simms Way

CITY San Diego STATE CA ZIP 92136

CONTENTS/COMPOSITION: BLAST GRIT - PLASTIC

PHYSICAL STATE: ☒ SOLID ☐ LIQUID ☐ GAS

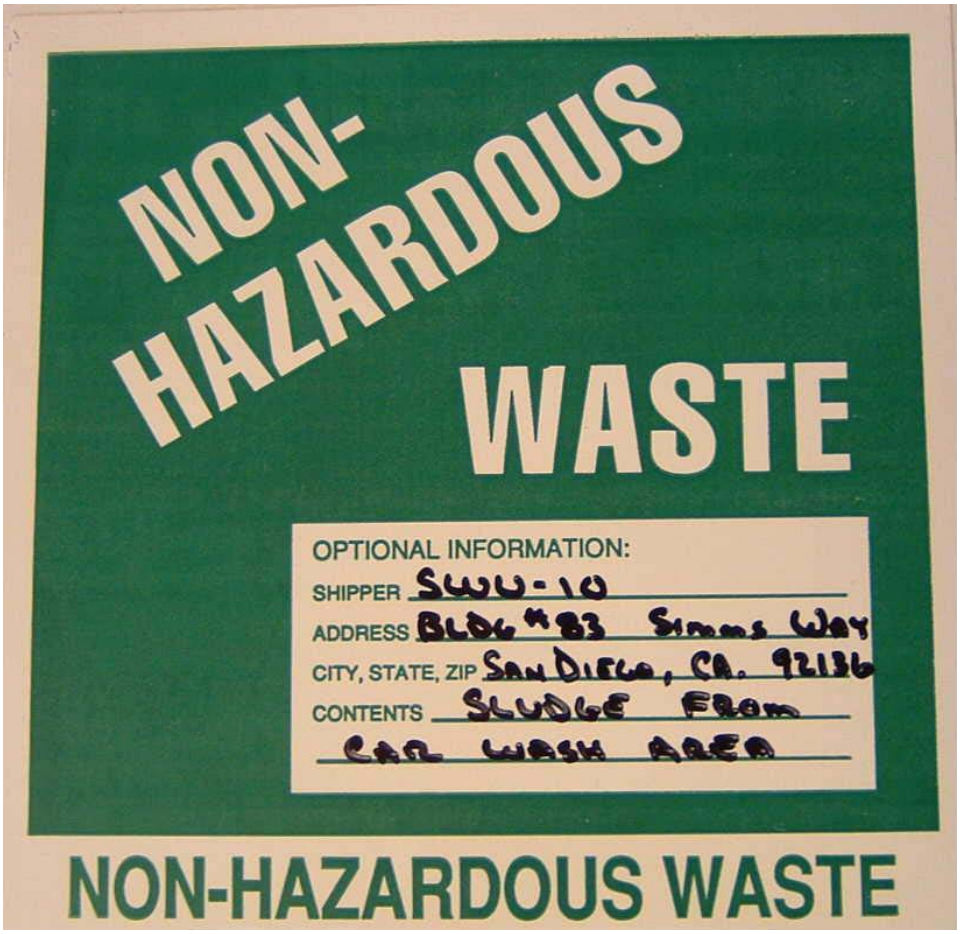
HAZARD CLASS: ☐ IGNITABLE ☐ CORROSIVE ☒ TOXIC ☐ REACTIVE

ACCUMULATION START DATE 6-18-03

Ensure all required sections are completed, legible and marked in indelible ink.

Environmental Labels

Sample Non-Hazardous Waste Label



Ensure that testing or process knowledge confirms that the wastes are non-hazardous.

CNRSW Board of Equalization Policy Letter

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
Ser N45JHB.cg/0117
March 28, 2005

From: Commander, Navy Region Southwest (N45PA)
To: Commanding Officer, Southwest Division, Naval Facilities Engineering Command

Subj: PROCEDURES FOR HAZARDOUS WASTE GENERATOR FEE RETURNS ASSOCIATED WITH CONSTRUCTION/DEMOLITION PROJECTS

Encl: (1) Board of Equalization Excise Taxes and Fees Division, Hazardous Waste Generator Fee Return Fact Sheet

1. The Commander Navy Region Southwest (CNRSW) Environmental Program manages a large majority of the EPA ID numbers in the metro area. One of the duties with the EPA ID numbers includes the certification and payment of fees associated with hazardous waste activity. A Hazardous Waste Generator Fee Return (generator fees) is filed annually with the State Board of Equalization (BOE). This fee is based on the volume of hazardous waste generated in preceding years.

There are varying fee amounts ranging from less than 5 tons to over 2,000 tons. The generator fee is based on the total tonnage of hazardous waste, including recycled waste, waste shipped out of state, and any waste generated as the result of a one-time cleanup. Enclosure (1) provides a summary of the hazardous substance fees associated with various hazardous waste activities, including the calendar year 2005 BOE rates.

2. The BOE cross references the hazardous waste manifests using an EPA ID number to validate the certification and amounts submitted in the generator fees. When periodic construction or demolition projects, such as lead abatement, asbestos abatement, underground storage tank removal or contaminated soil remediation projects occur without advance coordination with the CNRSW or respective EPA ID holder, the project can cause the volume of hazardous waste to increase above the annual certification amounts. The EPA ID holder can be held subject to penalties arising from underpayment or late payment of fees.

3. The generator fees are paid twice during a calendar year but are tied to the State's fiscal year. Therefore, the first payment (pre-payment) is based on an estimated amount of the current calendar year or 50% of the prior calendar year. The second payment is based on the actual volumes generated. BOE has

a DoD facilitator and CNRSW has set up a regional point of contact and coordinator to address this issue.

4. Based on the unknown factor about projects that can contribute to hazardous waste generation volume changes, CNRSW has made the decision to require the Project Manager for any projects that generate hazardous waste to notify and work with the CNRSW point of contact to ensure funds are set aside to cover these fees.

5. As the fee rate increases every year, the Project Manager may need to make some adjustments based on actual amounts and or total estimated pre-payment amounts. CNRSW point of contact will provide a cost estimate to the Project Manager based on current and projected BOE rates.

6. One option is to obtain a temporary EPA ID number for short-term projects (i.e. less than 180 days). CNRSW will determine whether a temporary EPA ID number is appropriate and will obtain the temporary EPA ID number for the customer.

7. CNRSW Environmental, Hazardous Waste Program Staff are available to assist you with any compliance issues related to this matter. Hazardous Waste Program staff can be reached at (619) 524-6351 and the CNRSW BOE coordinator can be reached at (619) 524-6371.

8. Request widest dissemination possible, including tenant activities and stand-alone commands, auxiliary commands, and all commands with contracting authority.

A. J. GONZALES
Program Director Environment

Copy to:
Commanding Officer, Naval Base San Diego
Commanding Officer, Naval Base Coronado
Commanding Officer, Naval Base Point Loma

11 New hazardous waste fee rates—calendar year 2009

The Health and Safety Code provides for annual adjustment of the rates for the disposal fee, facility fee, generator fee, environmental fee, and occupational lead poisoning prevention fee, based on changes in the cost of living as measured by the California Consumer Price Index. The following tables show the hazardous waste fee rates that are in effect for calendar year 2009.

2009 DISPOSAL FEE
(Base Rate $124.29)

CATEGORY	FEE RATE (PER TON)
Non-RCRA Waste	
Non-RCRA hazardous waste	$ 20.27
Non-RCRA hazardous waste, generated in a cleanup action	5.72
RCRA Waste	
Hazardous waste not elsewhere classified (RCRA waste)	50.21
RCRA waste treated to be non-RCRA or non-hazardous	20.27
RCRA waste generated in a cleanup action and treated to be non-RCRA or non-hazardous	5.72
Other Waste	
Mining waste	16.16
Extremely hazardous waste	248.58
Restricted hazardous waste	248.58
Solid waste residues resulting from incineration or dechlorination	6.21

2009 GENERATOR FEE
(Base Rate $4,007.00)

WASTE GENERATED	FEE
5 – 24.9 tons	$ 200.00
25 – 49.9 tons	1,603.00
50 – 249.9 tons	4,007.00
250 – 499.9 tons	20,035.00
500 – 999.9 tons	40,070.00
1,000 – 1,999.9 tons	60,105.00
2,000 – more tons	80,140.00

2009 ENVIRONMENTAL FEE

NUMBER OF EMPLOYEES:	FEE
1 – 49	$ 0
50 – 74	284.00
75 – 99	500.00
100 – 249	998.00
250 – 499	2,139.00
500 – 999	3,994.00
1,000 or more	13,556.00

2009 FACILITY FEE
(Base Rate $28,812.00)

CATEGORY	RATE (PER FACILITY)
Disposal	$ 288,120.00
Large Onsite Treatment	86,436.00
Large Offsite Treatment	86,436.00
Small Treatment	57,624.00
Mini Treatment	14,406.00
Large Storage	57,624.00
Small Storage	28,812.00
Mini Storage	7,203.00
Postclosure–less than 5 years*	
Small	5,725.00 *
Medium	11,450.00 *
Large	17,175.00 *
Postclosure–more than 5 years*	
Small	3,050.00 *
Medium	6,100.00 *
Large	10,300.00 *
Standardized	
Series A	11,730.00
Series B	5,497.00
Series C	4,617.00
Series Small Quantity C	2,308.00

**For postclosure fees, if the lead agency is someone other than DTSC, the postclosure fees due would be 50% of the current fees.*

2009 OCCUPATIONAL LEAD POISONING PREVENTION FEE

NUMBER EMPLOYEES	FEE
Category A:	
Number of Employees:	
10 – 99	$ 292.00
100 – 499	587.00
500 or more	1,465.00
Category B:	
Number of Employees:	
10 – 99	420.00
100 – 499	1,172.00
500 or more	3,355.00

How are we doing?

We are committed to providing top-quality public service. Please let us know how we are doing by sending us your comments or suggestions. Please go online to fill out a brief *Customer Survey Form* at *www.boe.ca.gov/info/survey.htm.*

EPA Identification Numbers and Naval Vessels Policy Letter with Related Historical Documentation

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
Ser N45JHB.cg/0279
August 16, 2006

Ms. Cindy Riley
Department of Toxic Substances Control
Sacramento Regional Office
EPA Identification Unit
8800 Cal Center Drive
Sacramento, CA 95826-3200

SUBJECT: NAVAL VESSELS AND EPA IDENTIFICATION NUMBERS

Dear Ms. Riley:

Commander Navy Region Southwest (CNRSW) continues to encounter instances where Department of Toxic Substances Control (DTSC) staffs are instructing contractors performing work on naval vessels that the vessel name be identified as the "generating site" when applying for an EPA identification number. This letter is to communicate the Navy policy and program manual interpretation on this issue, and to request the facility name (military base and pier) be represented as the generating site.

The Chief of Naval Operations (CNO), Environmental and Natural Resources Program Manual, referred to as OPNAVINST 5090.1B addresses hazardous waste management from naval vessels in Chapters 12 and 19. This instruction provides the management methods for complying with the 1992 Federal Facilities Compliance Act (FFCA). This law provides that any hazardous waste generated on public vessels (which includes Navy vessels) shall not be subject to the storage, manifest, inspection, or recordkeeping requirements of RCRA until such waste is transferred to a shore facility. FFCA acknowledges that hazardous waste is subject to regulation 90 days after the vessel is placed in reserve, is no longer in service or the waste has been transferred to another public vessel and is stored for more than 90 days after the date of transfer.

To paraphrase the OPNAVINST 5090.1B; naval vessels do not generate hazardous waste regardless of whether or not the vessels are berthed on military installations or private facilities. Consequently, the naval vessels are not "generating sites" for purposes of issuing hazardous waste EPA identification numbers. To paraphrase OPNAVINST 5090.1B, Chapter 12, Section 5.2.1; the shore installation manages the excess materials and solid wastes removed from the vessel, including performing the waste determinations. The instruction also states that naval vessels shall not accept hazardous waste from a Navy shore activity for transportation to another activity or facility. Furthermore, OPNAVINST 5090.1B, Chapter 19, Section 6.1.4 describes how federal contract law pertaining to national defense requires that contracts for work on board naval vessels identify the type and amount

5090
Ser N45JHB.cg/0279
August 16, 2006

of hazardous waste expected to be generated and responsibility for the disposal.

CNRSW respectfully requests DTSC staff cease the practice of requiring a Navy vessel name when processing the EPA identification number application. CNRSW has directed the Navy commands and contractors to identify the military base and pier where the naval vessel is berthed during the repair or maintenance activities, for purposes of the "generating site" during EPA identification number applications. Internal hazardous waste tracking methods are capable of ensuring the wastes generated from servicing naval vessels are properly managed accounted and reported.

If you have any additional questions regarding this matter, please contact Ms. Christina Graulau at (619) 524-6351 or Mr. Brian Gordon at (619) 524-6390.

Sincerely,

Brian S. Gordon

BRIAN S. GORDON
Director, Compliance and
Technical Division
By direction

copy to:
DTSC Headquarters
Attn: Maureen Gorsen, Director
P.O. Box 806
Sacramento, CA 95812-0806

Blind copy:
Andy Quinones, SWRMC Safety & Environmental, C106B
Bruce Potoki, SWRMC Assistant Counsel
Maryanne Flanagan, SPAWAR Environmental
Kathie Beverly, NAVFAC Environmental Services PLC
Mark Edson, CNRSW NBSD Environmental IPD
Archie Ordonio, CNRSW NBPL Environmental IPD
Luis Perez, CNRSW NBC IPD
David Baille, CNRSW NBSB IPD
Ron Dow, CNRSW NBV IPD
Mike Huber, CNRSW REC
MaryKay Faryan-Dan Eldredge-Melanie Ravan, CNRSW Counsel

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

December 3, 1990

Vice Admiral P.M. Hekman, Jr.
Department of the Navy
Naval Sea Systems Command
Washington, D.C. 20362-5101

Dear Admiral Hekman:

Thank you for your letter of November 7, 1990, regarding the Fiscal Year 1990 Defense Authorization Act and its impact on the Navy's hazardous waste handling procedures. Last summer, my staff became aware of the issues mentioned in your letter, and they have been investigating how the new legislation affects the Solid Waste Disposal Act.

The legislation at 10 U.S.C. 7311 puts a certain burden on the Navy and its contractors to obtain separate "generator identification numbers" in order to document which party generated a hazardous waste during the repair of a ship. Section 7311(a)(4)(B) specifically states:

> A determination under this paragraph of whether the Navy is a generator, a contractor is a generator, or both the Navy and a contractor are generators, shall be made in the same manner provided under subtitle C of the Solid Waste Disposal Act (42 U.S.C. 6921 et seq.) and regulations promulgated under that subtitle.

Under the federal hazardous waste regulations, a "generator" is defined in 40 CFR 260.10 as "...any person, by site, whose act or process produces hazardous waste ... or whose act first causes a hazardous waste to become subject to regulation." EPA interprets the act of owning a vessel such as a Navy ship to cause the Navy to be a generator of hazardous wastes that are produced during the repair of the ship; in addition, a contractor actually conducting the repair is also a generator. In 1980, EPA addressed the issue of more than one party being responsible for a hazardous waste's generation by introducing the concept of "cogenerators." If more than one party plays a role in the generation of a hazardous waste at a site, the parties are "cogenerators" and must decide between themselves who is to assume the generator responsibilities. See the discussion in the enclosed Federal Register notice.

One of the generator's requirements is to obtain an EPA identification number (see the requirement in 40 CFR 262.12). Since a generator is defined as a "person, by site," the person generating hazardous wastes at a given site must obtain an EPA identification number for that site.

EPA's data management system for hazardous waste generators, transporters, and treatment, storage, and disposal facilities is set up to assign only one EPA identification number per unique site. To

assign more than one number to a unique site raises certain issues that EPA is still investigating. However, EPA's Office of Solid Waste will be rethinking the entire ID number assignment issue within the next eighteen months. Currently, the EPA regions and authorized states are responsible for assigning the numbers, and may make their own determinations of how to assign numbers at port facilities.

Assuming only one EPA identification number is issued to a port where a contractor is repairing a Navy ship, both the Navy and its contractor may use that EPA identification number in completing Box 1 of the Uniform Hazardous Waste Manifest. Note that nothing in the hazardous waste regulations prevents a generator, such as the U.S. Navy, from assigning its own tracking numbers on manifests in order to identify a particular contractor who was involved in generating the hazardous waste in that shipment (or, similarly, assigning tracking numbers that relate a particular hazardous waste shipment to a given ship or port of origin). Such "internal" tracking numbers could be placed in Box 15 of the Uniform Hazardous Waste Manifest.

Please be aware that this response reflects the federal hazardous waste regulations. States may impose their own requirements that are stricter or broader than the federal requirements. If you have further questions on this issue, please have your staff contact Becky Cuthbertson of my staff at (202) 475-8551.

Sincerely yours,

Don R. Clay
Assistant Administrator

DEPARTMENT OF THE NAVY

November 7, 1990

Mr. Don R. Clay
Assistant Administrator for Solid Waste and Emergency Response
Environmental Protection Agency
401 N Street, Southwest
Washington, DC 20460

Dear Mr. Clay:

The purpose of this correspondence is to enlist your assistance in resolving an issue regarding management and disposal of hazardous waste generated during Navy ship repairs performed by private shipyards.

The FY90 DOD Authorization Act amended 10 U.S.C. 7311 regarding hazardous waste management for contracts, other than new construction, for work on board naval vessels. The amendment, included at enclosure (1), requires the contractor to provide a hazardous waste generator identification number on manifests for contractor generated hazardous waste; the Navy to provide a hazardous waste generator identification number for Navy generated waste; and for the contractor and the Navy to provide a number for co-generated waste. The amendment further refined an existing requirement to identify the types and quantities of hazardous waste expected to be generated in the contractor's facility. Prior to the amendment, it was Navy policy that the owner of the facility where ship repair work was being performed would perform the hazardous waste generator duties including manifesting the waste using the shipyard owner's identification number. This policy was consistent with our understanding of applicable Federal and state laws.

The Naval Sea Systems Command (NAVSEA) and in particular, the Supervisors of Shipbuilding, Conversion and Repair (SUPSHIPs) who are responsible for managing private sector repairs of Navy ships throughout the country, have implemented the new provisions of 10 U.S.C. 7311 in standard work specifications and contract clauses for ship repair work and have applied for hazardous waste identification numbers with state and/or regional EPA offices.

Responses received from state agencies and EPA regional offices thus far have been inconsistent. We have included a copy of a State of South Carolina letter to EPA Region IV, a State of Washington letter to the Navy, and two letters to Region IX from the Navy at enclosures (2) through (5) for your information. The unique provisions in 10 U.S.C. 7311 are requiring many states to review their own regulatory provisions. Further complicating the issue is the lack of definition of terms used only in 10 U.S.C. 7311. While several states have agreed to issue permanent generator numbers to SUPSHIPs, others interpret EPA regulations regarding "division of responsibility for generator duties"

very rigidly - limiting the issuance of generator numbers to owners of the facility. This interpretation has prevented small ship repair contractors who perform work on Navy ships docked at a Navy facility from complying with the requirements of 10 U.S.C. 7311 to provide generator numbers to manifest hazardous waste they generate. It has also hampered Navy efforts to comply with the requirements of 10 U.S.C. 7311.

We are advised that several states have requested direction from the regional offices who in turn have requested rulings from EPA headquarters. A NAVSEA representative met with EPA headquarters personnel on 30 May 1990 and discussed in general the difficulties that the SUPSHIPs were having in obtaining generator numbers and that the states were having in fitting 10 U.S.C. 7311 requirements into their RCRA manifesting systems. While the meeting was productive in identifying the issues, no concrete solutions were identified.

The SUPSHIPs have managed to make arrangements for disposal of hazardous waste generated during performance of ship repair contracts or have directed the ships to off-load any Navy waste at Navy owned facilities prior to ship arrival at the repair facility. The efforts do not present a permanent or satisfactory solution, however, and with the recent involvement of EPA regional offices, it is time to resolve the issue. We need guidance to the issued that addresses the unique problems raised by 10 U.S.C. 7311 and allows us to comply in a consistent manner with its requirements and Resource Conservation and Recovery Act requirements for the responsible management of hazardous waste including a system for tracking its generation, management and disposal.

Since neither 10 U.S.C. 7311 nor RCRA define the terms "Navy generated," "contractor generated," and "co-generated," the Navy has developed its own contractual definitions. We believe these definitions are consistent with RCRA and have included a copy of our contract clause for your assistance in reviewing this issue. We would ask that any guidance provided by your office to the regions and states would facilitate our use of the contract provisions to implement 10 U.S.C. 7311 and authorize the navy and the contractors, as appropriate, to obtain generator numbers for disposal of waste by a party other than the site owner. Senior members of my staff are available to meet with EPA personnel to examine the alternatives and assist in developing a solution. I have asked my Director of Environmental Protection, Dr. Kurt Riegel to take the lead on this very important issue. Dr. Riegel may be reached on (703) 602-3594.

P.M. Hekmen, Jr.
Vice Admiral, U.S. Navy

FaxBack # 11571

PART I

HAZARDOUS WASTE GUIDANCE DOCUMENTS

EPA ID Numbers & Manifest Signature Authority

Hazardous Waste & Special Waste Manifesting

Dumpster & Landfill Restricted Items

Ship-To-Shore Offload Procedures

Used Oil Management

Drained Used Oil Filters

Oily Rags & Debris

Used Absorbents

Automotive Type Spent Lead-Acid Batteries

Spent Dry Cell Batteries

Asbestos Containing Materials (ACM)

Mercury Containing Wastes

Compressed Gas Cylinders

Ozone Depleting Substances (Halons/Freon/CFCs)

Abrasive Blast Media

Process Ash Residuals

PCB Management

PCBs in Caulk

Discarded Industrial Devices

Scrap Metal Products

Painted Construction Debris

Hazardous Waste Addendum for Paints & Painted Debris

Resins, Urethanes & Epoxy Paints

Latex Paint & Debris

Low Level Radioactive Wastes (LLRW)

Electronic Waste

Fluorescent & H.I.D. Lighting Wastes

Cathode Ray Tubes (CRTs)

Is it Treated Wood Waste?

Treated Wood Disposal

Expired Chemicals & Materials

Hazardous Materials Management

Pesticide Container Management

Aerosol Container Management

Contaminated Containers

Pharmaceutical and Personal Care Product Management

Hazardous Waste Guidance
for
EPA ID Numbers & Manifest Signature Authority

- EPA ID Numbers are issued by both the US EPA and DTSC (California ID Number). The number identifies each handler of hazardous waste on manifests and other paperwork, and enables regulators to track waste from "cradle to grave."

- Installations have permanent EPA ID Numbers which must be used for all Navy and co-generated hazardous wastes.

- Contractors must obtain a California ID Number for any contractor-generated waste. Contract specifications may dictate if the contractor and subcontractors manage the waste as separate from a Navy EPA ID Number.

- If a contractor must obtain an EPA ID number for work being performed on a federal installation, the contractor is not authorized to name the federal government (especially not vessels) as the generator or owner of the hazardous waste.

- Contractors are encouraged to use the installation-specific EPA identification number whenever possible. This will require coordinating with installation environmental offices in advance of shipping the waste.

- The use of EPA ID Numbers triggers many reporting requirements, additional fees, and potential fines. Always coordinate with the installation environmental office or duly authorized installation environmental service provider.

- Only duly authorized, appropriately trained individuals, ***with delegated signature authority*** may sign hazardous waste manifests. For government-generated waste or co-generated waste, signature authority is limited to specific individuals.

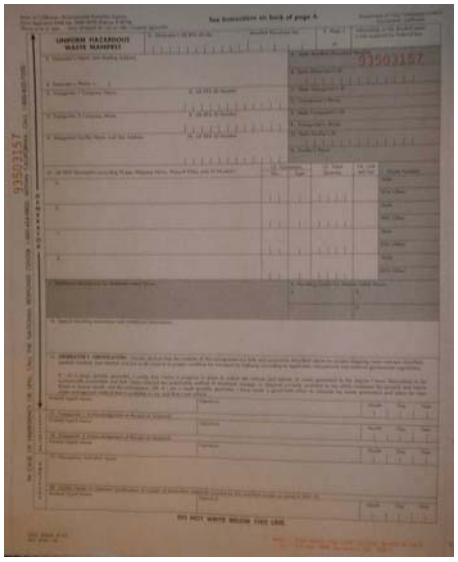
Refer to Appendices 7, 8 &11 for Region Policy, which provides more detailed guidance.

Hazardous Waste Guidance
for
HAZARDOUS WASTE
&
SPECIAL WASTE MANIFESTING

HAZARDOUS WASTE

- Commands and Activities that transport or have Hazardous Waste transported off-base for storage or disposal must use a properly completed Uniform Hazardous Waste Manifest.

- Effective September 5, 2006, only the federal hazardous waste manifest forms may be used. These forms are to be used on a national basis and there have been some revisions to manifesting procedures. More information and training is at: http://www.dtsc.ca.gov/IDManifest/Manifests.cfm



- Per OPNAV 5090 and CNRSW Hazardous Waste Policy, only authorized individuals may sign a Hazardous Waste Manifest using a government owned EPA ID number, regardless of who provides the manifest or transports the waste.

SPECIAL WASTES

FOR SPECIAL WASTE MANIFESTING REFER TO PART II SPECIAL WASTE MANAGEMENT

- Commands or Activities that transport or have Special Waste (such as Treated Wood) transported off-base for disposal must use a properly-completed Special Waste Manifest.

- Command or Activity personnel may complete and sign a Special Waste Manifest.

- Special Waste Manifest and Disposal Request Forms may be obtained through your installation Environmental Office.

Hazardous Waste Guidance
for
DUMPSTER & LANDFILL RESTRICTED ITEMS

Below is a list of many items, materials and products that are **PROHIBITED** from being placed into dumpsters, roll-offs, or trash receptacles destined for landfill disposal. This list is not considered all-inclusive.

- **ANY HAZARDOUS WASTE**
- Pesticides, Herbicides, and Fertilizers.
- OBAs, EEBDs, Oxygen Candles or igniters.
- PCB-contaminated or containing items or products.
- Non-Empty Containers of Paint, POLs, or Adhesives.

- Paint Chips & Paint Contaminated Debris (unless otherwise specified).
- Cathode Ray Tubes (CRTs).
- Wood that has been Treated, Painted, or contains Cresol.
- Asbestos and Asbestos-Containing Materials.
- Batteries (Dry Cell, Nickel Cadmium, Lead-Acid etc.).
- Fluorescent, Mercury Vapor, Metal Halide and similar type lamps or tubes.
- Non-Empty Aerosol Containers.

- Abrasive Blast Media and Debris.
- Used Oil Filters/Used Fuel Filters.
- Terrazzo contaminated with paint (pending analytical results).
- Scrap Metal (cuttings, borings, shavings & grindings that meet the definition of hazardous waste).
- Solvent-Contaminated Rags & Debris.
- Toner Cartridges (non-empty).
- Any industrial materials or items that contain free liquids.
- Any item, device, or material that is considered special or medical waste.
- Oil or POL saturated rags or debris

If you have any questions regarding items placed into dumpsters, contact your installation Environmental Office.

Hazardous Waste Guidance
for
SHIP-TO-SHORE OFFLOAD PROCEDURES

- Determine if the contents of each package are unused or spent, use the Profile Guideline Summary to categorize the materials and determine what paperwork is needed. Although OPNAVINST 5100.19D requires ships to turn in waste via 1348 forms, Clean Harbors will perform that function by aiding in the completion of Waste Turn-In forms. Clean Harbors will supply blank Turn-In forms, hazardous waste storage labels, and empty containers that meet DOT regulations as needed.

- Radioactive waste or material, biohazardous wastes, medical wastes, compressed gas cylinders, explosives, ammunition, pyrotechnics, trash, garbage, and food are PROHIBITED for acceptance as hazardous wastes.

- All hazardous waste must be labeled in accordance with local, state, federal and Navy regulations. Utilize overpack containers for damaged containers and containers that cannot be properly secured.

- Hazardous waste must be packaged and staged in a manner that completely segregates incompatibles. Containers must be in good condition, tightly sealed, and free from leaks. Lids must have all bungs, nuts and bolts in place to prevent the release of hazardous waste and volatiles.

- Include any available MSDS sheets and analytical information, and verify that labeling of contents are consistent with documentation. If there is more than one applicable MSDS, a copy of each may be attached to the outside of the container. At a minimum, a list of applicable MSDSs must be marked/attached to each container.

- Containers larger than 5 gallons will be opened by Clean Harbors (if considered safe to do so) to verify the contents. Opening of some containers may require special consideration, i.e. special equipment or PPE.

- Certain hazardous wastes will require lab analysis to resolve uncertainties and for proper disposal of the hazardous waste item. This can significantly impact the final cost of hazardous waste disposal; therefore, it is important to maintain accurate documentation. The following types of waste will generally require analysis: Mixed or consolidated hazardous wastes from processes, spent products (i.e. cleaners, degreasers, etc.), unknown wastes, non-routine and open purchase hazardous waste lacking documentation.

Hazardous Waste Guidance
for
USED OIL MANAGEMENT

- **USED OIL** includes: engine, transmission, gear/gearbox, hydraulic, turbine, bearing, refrigeration, compressor, transformer (electrical) or metalworking oils.

- **USED OIL** does not include: antifreeze, brake fluids, solvents, fuels, grease, tank bottoms, oily wastewater or oils contaminated with halogens (1000ppm) or PCBs (5ppm), with flash points less than 100 degrees F or mixed with any RCRA-listed hazardous waste.

- Used oil in any quantity shall be labeled, stored, disposed or otherwise managed as hazardous waste prior to testing and disposal or recycling.

- Used oil should be tested annually to ensure proper waste determination and profiling.

- Above ground tanks or containers accumulating used oil and fill pipes that transfer used oil to underground tanks shall be labeled "Used Oil – Hazardous Waste", and include the initial accumulation start date and the name and address of the generator.

- Commands recycling used oil at their location must follow the hazardous waste recycling requirement.

Note: Used oils may be managed as recyclable material provided that the provisions of the California Health and Safety Code, beginning with Section 25250.1 or 25143.2 for onsite recycling are followed, provided that all certification and record keeping requirements are met.

Hazardous Waste Guidance
for
USED OIL and FUEL FILTERS

- Disposal of used oil and fuel filters in the trash or at municipal landfills is prohibited.

- Used oil and fuel filters must be stored, labeled, and managed as hazardous waste or must be managed to meet *ALL* the following requirements:
  - Used filters must not contain any free flowing product – (free flowing means a continuous stream, not drop by drop).
  - If the filter has a device that impedes drainage, that device must be manipulated to allow the oil to be removed.
  - Containers must be labeled "Drained Used Oil (or Fuel) Filters", the initial accumulation start date or the date that the filters were first received.

  - Filters must be stored in containers that are rainproof, non-leaking, and have tightly sealed lids.

- Maximum storage limit is up to 1 year for less than 1 ton of drained filters or up to 180 days for greater than 1 ton.
- If filters are transported off-base, a "Bill of Lading" or Hazardous Waste Manifest must be used and retained for 3 years at the generator location. If filters are turned-in as hazardous waste, turn-in documents must be maintained for 3 years.
- Any residual petroleum remaining in the container which held used oil or fuel filters shall be collected and managed as hazardous waste.

Hazardous Waste Guidance
for
OILY RAGS & DEBRIS

- Environmental regulations require Oil/POL *saturated* rags & debris to be managed as hazardous waste unless the items are being recycled (such as Red Rags) at an authorized recycling facility.

- Non-saturated rags or debris contaminated with Oils/POL may be managed as solid waste and disposed of into the trash.

- Any rags or debris which becomes saturated with Oils/POLs shall *not* be disposed of in the trash and is considered hazardous waste.

- For the purpose of the guidance only; POLs are identified as:

  - Oils (all types)
  - Hydraulic Fluids
  - Greases/Graphites

- Rags that become saturated with these types of substances must be accumulated in lined containers. The containers must be emptied daily, and the contents taken to a hazardous waste accumulation area for proper management and disposal.

- Rags & debris contaminated with substances other than POLs (such as fuels, pesticides, paints and solvents) must be identified with the specific contaminant and managed separately.

- Additionally, rags & debris *contaminated* with POLs that contain PCBs or with hazardous waste must be managed as hazardous waste.

- Plastic oil containers may be recycled or disposed of in the trash if the container meets the empty container requirements as defined in Guidance for "Contaminated Containers".

- Porous containers that become saturated with Oils/POL must be managed as hazardous waste.

Note: If no liquid can be released from the oily rags or debris by hand pressure, and the item is not contaminated with a hazardous waste as indicated above, then it may be managed as trash.

Hazardous Waste Guidance
for
USED ABSORBENT

- Absorbent materials are only considered contaminated when they come in contact with and absorb a hazardous material or substance.

- Contaminated absorbent may be re-used to clean up another mishap where a similar material or substance was spilled (i.e. POLs).

- Absorbent contaminated with specific hazardous materials such as battery acid, hydrogen peroxide, or pesticides should be promptly disposed of as hazardous waste.

- Contaminated absorbent material is classified as hazardous waste when it becomes unable to absorb the spilled substance or material, becomes saturated with a spilled substance or material, or reaches the concentration level that exceeds the regulatory limit for that specific material or substance.

- Absorbent materials, which absorb a hazardous waste with a listed characteristic, must be managed as hazardous waste.

- Usable contaminated absorbent materials can either be placed into containers for future use and labeled "Usable Absorbent," or managed as the appropriate waste type. Labels must also include name/type of contaminant already absorbed.

- Segregate absorbent materials based on the hazardous properties of the contaminant, for example, flammable materials separated from corrosive, etc.

- Saturated absorbent materials containing free liquids must be placed in a container that will prevent spills, such as a drum. Dry absorbent materials may be bagged.

Note: If a shop consistently generates the same type of absorbent waste the initial testing of a representative sample may be used as a basis in determining when the used absorbent reaches the concentration level and becomes hazardous waste.

Hazardous Waste Guidance
for
AUTOMOTIVE TYPE SPENT LEAD ACID BATTERIES

- The following management requirements apply to persons that generate, store, or transport off-site spent lead acid batteries.
  - If more than one ton of batteries are stored at the generator location, the maximum storage time is up to 180 days.
  - If less than one ton of batteries are stored at the generator location the maximum storage time is up to one year.
  - Generators shall use a “Bill of Lading” or “Manifest” to transport lead acid batteries to the Base recycling office, or to a person or persons who stores, reuses, recycles or reclaims batteries.
  - Generators must retain copies of the manifests or bill of lading for shipments of lead acid batteries for a period of 3 years.

Note: *ONLY* duly authorized, appropriately trained individuals, and with *delegated signature authority* may sign manifests. Refer to the Hazardous Waste Guidance for EPA ID Numbers & Manifest Authority for more specific information.

- Individual batteries or containers holding non-damaged batteries must be labeled with indelible ink, paint or other weather resistant materials, and managed in a manner that prevents the container from tipping, spilling or leaking.
- Generators shall obtain a receipt or other documentation for spent batteries provided to vendors. These records must be readily available upon request.

- Damaged or leaking batteries shall be managed as hazardous waste.
- Damaged batteries must be stored in non-reactive (polyethylene/plastic, *not* metal or cardboard), structurally secure, closed container labeled with the date when the first battery was placed into that container.

Note: Batteries missing one or more caps are considered damaged.

Hazardous Waste Guidance for
SPENT DRY CELL BATTERIES

- Spent or discarded alkaline or other types of dry cell batteries are to be managed as hazardous waste *or* universal waste and are not to be placed or disposed of into the trash.

- Effective February 2006, there is no exemption for household-generated waste batteries.

- All batteries regardless of type shall be stored, accumulated or transferred in a manner that minimizes the possibility of fire, explosion, or any release of hazardous substance into the environment.

- DRMO and recyclers may reject the batteries if they do not arrive in DOT-conforming packaging.

- Batteries shall be segregated by type (i.e. NiCad, NiMH, alkaline, silver-zinc, etc.) both during storage and transport. Storing piles of mixed types of batteries in a bucket is NOT acceptable.

- Batteries fall under different DOT hazard classes. Lithium and lithium-ion batteries are Class 9. Potassium hydroxide batteries are Class 8.

- DOT regulations for packaging require that most *rechargeable batteries* (with the exception of 9-volt batteries) be kept from short-circuiting and generating heat from terminals touching. Batteries can be bundled together to form a "puck" and applying clear tape over the positive terminals. Alternatively, batteries can be individually packaged in plastic sealable baggies.

- DOT has recently determined that spent *non-rechargeable* alkaline, NiCad, and nickel-metal hydride batteries described as "Batteries, dry, sealed, n.o.s.", and not specifically covered by another proper shipping name, up to 9-volts, are not likely to generate dangerous quantities of heat, or to short-circuit when they are transported. *Rechargeable* batteries less than 9-volt also do not need to be kept from short-circuiting during transport. Lithium batteries and Lead Acid batteries *do not* qualify for the transport exemption.

- Batteries managed as Universal Waste shall be labeled as "Used Batteries" or "Universal Waste – Batteries".

- Containers of batteries shall be labeled for hazard classification along with the date the batteries began to be accumulated.

- Wear appropriate PPE when dealing with leaking or damaged batteries. These must be separated (by type) from non-damaged batteries.

Hazardous Waste Guidance
for
ASBESTOS CONTAINING MATERIALS

- Asbestos Containing Materials (ACM) include, but are not limited to: floor tile, roofing materials, acoustic materials, pipe, boiler, and duct insulation, and ceiling panels.

- Materials containing "friable asbestos" in concentrations equal to or greater than 1% must be managed as hazardous waste.

- Friable means: any ACM that may be crumbled, crushed, pulverized, or reduced to a powder or similar type debris by hand pressure.

- Friable ACM must be wetted and double-bagged for storage and transfer.

- ACMs containing friable asbestos in concentrations less than 1% may be sent to a municipal solid waste landfill for disposal (Pending landfill approval).

- For demolition & restoration operations, determine the quantity and type of ACM (friable/non-friable) before starting the project and retain the documentation for your records.

- Under CERCLA, any person or operation that releases 1 pound or more of friable asbestos into the environment must comply with regulatory reporting requirements within 24 hours.

NOTE: All ACM (friable or non-friable) sent to municipal solid waste landfills for disposal must be managed under **Part II** of this plan, Special Waste Management.

Hazardous Waste Guidance
for
MERCURY CONTAINING WASTES

- Mercury is a regulated hazardous substance, and when any item or device which contains mercury or mercury compounds is discarded, abandoned or is no longer usable, the mercury then becomes regulated as a hazardous waste or universal waste.

- Mercury and mercury compounds can be found in major appliance light switches, thermometers, thermostats, dry cell batteries, blood pressure monitoring instruments, fluorescent light tubes, and vehicle hood and trunk light switches.

- Mercury containing switches must be removed only by a Certified Appliance Recycler. These switches must be properly managed before any appliance, vehicle, or other item is discarded. If these items are turned in to an authorized recycling center or buy back program the removal of the mercury is not required. The mercury will become the responsibility of the receiving entity.

- All removed switches being discarded and any broken or no longer functioning or usable mercury containing devices in which the mercury or mercury compound cannot be removed shall be managed and disposed of as hazardous waste if not being recycled or a universal waste if being recycled.

- Per BUMEDINST 6260.30A, dental amalgam scraps (both wet and dry) do NOT qualify as a recyclable material, and are considered hazardous waste. All dental scraps must be transferred to the DRMO in a tightly-closed unbreakable container. Label the container and all documentation as “RCRA Hazardous Waste-Dental Scrap Material.”

- Chair side dental vacuum pump filters (traps) contain mercury amalgam sludge/water and must be disposed of as hazardous waste. Do not rinse the collection devices over drains or sinks.

Hazardous Waste Guidance for
COMPRESSED GAS CYLINDERS

- Compressed gas cylinders are exempt from hazardous waste requirements when the pressure within the cylinder approaches atmospheric pressure.

- Gas cylinders **may not** be intentionally punctured, vented, or discharged into the environment to avoid regulatory requirements.

- Empty/intact gas cylinders shall not be placed into trash or scrap metal containers.

- Per hazardous waste regulations, aerosol containers (such as spray paints, lubricants or dye penetrants) are not compressed gas cylinders.

NOTE: With the exception of **acetylene bottles**, which may contain **asbestos**, if the gas cylinder has been cut in half, has the pressure valve removed, or can be verified (visibly) that the cylinder is empty, the cylinder may then be managed as scrap metal.

- With the exception of gas cylinders attached or associated with bar-b-que grills, all cylinders must meet the hazardous material standards of being:

  - Closed when not in use.
  - Labeled with the cylinder's contents.
  - Be in good condition and capable of holding the product.

- Pending disposal, gas cylinders shall be managed as hazardous waste or material depending on the final disposition of the cylinder through Stoody, DRMO, or FISC.

- For compressed gas cylinder disposal, regardless of size, contact :

Stoody Industrial and Welding Supplies @ (619) 234-6750
Or
DRMO if the cylinders cannot be accepted by Stoody (FISC contractor).

Hazardous Waste Guidance for
OZONE DEPLETING SUBSTANCES (Halons/Freon/CFCs)

- Ozone Depleting Substances (ODS) include halons, refrigerants (such as Freon), and solvents. Because these substances contain bromine and chlorine which deplete the ozone layer, they are no longer available locally, though they remain necessary for Naval mission-critical uses. ODS is available in both liquid and vapor (gas) forms, and if not disposed of properly, ODS will break down into a variety of acutely toxic products, being very dangerous even in low concentrations.

- Freon is a trade name for a Dupont product, and the generic ODS you use may be labeled as carbon tetrachloride (Freon-10); Trichloromonofluoromethane or CFC-11 (Freon-11); Dichlorodifluoromethane or CFC-12 (Freon-12); 1, 1, 2-trichloro-1, 2, 2-trifluoroethane, CFC-113, TTE, or "flush" (Freon-13); chloroform (Freon-20). Other trade names include Genetron, Isotron, Ucon, and Arcton.

- ODS are used as refrigerants, fire extinguishing agents, local anesthetics, aerosol propellants, blowing agents for foams, chemical/synthetic intermediates, and heat transfer mediums, degreasing solvents and for dry cleaning.

- DoD policy mandates that all ozone depleting substances (ODS) be turned-in to the ODS Reserve in Richmond, VA through the DDDC San Diego, 2680 Woden St, Bldg. 3322, San Diego, CA 92136, after cylinders are properly secured with safety caps and manifested using DD Form 1149. However, local reuse options may be available.

- Used filters which have come in contact with ODS must be treated as a hazardous waste and you need to keep proper records of their disposition.

ODS cylinders at ODS Reserve, Richmond, VA

- Halon fire-suppression systems (e.g. Halon 1301) are under extremely high pressure, and actuation systems must be deactivated and safety caps must be installed. In the absence of manufacturer's safety caps, anti-recoil devices must be specially installed prior to packing and transport. Appropriate PPE is required for personnel deactivating cylinders.

- The Defense Supply Center maintains a website with DoD Ozone Depleting Substances Reserve background information and general instructions: http://www.dscr.dla.mil/ExternalWeb/UserWeb/aviationengineering/OZONE/index.htm . These instructions *must be read and understood* before attempting to deactivate or transport any ODS containing equipment.

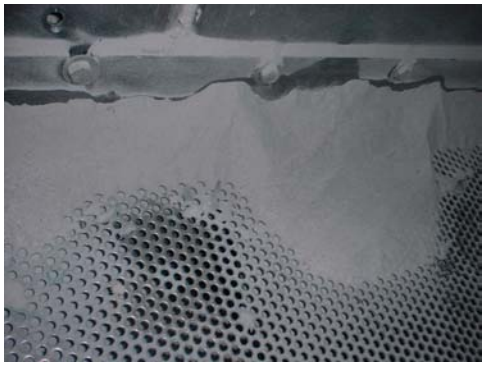
- Local reuse options may be available. Contact your local FISC HAZMIN Center to discuss current redistribution possibilities.

Hazardous Waste Guidance
for
ABRASIVE BLAST MEDIA

- Steel shot, aluminum oxide and similar types of abrasive blast grits may be collected, returned to the process, reused and managed as material until the grit becomes unable to be used for its intended purpose.

- Once blast grit becomes unusable or spent, it must be managed as hazardous waste **or** excluded recycled material, depending on its properties, constituents and ability to be recycled.

- All blast grit emitted from blast rooms or booths (usable or spent) must be immediately collected, containerized, and labeled. Any grit not collected and containerized is considered discarded and presumed to be hazardous waste.



- Used blast media collected for *reuse* in the blasting process shall be labeled "***Usable Blast Media***," "Blast Media," or in some other manner that identifies the grit as a usable material.

- Spent or otherwise non-useable blast media must be labeled as hazardous waste or excluded recycled material depending how it will be managed.

- Activities using blast grit such as plastic media being recycled at an off-site facility must review the hazardous waste recycling, Section 3.9 of this plan for possible notification requirements for recyclable waste pursuant to the health and safety code.

Hazardous Waste Guidance for PROCESS ASH RESIDUALS

- Residual ash generated by combustion operations such as baking, or burning-off of paints or other coating may need to be managed as hazardous waste.

- Ash residuals may contain heavy metals from the burned-off coating (lead, chrome, and zinc) in concentrations that exceed regulatory limits for hazardous waste. Often the parts are first treated in a corrosive solution, making the resulting ash corrosive.

- In addition, dioxins or vinyl chlorides may be present if plastics (PVC) or other chlorinated compounds were placed in the incineration process. Because of the widespread use of PCBs used in paint pigments intentionally or as an impurity, the residual ashes need to be analyzed to determine if regulatory thresholds have been exceeded.

- When analyzing samples, request Title 22 metals and corrosivity. Consult with the lab and disposal facility representative for the proper analysis for dioxins.

- After the ash has been analyzed and determined not to be a hazardous waste it may be disposed of as an Industrial Solid Waste at a municipal landfill under Special Waste provisions. (Refer to guidance regarding Special Waste).

- Lab analyses must be retained for a minimum of 3 years for waste stream determination.

Hazardous Waste Guidance
for
POLYCHLORINATED BIPHENYLS

- Older electrical equipment or components (pre 1979) may contain PCB material. PCBs appear as an amber colored or dark oily liquid that resembles motor oil and may have an odor similar to mothballs.

- PCBs may also be known by several trade names, such as; Aroclor, Askarel, Eucarel, Pyanol, Clorinol, Nepolin, Saf-T-Kul, EEC-18, Elemex and Intereen.

- PCBs become regulated as hazardous waste when the concentration is equal to or greater than 5 ppm (parts per million) in liquids and 50 ppm in non-liquids.

- PCB concentrations of 5,000 ppm or greater is considered extremely hazardous waste.

- Transformer cases or other similar items must be managed as hazardous waste if the material they contained had concentrations of PCBs greater than or equal to 5 ppm. These items must be labeled with the date they were removed from service and must be disposed of within 30 days.

- Electrical equipment (capacitors, light ballast or fixtures) with a concentration of 5 ppm or greater of PCBs are to be managed as hazardous waste.

- Fluorescent light ballast that have *no* concentration level stated or are *not* marked "PCB Free" or "NO PCBs" should be considered and managed as hazardous waste.

- Non-PCB ballasts may contain the regulated chemical Diethylhexyl Phthalate (DEHP). This chemical may be found in ballast F-40 & F-96. These ballast must be managed as hazardous waste.

- Light ballast that contains no PCBs, DEHP or other liquids may be managed as trash.

- Marine wire cable sheathing is known to contain PCBs and these must be managed as a hazardous waste.

- EPA has recently determined that PCBs can be present in caulk used in windows, door frames, ceilings, masonry columns and other masonry materials buildings built or renovated between 1950 and 1978. Please see separate PCB in Caulk guidance for more information.

Note: If you are unable to determine if your electrical equipment contains PCBs, contact your installation Environmental Office for assistance.

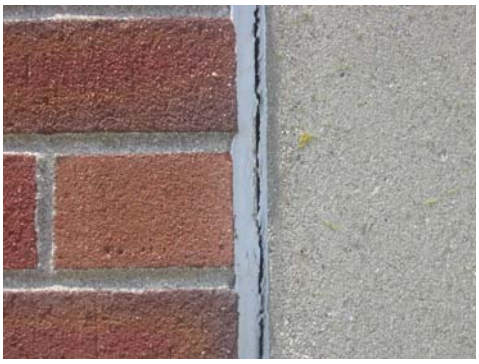
Hazardous Waste Guidance for PCBs in Caulk

- EPA has recently determined that polychlorinated biphenyls (PCBs) may be present in caulk used in windows, door frames, masonry columns and other masonry materials in many buildings built or renovated between 1950 and 1978. PCBs may also be present in caulked joints in concrete water storage basins. PCB-containing caulk may contaminate adjoining materials such as wood and soil.

- EPA recommends the testing and removal/ replacement of peeling, brittle, cracking, or deteriorating caulk. The testing method is EPA Method 8082 (approximately $150 per sample).

- For buildings constructed or renovated between 1950 and 1978, the caulking can be assumed to contain PCBs, and the base could proceed directly with the removal and proper disposal of the material as hazardous waste, without the delay of additional testing.

- PCBs can be transmitted to the air during the removal process, therefore proper safety and PPE procedures should be used during removal and handling. The work area must be contained as much as possible to prevent PCB-containing caulk dust from getting into the surrounding environment. Older caulking has a tendency to have become brittle, increasing the risk of creating hazardous dust during removal activities. The PCB-containing debris should be wrapped in heavy-duty plastic bags. Wrap waste building components, such as windows and doors, in heavy plastic sheeting and tape shut.



- PCB-containing caulk is considered *PCB bulk product waste* if the concentration of PCBs in the caulk is equal to or greater than (≥) 50 ppm. The definition includes masonry, wood, metals, and other building materials that have been serviced or coated with PCBs. Follow TSCA requirements to dispose of PCB-bulk product, which includes using a RCRA hazardous waste landfill.

- PCBs ≥5 to 49 ppm are managed as California-only (non-RCRA) hazardous waste.

- Older caulking may be also be associated with surfaces containing lead-based paint, and the guidance for lead-based paint needs to be considered as well.

- Additional information regarding PCB-containing wastes can be found at: http://www.epa.gov/osw/hazard/tsd/pcbs/pubs/caulk/caulkdisposal.htm and in the Guidance Document for PCBs.

- EPA Region 9 is working with the Navy to provide more detailed guidance in managing the Navy's demolition and related activities in compliance with the Toxic Substances Control Act and its implementing regulations. If PCBs are found during building survey, Project Managers should contact EPA Region 9: John Beach (415) 972-3347 for PCB Remediation work plan review/approval.

Hazardous Waste Guidance
for
DISCARDED CONSUMER AND INDUSTRIAL DEVICES

- A/C Units, compressors, water fountains, various types of electrical equipment, and refrigerators may contain hazardous materials that must be removed prior to disposal or recycling. This work must be performed by a Certified Appliance Recycler (CAR). A current list of CARs may be found at: http://www.dtsc.ca.gov/HazardousWaste/Mercury/upload/Approved-CAR-List.pdf

- These devices may contain:
  - Oils, Dielectric Fluids
  - Refrigerants (CFCs)
  - Mercury Switches
  - PCBs & DEHPs (older devices)

- Once removed from the device these hazardous materials become classified as relinquished or discarded, and must be reused, recycled or managed as hazardous waste.

- Halons, Freons, CFCs or other refrigerants shall not be intentionally vented into the environment.

- Those items turned over to the Sustainable Solid Waste (SSW) Program are subsequently sold to a CAR and the SSW Program retains the records.

Note: The owner is responsible for paying for having any hazardous material removed from devices prior to disposal or recycling.

Once the material is removed and the material will be disposed of as a hazardous waste, the Environmental Office will be responsible for the disposal cost.

- For those items not turned over to the SSW Program, prior to disposal or recycling, contact Facilities or PWC Code 500 to have your refrigerant removed or recovered by a CAR.

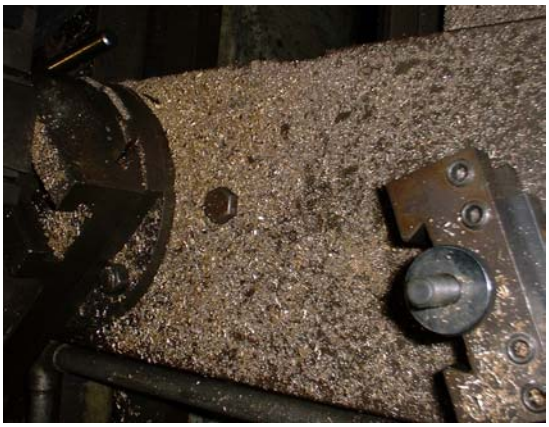
- Once all hazardous materials are removed, the device can be discarded, recycled, or placed into scrap metal containers.

Hazardous Waste Guidance
for
SCRAP METAL

- **Scrap metal is defined as one or more of the following:**

- Manufactured solid metal objects and products.

- Metal workings, including cuttings, trimmings, grinding, shavings, or sandings with a particle size greater than 100 micro meters.



- Solid metal residues of metal products.

- Empty containers meeting the requirements of Guidance for Contaminated Containers

- Scrap metal does *NOT* include the following:

- Spent lead-acid batteries, elemental mercury or water reactive metals such as sodium, potassium and lithium.

- Metal products that have been painted and the paint has deteriorated to the point where it is chipping, peeling, or flaking, and when tested, would be classified as hazardous waste.

Once the loose material (as shown above) is removed, the metal product would revert to scrap metal.

- Magnesium or Beryllium borings, trimmings, grindings, shavings or sandings.

- Metals contaminated with oil that is a hazardous waste and is free-flowing.

- Waste metal products or byproducts that are sludges, fine powders(less than 100 micrometers), semi-solids or in liquid solutions that are hazardous wastes.

Note: Metal not meeting the definition of “Scrap Metal” must be managed and disposed of as hazardous waste.

Hazardous Waste Guidance
for
CONSTRUCTION DEBRIS CONTAINING LEAD BASED PAINT

- Painted construction debris containing lead or other heavy metals above the regulatory limits is not considered to be hazardous waste if the paint is not peeling, flaking, chipping or what is considered "finely divided". Debris that contains lead or other heavy metals in the paint is not required to be managed as Hazardous Waste or Special Waste if the paint is "Tightly Adhered" to the substrate.

- Construction debris may be transported to a landfill as solid waste in containers or bins that have covers or tarps.

- Any paint (chips or dust) that separates from the debris must be collected and evaluated to determine if the paint is a hazardous waste, by having a lab analyze a sample using a Title 22 metals test method. First analyze to compare with the Total Threshold Limit Concentration (TTLC). If the results are ten times greater than the Soluble Threshold Limit Concentration (STLC) values or twenty times greater than the Toxicity Characteristic Leachate Procedure (TCLP) values, conduct additional testing. A Waste Extraction Test (WET) is needed to compare to the STLC values. If the STLC results are lower than the TCLP values, there is no need to perform the TCLP testing.

- While pending analysis, paint chips must be containerized and identified as "Paint Chip Pending Analysis"

- Most commonly, the metals lead, chromium, nickel and zinc cause paints to be considered hazardous waste.

- In August 2006, Cal-EPA DTSC began the process of drafting regulations for revising the TTLC for lead. The TTLC level for lead may be set at 250 or 500 mg/kg. Regardless, this change will affect Lead Based Paint (LBP) construction debris.

- A waste that does not meet California hazardous waste criteria but has 350 mg of Lead per kg of waste must still be manifested per HSC 25157.8

- PCBs can be present in caulk used in buildings built or renovated between 1950 and 1978. Refer to separate PCB in Caulk guidance for more information.

Note: If paints or debris are hazardous waste they must be managed and disposed of accordingly and not sent to the landfill for disposal. If you are unable to determine if your painted debris is hazardous contact the installation Environmental Program for assistance.

Hazardous Waste Addendum
for
PAINTS AND PAINTED DEBRIS

Paints come in a variety of toxicities, from haze gray to anti-foulant to latex. Each has its own hazardous properties and management requirements. The following is a general outline of the different groupings of paints and their waste management requirements.

Water-based, more commonly known as latex paints, are widely used in architectural applications and are the least toxic group of paints. Notice the term "Least Toxic" and not non-toxic. Some latex paints contain fungicides or algaecides as additives to inhibit the growth of these organisms, and may fail the California hazardous waste test for acute aquatic bioassay. Never rinse or pour latex paint onto the ground or into drains or storm drains. Rinsing these types of paints from paintbrushes or painting equipment into the sanitary sewer is acceptable under normal conditions, if the paint does not contain fungicides or algaecides.

Pouring liquid latex paint into a deep sink is prohibited. Additionally, intentionally air drying latex paints for disposal as solid waste (trash) by leaving the lid off is prohibited by environmental law, although dried paintbrushes, tape, tarps, or other non-hazardous debris contaminated with dried latex paint may be placed into the trash.

Solvent and oil-based paints. These paints normally have flashpoints that cause them to be classified as ignitable or flammable, and contain heavy metals such as chrome, cadmium, and zinc that are regulated as hazardous waste if specific levels are present. Even when dry, these heavy metals still remain within the paint's chemical composition. In addition, when these paints are removed from a surface they can absorb or retain contaminants from the removed substrate. Paint chips require lab analysis to determine their composition and are almost always classified as hazardous waste.

Also, even debris contaminated with a significant amount (20% or more coverage) of dried paint having heavy metals needs to be managed as hazardous waste and must not be placed into the trash.

Epoxies or other two-part coating systems are unique. When mixed and in liquid form these paints have higher flashpoints and are not classified as flammable. They do, however, fail the aquatic bioassay test for toxicity and must be managed as a hazardous waste. On the other hand, once dried and fully cured epoxy paints do not normally have any characteristics of toxicity and may be placed in the trash. However, as mentioned above, paint removed from a substrate (including epoxies) may become hazardous. As a best management practice, always test your paint/ paint chips before disposal as MSDSs do not normally identify ingredients below 1% (10,000 ppm), and heavy metals are regulated at much lower concentrations. Remember that any container, which contains dried epoxy paint, must comply with the requirements of Guidance for Contaminated Containers.

Anti-foulant paints. These types of paint in some cases are pesticide variants and are even registered as pesticides with the USEPA. Anti-foulant paints contain ingredients that kill marine organisms and contain the heavy metal copper. Discarded paints, paint chips, and all debris from these paints must be managed as hazardous waste.

Remember it is your responsibility as a generator to test your paint and paint debris before disposal and determine the appropriate management technique. If you have questions regarding proper disposal of paints contact your installation Environmental Office.

Hazardous Waste Guidance
for
RESINS, URETHANES & EPOXY PAINTS

- Liquid, unhardened or uncured resins, two-part epoxy, paints and urethane specialty coatings, when disposed of, shall be containerized, labeled, and otherwise managed as hazardous waste.

- Resins, epoxy paints and urethanes may be managed as solid waste and placed into the trash, provided that:
  - Resins, urethanes and paints are hardened and fully cured.
  - Are not contaminated or mixed with other hazardous materials or wastes.
  - Do not contain other ingredients that would classify them as hazardous waste.
- Containers holding resins, epoxy paint and urethanes must be managed in-accordance with Guidance for Contaminated Containers.

- Non-hazardous debris (cardboard, rags, tarps, paintbrushes etc.) contaminated with resins, paint, or urethane may also be managed as solid waste and placed into the trash when the material becomes completely dry.

- Resins, epoxy paints and urethanes SHALL NOT be intentionally mixed, spread, blended or otherwise dried for the sole purpose of disposal as solid waste.
- Epoxy paint chips should be managed as hazardous waste. These paint chips may have absorbed or come in contact with other contaminants or substrates that would cause them to be classified as hazardous.

See additional guidance for paint debris management.

Hazardous Waste Guidance
for
LATEX PAINT AND DEBRIS

- Non-hazardous debris contaminated with dried latex paint may be managed as solid waste and disposed of into the trash.

- For the purpose of this document, non-hazardous debris is cardboard, drop cloths, clothing, rags, tape, roller pad, brushes, paint trays, and similar items not contaminated with non-latex paints, oils, solvents or hazardous waste.

- Paintbrushes, roller pads or other painting equipment containing latex paints may be rinsed and cleaned with water into deep-sinks that discharge into industrial sewers.

- Rinsing out or cleaning paint brushes, roller pads or other painting equipment on the ground or into storm drains is strictly prohibited.

- Latex paint chips shall be managed as hazardous waste unless lab analysis determines otherwise. These chips may have absorbed or come in contact with other contaminants that would cause them to be classified as hazardous.

- Discarded cans or containers of latex paint must be managed in accordance with Guidance for Contaminated Containers.

- Liquid or semi-solid latex paint or containers holding such paint shall not be placed, poured or otherwise discarded into deep sinks, trash containers, or dumpsters.

NOTE: Check all latex paints MSDSs. If the paint being applied contains fungicides or algaecides, this guidance does not apply. Manage all residual discarded paints, debris or contaminated items for these paints as hazardous waste.

Hazardous Waste Guidance
for
LOW-LEVEL RADIOACTIVE WASTES (LLRW)

- LLRW is any discarded or non-usable item or device that contains a low-level radioactive material, such as specifically labeled or marked:
  - Smoke Detectors
  - Combat Systems Electron Tubes
  - Radioactive Calibration Samples
  - Helicopter Counter-Balance Weights
  - Deck Markers
  - Radium Dials
  - Tritium Exit Signs (label with location where the sign[s] were installed)

- LLRW shall not be disposed of in the trash. LLRW that has been mixed or contaminated with hazardous waste shall be managed and disposed of as hazardous waste. Note: Special arrangements will have to be made with a hazardous waste disposal facility authorized to accept Mixed Waste. CNRSW Hazardous Waste Facilities do not accept mixed waste.

- Once identified as LLRW (MSDS or manufacturer) the item or device shall be containerized (if possible) and labeled, such as: “Exit Signs,” “Smoke Detectors,” etc. Do NOT use hazardous waste or excluded recyclable labels.

- Dimmed tritium Exit Signs may be returnable to the manufacturer, after receiving a confirmation from them, but it is a tedious process.

- The Radiologic Affairs Support Program is the lead office for managing LLRW. The main instruction is NAVSEA S0420-AA-RAD-010, Radiological Affairs Support Program (RASP) Manual. Additional information is provided in OPNAVINST 6470.3, Naval Radioactive Materials Permit Program and NAVSEAINST 5100.18A, Radiological Affairs Support Program. The Navy Low-Level Radioactive Waste (LLRW) Program is covered by OPNAVNOTE 5100 of 7 April 1992 and the DoD LLRW Charter.

RASP contact person for all LLRW is:
LCDR Allen Stambaugh , Navy LLRW Program Manager, NAVSEADET RASO; BLDG 1971 NWS P.O. Drawer 260; Yorktown, VA 23691-0260.
Office: (757) 887-7610
email: allen.stambaugh@navy.mil

Within the San Diego Metro area, contact your base Radiation Safety Officer for specific instructions regarding LLRW identification and turn-in procedures.

NOTE: Afloat commands are required to contact their respective Logistic Support Representative (LSR) for the removal and disposal of LLRW.

Hazardous Waste Guidance for
Electronic Waste Management

- Electronic Devices, Cathode Ray Tubes (CRTs) and CRT glass that are no longer usable are called e-waste. In California, e-waste is managed as a Universal Waste in order to promote recycling.

FOR PROPER MANAGEMENT OF UNIVERSAL WASTE, REFER TO PART I, SECTION IV OF THIS PLAN, HAZARDOUS WASTE MANAGEMENT

- E-Waste often contains heavy metals including, but not limited to, lead, mercury, copper, chromium, cadmium, and zinc. These substances are removed from e-waste for recycling or disposal as hazardous waste.

- Universal wastes must be recycled at an authorized facility, taken to a CNRSW hazardous waste facility or otherwise managed as hazardous waste and may not be placed or discarded in solid waste (trash) containers.

- CRTs must be handled, stored or otherwise managed in a manner to reduce the possibility of being broken or otherwise damaged.

- E-waste includes any device with a circuit board, including but not limited to:
  - TVs
  - Computers
  - Cell phones
  - CD/DVD players
  - Stereos
  - Computer peripherals
  - Calculators
  - Some minor appliances

- All universal wastes shall be segregated and stored under the requirements for hazardous waste management, and not be accumulated for longer than *6 months* at the generator location.

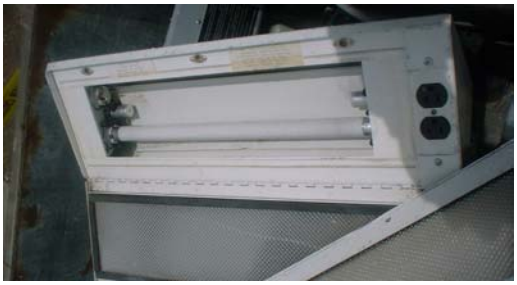
- Turning unwanted electronics into DRMO is good environmental stewardship. It allows the Federal government to reduce waste, responsibly reuse valuable resources, and protect our environment.

- Universal wastes may be transported to another universal waste handler or authorized disposal facility without using a hazardous waste manifest. However, the transporter must comply with Department of Transportation DOT shipping requirements for hazardous materials by using a bill of lading or other approved shipping document. In addition, universal wastes shall not be classified as hazardous waste or waste on the shipping document.

Note: For more information on CRT management, refer to *the Hazardous Waste Guidance for Cathode Ray Tubes* section of this plan.

Hazardous Waste Guidance
for
FLUORESCENT
&
HIGH DISCHARGE LIGHTING WASTE

- All spent, intact fluorescent light tubes (including green end capped "Phillips Altos") and high intensity discharge (HID) lamps (mercury, sodium or metal halide) that are not being recycled shall be managed as hazardous or universal waste.



- Broken or spent fluorescent tubes and HID lighting wastes shall be labeled and managed as hazardous waste.

- Intact tubes or lamps shall be managed in a manner that minimizes the possibility that they may become broken or otherwise damaged.

- All lamps or tubes being disposed of shall not be accumulated at the generator location for longer than 90-days.

- Fluorescent tubes or HID lamps, broken or intact, shall NOT be disposed of into trash containers, dumpsters, or other solid waste receptacles.

- Incandescent light bulbs are not classified as hazardous waste and may be disposed of into the trash.

- Spent, non-broken lamps shall be labeled "Used Lamps", Waste Lamps" , and whenever possible, placed into the original boxes.

NOTES:

The long standing DTSC Policy allowing the disposal of 25 fluorescent tubes per day in dumpsters **HAS BEEN REPEALED**. Any disposal of above mentioned light tubes or lamps as solid waste is a violation of California Environmental Law.

As of February 9, 2004, green-tipped "Phillips Alto" light bulbs are no longer considered non-hazardous. They must now be managed as universal or hazardous waste.

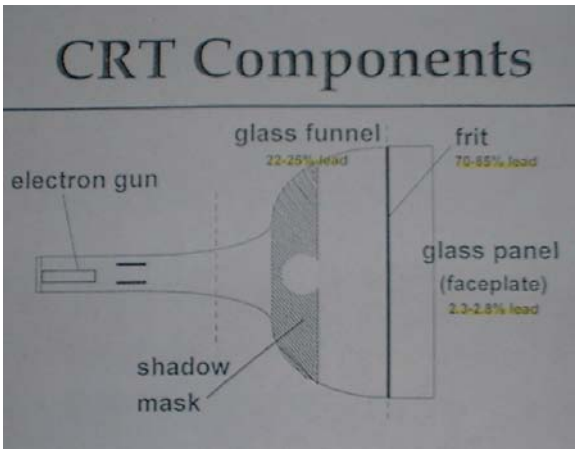
As of February 8, 2006, there is no longer a household waste exemption for universal wastes.

Hazardous Waste Guidance
for
CATHODE RAY TUBES

- Spent, discarded or unserviceable CRTs (not being recycled) including computer monitors, vacuum tubes, television picture tubes or similar type tubes are considered hazardous waste unless lab analysis or other documentation determines otherwise.

- Depending on the size and year manufactured, CRTs can contain between 1.5 and 6 pounds of lead, lead compounds (lead oxide) or lead containing materials (leaded glass).

- CRTs must be handled, stored or otherwise managed in a manner to reduce the possibility of being broken or otherwise damaged.



- Broken CRTs shall be labeled and managed as hazardous waste and may not be discarded in the trash or other solid waste receptacles.

- Intact, spent or discarded CRTs shall be labeled "Waste CRTs", "Used CRTs" or "Universal Waste-CRTs," and the label shall include the accumulation start date.

  (You are *not* required to use a hazardous waste label for intact tubes labeled in this manner).

- All CRTs being recycled or disposed of shall not be accumulated at the generator location for longer than 90-days.

Hazardous Waste Guidance

IS IT TREATED WOOD WASTE ?

- Treated woods are woods that have been impregnated, coated or infused with chemicals, preservatives or poisons to reduce the deterioration of these woods due to weather, insects, or other specific elements to which these woods are exposed. Woods are often treated with preservatives that are registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) or with chemicals to prevent rotting or decay, and when disposed, are known as Treated Wood Waste (TWW).

FOR PROPER IDENTIFICATION OF TREATED WOODS REFER TO PART II, APPENDIX D OF THIS PLAN, SPECIAL WASTE MANAGEMENT

- TWW includes chemically-treated or pressure-treated toxic constituents such as pentachlorophenol, creosols (creosotes), and chromium copper arsenate. Most TWW exhibits RCRA or non-RCRA HW characteristics.

- Landscaping Stakes, Pressure-Treated Woods (green or yellow), and other chemically-treated woods such as batten boards, have been classified as Hazardous Waste.

- Pier Pilings, Railroad Ties, Wooden Crates, Mammal Pens, USDA-APHIS pallets and some construction debris may be classified as TWW. Such types of TWW may be considered non-hazardous, depending upon sample analyses.

- Green or yellow pressure-treated woods have pressure indentations indicating that they have been chemically treated.

- Fire/Flame Retardant Woods (FRX) typically do not use FIFRA products. However some FRX woods are using dyes to readily distinguish the type of product. MSDS information on those dyes indicates heavy metals may be present up to 1%. Therefore, analytical testing for heavy metals such as copper, nickel, chromium and zinc may be necessary.

- Utility poles which have only been used for the transmission of electricity, gas and telephonics, and on which additional coatings have not been applied, may qualify for certain testing exemptions.

- For more information on TWW, refer to Treated Wood Waste Management & Disposal guidance, Part II, Appendix D, and the Cal-EPA DTSC website: Treated Wood Waste.

Hazardous Waste Guidance
For
TREATED WOOD WASTE MANAGEMENT & DISPOSAL

- Woods treated with preservatives that are registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) or with chemicals to prevent rotting or decay, are known as Treated Wood Waste (TWW).

FOR PROPER MANAGEMENT OF TREATED WOODS REFER TO PART II OF THIS PLAN, SPECIAL WASTE MANAGEMENT

- Fire/Flame Retardant Woods (FRX) typically do not use FIFRA products. However, some FRX woods are using dyes to distinguish the type of product, and heavy metals may be present up to 1%. Therefore, analytical testing for heavy metals such as copper, nickel, chromium and zinc may be necessary.

- Alternative management standards for TWW have been in effect since July 2007. Some requirements include segregated, covered storage that prevents ground contact, away from public access, labeled as "TREATED WOOD WASTE – Do not burn or scavenge," and shall include the generating activity name, address, and accumulation date.

- TWW generation has notification requirements and reuse has restrictions. Saw dust from cutting TWW that meets hazardous waste criteria will not be accepted at the landfill for disposal and must be managed and disposed of as Hazardous Waste.

- TWW may be disposed of using a bill of lading instead of a uniform hazardous waste manifest. Some landfills are approved to accept TWW under special permit. Any disposal of hazardous TWW from a military installation must be coordinated with the installation environmental office.

- Miramar landfill only accepts Non-Hazardous (NH) TWW. Typically a Special Waste request is submitted and once approval has been granted, the NH-TWW can be sent to the landfill using a Special Waste Manifest and solid waste Disposal Coupons obtained from the CNRSW Solid Waste Program Office.

- ROICC/FEAD, contractors/executing agents may sign Non-Hazardous Waste Special Waste Manifests for TWW only with test results or proof of non-hazardous characterization.

- For more information on TWW, refer to Cal-EPA DTSC website: Treated Wood Waste

Hazardous Waste Guidance
for
EXPIRED CHEMICALS
&
MATERIALS

- Hazardous materials or chemicals become regulated as hazardous waste when:
  - They are discarded, regardless of their expiration date
  - They pose a threat to human health or the environment
  - They are mislabeled or inadequately labeled (unless corrected within 10 days)
  - Their packaging or container is damaged (unless corrected within 4 days) regardless of the expiration date.

- The material or chemical is a "retrograde material," meaning it will not be used or distributed for its original or intended purpose and has exceeded the specific or recommended shelf life after the specified date:
  - One year after the date when the material becomes a retrograde material or chemical.
  - After one year, the material or chemical is a "recyclable material" which is managed as a hazardous waste unless it falls into a provision of the Health and Safety Code for reuse or recycling.

- All excess/expired hazardous materials must be reviewed by FISC and DRMO for reuse before turning in to the HW Facility for disposal.
- The expired/excess material must be segregated based on compatibility and hazardous classification (flammable/ oxidizer/ corrosive/reactive/poison), and any leaking containers must be placed in a container that will prevent release. Refer to compatibility chart for additional info: (http://www.sefsc.noaa.gov/HTMLdocs/appendix-H.htm)
- The applicable MSDS must accompany the waste at the time of pick up.

Note: Used or excess hazardous material, chemicals or substances, expired or not must never be disposed of into any solid waste (trash) containers or receptacles

Hazardous Waste Guidance for
HAZARDOUS MATERIALS MANAGEMENT

- Hazardous Material Business Plans and Unified Facility Permits are required for shops that store hazardous materials exceeding 200 cubic feet of a compressed gas, 500 pounds of solid, or 55 gallons of a liquid at any one time.

- Business Plan refresher training must be conducted and documented annually. Newly assigned personnel must be trained on the Business Plan requirements prior to the annual refresher review.

- Ensure all containers are identified with readable labels or markings; replace any labels that are unreadable, torn, faded or missing

- Keep all containers closed with proper fitting lids, seals or gaskets. Replace or repack any containers that are leaking, in poor condition, or that have torn bags or boxes.

- Separate ignitable, corrosive, or oxidizing material in storage lockers or cabinets.

- During hazardous waste compliance inspections, the inspector has the authority to review and inspect hazardous material lockers for the following areas of compliance:

- Is the material labeled? Material that is unlabeled or inadequately labeled or that cannot be identified is considered waste and must be managed in accordance with its hazardous properties or characteristics, unless the material can be identified and be properly labeled within 10 days.

- Is the material container in good condition? Damaged containers either badly rusted, with large dents or not otherwise structurally sound must be re-packaged within four days to avoid being classified as a waste.

- Is the container closed? Containers must remain closed when the product is not being used.

- A material is classified as “Retrograde” and is considered a hazardous waste if the material is not used or returned to the manufacture 1 year after the materials expiration or extension date.

Hazardous Waste Guidance for PESTICIDE CONTAINER MANAGEMENT

Certification and Licensing

- Any person applying pesticides is required to be licensed or certified by the Dept. of Pesticide Regulation Licensing and Certification Program as a "Qualified Applicator." A copy of the certificate must be readily available or can be checked at http://www.cdpr.ca.gov/docs/license/currlic.htm

- For more specific information regarding pest management and certification, contact the NAVFAC Pest Management Consultant, Michael Medina at 532-1157.

Note: Personnel applying products in work spaces for personal relief and military housing residents applying pesticide for personal use are exempt from this certification requirement.

Approval & Record Keeping

- All pesticides to be used on DoD installations shall be submitted for approval to the NAVFAC Pest Management Consultant via your respective pest management coordinator. There are no coordinators within the San Diego Metro area. Records shall be maintained on all pesticides applied at the facility and submitted to the pest management coordinator. Within the San Diego Metro area, these records are submitted to the NAVFAC Consultant Mike Medina.

Container Management

- Empty containers that held liquid pesticides may be recycled or managed as solid waste after the container has been triple-rinsed. Only non-acute hazardous waste (not P or U listed) pesticide product containers may be rinsed. Acute hazardous waste pesticides are P or U listed in 22 CCR 66261.33 (examples are warfarin, strychnine, and toxaphene). Triple-rinsing must be performed by a licensed pesticide applicator, and the effort must follow prescribed regulatory techniques of 22 CCR 66261.7 (e) and (f) such that the containers will subsequently be used as a recyclable material in a solid waste disposal program. However, any rinsed material from pesticide containers must be applied in the pest control process and not disposed of into the sewer system, storm drains, or discharged onto the ground.

- All aerosol containers that contain or contained pesticides, regardless of whether they are empty or not, shall be managed as hazardous waste, unless it can be proven that the pesticides do/did not contain extremely or acutely listed hazardous wastes.

- Bags that contain non-acute hazardous waste (not P or U listed) pesticides may be disposed of as trash after all the material has been removed.

Note: Any pesticide container that is not completely empty when discarded must be managed as a hazardous waste

Hazardous Waste Guidance
for
AEROSOL CONTAINER MANAGEMENT

- Aerosol containers which contain food and personal hygiene products are exempt from these requirements.

- Aerosol containers which contain hazardous materials or substances that are no longer usable, when discarded shall be managed as hazardous or universal waste.

- Aerosol containers with defective, missing, clogged or non-functioning valves, which contain hazardous substances, shall also be managed as hazardous waste and not placed into the trash.

- Once all hazardous materials and substances are removed, empty aerosol containers can be recycled and placed into scrap metal containers.

- EMPTY: Means that all hazardous materials, products and propellants have been used during normal application of the aerosol produce.

- All aerosol containers that contain/contained pesticides, regardless of whether they are empty or not, shall be managed as hazardous waste, unless it can be proven that the pesticides do/did not contain extremely or acutely listed hazardous wastes.

- Aerosol containers shall not be intentionally vented, punctured or otherwise depleted into the environment to achieve the status of empty.

Note: Compressed gas cylinders, regardless of size or content are not classified as aerosol containers and must be managed accordingly.

Hazardous Waste Guidance for CONTAMINATED CONTAINERS

- All containers or liners that previously contained hazardous materials must be EMPTY before being placed into recycling bins or the trash.
- Containers or liners include; drums, bottles, buckets, plastic bags, boxes or similar items.
- Empty: means that ALL of the remaining material must be removed by chipping, scraping, pumping or draining. Certain rinsing is allowed (refer to Pesticide Management Guidance) and triggers permit requirements.
- Containers or liners greater than 5 gallons in capacity must be marked empty and dated with the date that the container or liner became empty and managed (recycled or disposed) of within 1 year.

- For containers over 5 gallons in capacity, a record must be maintained of the person or vendor that the container was sent to. Turn-in records are acceptable if the containers are turned in for hazardous waste disposal.
- Porous containers such as cardboard, paper or fabric must be disposed of as hazardous waste if they come in contact with a hazardous waste or absorb and become saturated with a hazardous material.

- Compressed gas cylinders are empty when they reach atmospheric pressure through normal operations, venting is not authorized.
- Empty containers or liners less than 5 gallons in capacity may be placed into scrap metal or recyclable plastic bins.
- Household type cleaning materials (cleaners or disinfectants) containers less than 5 gallons are exempt and empty when they are rinsed and the rinse water is used in the cleaning process.
- Under no circumstances are any acute hazardous waste listed (P or U coded) pesticide product containers to be placed into solid waste or recycling bins. If not hazardous waste or recyclable then cleaned (triple-rinsed by licensed pesticide applicator) and emptied pesticide containers must be disposed to sanitary trash. (refer to Pesticide Management Guidance for specific requirements).

Note: If all of the residual material cannot be removed or the container or liner held acute or extremely hazardous material, then the container must be disposed of as hazardous waste.

Hazardous Waste Guidance for
Pharmaceutical and Personal Care Product Management

- A pharmaceutical is any drug or medicine used in medical treatment. Both over-the-counter (OTC) and prescription medicines are included.
- Personal care products include any product used for personal health or cosmetic reasons. Sunscreen, cosmetics, fragrances, vitamins, supplements, and ***any*** medicated personal use products are included.
- Pharmaceuticals must be turned-in to the Reverse Distribution Program (RDP) or Guaranteed Return Program (GRP). Products are redistributed, incinerated, or returned to the manufacturer.
- Personal care products should be disposed of as medical waste, hazardous waste, or solid waste depending on the product.

FOR ADDITIONAL INFORMATION REFER TO PART IV OF THIS PLAN, MEDICAL WASTE MANAGEMENT

- Pharmaceuticals and personal care products (PPCPs) are waste if expired, damaged, contaminated, or were not used for intended purposes.

- Unused or waste PPCPs shall be disposed of in the following order of priority:
    1. Turn-in to RDP.
    2. Turn-in to GRP.
    3. Dispose as medical waste.
    4. Dispose as hazardous waste.
    5. Dispose as solid waste.

DO NOT FLUSH PHARMACEUTICALS DOWN A TOILET

- Hazardous pharmaceuticals include epinephrine, chloraseptics, and some antineoplastics.
- PPCPs requiring special management include, but are not limited to:
    - Antihistamines
    - Nicotine patches, gum and lozenges
    - Aspirin, acetaminophen and ibuprofen
    - Pain medications
    - Blood pressure medications
    - Antibiotics
    - Decongestants
    - Anti-fungal products
    - Psoriasis and eczema topical treatments
    - Products that contain lidocaine
    - Dandruff shampoo
    - Antiperspirant deodorant
    - Antiseptics such as iodine, betadine and alcohol based hand wipes
    - Antibacterial soap
    - Nail polish and remover
    - Lotion containing vitamins
    - Aftershave
    - Eyeliner
    - Hair styling gel

Note: Orthophthalaldehyde (OPA) and glutaraldehyde products are non-RCRA hazardous waste due to acute aquatic toxicity, and must be disposed of as hazardous waste unless neutralized onsite with glycine. Healthcare facilities are exempt from tiered permitting regulation when this process is carried out onsite.

CONTACT BASE ENVIRONMENTAL FOR GUIDANCE ON ALL QUESTIONS

PART II

SPECIAL WASTE MANAGEMENT

PART II

TABLE OF CONTENTS

INTRODUCTION **1**

SECTION 8 - SPECIAL WASTE MANAGEMENT ADMINISTRATION **2**

8.1 PURPOSE 2
8.2 COMMAND RESPONSIBILITIES 2
8.3 CNRSW ENVIRONMENTAL PROGRAM RESPONSIBILITIES 2

SECTION 9 - SPECIAL WASTE MANAGEMENT **3**

9.1 OVERVIEW 3
9.2 SPECIAL WASTE DISPOSAL REQUEST AND MANIFESTING 3

SECTION 10 - SPECIAL WASTES **5**

10.1 TREATED WOODS 5
10.2 ASBESTOS 6
10.3 CONTAMINATED SOILS 7
10.4 INDUSTRIAL SOLID WASTES 7

APPENDICES

Appendix A-1 Special Waste Disposal Request

Appendix A-2 Special Waste Manifest

Appendix B NRSW Policy Letter

Appendix C Sample Letter to Landfill

Appendix D Treated Wood Photos

Appendix E Asbestos Materials Photos

Appendix F Industrial Waste Photos

INTRODUCTION

Part II is designed as a guidance document to support the management and disposal of Special Wastes (i.e. solid waste), aside from hazardous waste requirements for the management of Treated Woods, Asbestos, Contaminated Soils and Industrial Solid Wastes under the provisions of the Miramar Landfill waste acceptance criteria. Special wastes fall under the provisions of Resource, Conservation and Recovery Act (RCRA), Subtitle D, for the management of non-hazardous solid waste. Although under RCRA all liquids and semi-solids are classified as solid waste, aqueous and semi-solid substances and waste are not authorized for disposal at the municipal landfill.

CNRSW commands under the requirements of the Federal Facilities Compliance Act of 1992 must meet and comply with this waste management criteria as required by the City of San Diego, Miramar Landfill Environment Enforcement Division who is in turn regulated by permit from the Regional Water Quality Control Board under the authority of California EPA.

To identify and comply with these requirements, specialized knowledge is required. CNRSW Environmental Program, through the information provided within this guidance, will help your command understand its responsibilities towards environmental compliance for special waste management.

SECTION 8 - SPECIAL WASTE MANAGEMENT ADMINISTRATION

8.1 Purpose

To provide Commander Navy Region Southwest (CNRSW) personnel with a reference document that supports the overall management requirements for special wastes by defining your responsibilities that relate to waste identification and disposal issues. Additionally, this will establish an effective management program for special waste compliance for all areas under the cognizance of your Commanding Officer.

8.2 Command Responsibilities

a. Operations or processes that create special waste must comply with the waste acceptance criteria as specified by the Miramar Landfill Environmental Enforcement Division and all other applicable laws or ordinances that pertain to Class III municipal solid waste landfills.

b. Ensure command personnel assigned to manage or handle special waste can properly identify and segregate these waste from other solid wastes or trash prior to disposal.

c. Complete and submit a Special Waste Disposal Request or Manifest with all pertinent information to the appropriate Landfill personnel as specified on the request form.

d. Retain a copy of this documentation for your files to be used as a future reference for special waste management and disposal.

8.3 CNRSW Environmental Program Responsibilities

a. CNRSW Environmental Program shall research, develop and disseminate specific policy or guidance and to provide oversight for the management of special wastes.

b. Advise activities on changing environmental laws, regulations or other requirements that will impact special waste operations or disposal.

c. Conduct special waste analysis or classifications, waste determinations, and provide technical assistance for regionalized commands to address specific questions or concerns on special waste management.

SECTION 9 - SPECIAL WASTE MANAGEMENT

9.1 Overview

a. Special wastes are various types of industrial wastes, contaminated soils or other solid wastes which because of the physical or chemical properties have the potential for meeting the characteristics of hazardous waste, designated wastes or other wastes that are regulated by the Department of Toxic Substances Control or Regional Water Quality Control Board.

b. After lab analysis has determined if these solid wastes or soils are non-hazardous, as specified by California environmental requirements, and meet the municipal landfills waste acceptance requirements, these waste may be managed as special waste and disposed of at a non-hazardous waste landfill under specific handling provisions. There is no all-inclusive list of waste which may be classified as special waste; however, these have been segregated into larger subcategories such as:

- Treated Woods
- Asbestos
- Contaminated Soils
- Industrial Solid Waste

c. The provisions for special waste management require the requesting command to submit a special waste disposal request and corresponding lab analysis to the environmental enforcement division of the municipal landfill to be reviewed for acceptance prior to disposal.

9.2 Special Waste Disposal Request and Manifesting

a. Prior to disposal of special wastes at the municipal landfill, a special waste disposal request must be submitted to the landfill authorities for review. This review normally takes 3-5 days after the request is received. Once the review process is complete, landfill authorities will notify you that the waste(s) are approved or disapproved for disposal at their facility and will provide you with additional disposal instructions. Appendix A-1 is an example of a completed Special Waste Disposal Request form.

b. After acceptance has been received from the appropriate landfill authority, the waste may be transported for disposal. A completed Special Waste Manifest must accompany these wastes to the landfill. Appendix A-2 is an example of a completed Special Waste Manifest. Each manifest has a specific tracking number assigned and must be signed by the generator of the waste and waste transporter. This document and corresponding waste disposal request submitted earlier are retained at the landfill for future reference for the types and amounts of waste received into their facility.

c. Each shipment of special waste can (and will most likely) be inspected by the landfill enforcement division to ensure compliance with environmental regulations, landfill waste acceptance criteria and contents as specified on the manifest.

d. Disposal requests and manifests can be obtained from the installation Environmental Office or Fee Shack located at the entrance to the Miramar Landfill. Appendix B is the CNRSW Hazardous Waste Policy Letter to landfill enforcement authorities regarding the Navy's management of treated woods in the San Diego area. Appendix C is a sample cover letter to the landfill hazardous substance enforcement team, which accompanies the initial waste disposal request.

SECTION 10 - SPECIAL WASTES

10.1 Treated Woods

a. Treated woods are commercial or industrial woods that have been impregnated, coated or infused with chemicals, preservatives or poisons to reduce the deterioration of these woods due to weather, insects, or other specific elements in which these woods are exposed. Based on the type or concentration of the substance used to treat the wood, each specific treated wood waste must be analyzed to evaluate and classify, by type, to determine the wood's characteristics as either hazardous or non-hazardous waste. Appendix D provides an expanded definition and clarification on the types of treated wood located at naval installations. Fire/Flame Retardant Woods (FRX) typically do not contain the same chemicals; however, some have been found to require analysis for heavy metal content. For detailed information, download the DTSC Treated Wood Fact Sheet from http://www.dtsc.ca.gov/HazardousWaste/treated_wood_waste.cfm

b. Navy representatives have met with Miramar Landfill environmental personnel, provided waste determinations and policy statement specifying how metro-area commands will manage various types of treated woods as either non-hazardous special waste or hazardous waste. However, it is still the responsibility of the command requesting disposal of treated woods as well as other special wastes to submit the appropriate disposal request, manifest or other pertinent documentation for proper waste determination to the appropriate municipal landfill authority for review.

c. As specified below, the following treated woods have been analyzed and classified as non-hazardous and maybe transported to a municipal landfill as special waste using the criteria specified in the following sections. Although the size and amount of the below treated woods have no limitations, sawdust or other fine particulates from these woods should be placed into plastic bags and disposed of into the trash.

- Railroad Ties
- Pier Pilings and support structures
- Utility Poles and support structures
- Certain Chemically Treated Woods (i.e. FRX; "Pest-Free" USDA-APHIS pallets)

d. Listed below are treated wood wastes, which have been analyzed and have been classified as Hazardous Waste and must be managed appropriately. However, a comprehensive review of Appendix D will provide a more detailed aspect of all wood wastes.

- Landscaping Tree Stakes
- Pressure Treated Woods (Green or Yellow)
- Chemically Treated Woods containing chromium copper arsenate (i.e. batten boards)

10.2 Asbestos

a. Asbestos is classified into two distinct subgroups of "Friable" and "Non-Friable". These classifications determine how and where asbestos is managed for disposal and which management practices are employed. The installation Safety Office or Industrial Hygienist will determine personnel exposure hazards, while the Environmental Office identifies disposal options.

b. The determination of "***Friability***" is based on two criteria.

1. After analysis, if the Asbestos Containing Material (ACM) contains greater than or equal to 1% friable asbestos, meaning the ACM can be crushed, pulverized, easily crumbled into a finely divided powder or fibrous substance by using hand pressure, the ACM is classified as Friable and must be managed and disposed of as a *hazardous waste*.

2. After analysis, if the ACM contains less than 1% friable asbestos, as stated above, or the substance cannot be pulverized or become finely divided, (basically, the ACM is fuzzed into the substance) then, the ACM is classified as Non-friable. This type of substance may be managed as special waste for disposal at a municipal landfill.

c. Since ACM varies from location to location and in unknown concentrations, each shipment of suspected ACM must be analyzed for asbestos content and visually inspected for friability. It is possible that non-friable asbestos may become friable during the removal process or during transportation and thus may require alternate management strategies. The list below are potential sources of ACM.

- Older Floor Tiles
- Roofing & Acoustic Materials
- Ceiling Panels
- Cement Piping
- Piping Insulation
- Marine Wire Cable Sheating

d. Asbestos determination can be performed by environmental laboratories, some command safety offices or an industrial hygienist. It is imperative that documentation specifying that the asbestos percentage is provided with the Special Waste Disposal Request form and submitted to the landfill authorities for review and approval. Also, a signed statement must be included in the disposal request package stating that the ACM being disposed of contains only Non-friable asbestos.

e. Appendix E provides an expanded definition and additional visual identification on specific substances that may contain asbestos. For materials such as floor tiles, look for multi-layers. Even though in most cases floor tiles are not classified as friable in the undisturbed state, during demolition, non-friable materials can become friable if heavy equipment is employed to expedite the removal.

f. For transportation to the municipal landfill for disposal as special waste, ACM must be double wrapped into a durable 6-mil thick plastic sheet, bag or film.

10.3 Contaminated Soils

a. Soils contaminated with petroleum hydrocarbons, organic or inorganic compounds, or heavy metals may be managed as special waste, provided the soils are not contaminated with or exceed hazardous waste limits or concentration limits established by the Regional Waste Quality Control Board.

b. With the exception of some heavy metals, the contaminates listed below are the maximum contamination levels accepted at the Miramar Landfill. All soils, which exceed these concentration levels must be managed as a hazardous or designated waste unless otherwise indicated by Navy Installation Restoration (IR) program requirements. For hazardous waste concentration limits on heavy metals, contact your respective environmental department.

- Gasoline 100 mg/kg TPH
- Diesel Fuel 1000 mg/kg TPH
- Used/Waste Oils 2000 mg/kg TRPH
- PCBs Non- Detectable
- Lead 350 mg/kg

10.4 Industrial Solid Wastes

a. Industrial wastes are solid wastes that may be potentially classified as hazardous wastes or wastes regulated by the Regional Water Quality Control Board. These wastes are generated or employed by numerous industrial processes or applications and must be determined to be non-hazardous prior to disposal at the landfill. There is no all-inclusive list of industrial wastes that may be classified as industrial solid waste. However, listed below are a few wastes that *may* meet this classification and thus be disposed of as a special waste.

- Ion Resin Exchange
- Desiccants
- Phosphates
- Bicarbonates
- Oven Ash (Non-hazardous)
- Polystyrene Camels not coated with Tributyl Tin (TBT)
- Fire Extinguisher Agent (PKP)

b. Appendix F provides an additional visual identification of various types of industrial wastes, which have the potential of being managed as special waste.

c. If you have any questions on these types of industrial waste or believe your waste may be managed and classified as special waste for disposal at a municipal landfill, please contact the installation Environmental Office.

PART II

APPENDICES

Appendix A-1	Special Waste Disposal Request
Appendix A-2	Special Waste Manifest
Appendix B	NRSW Policy Letter
Appendix C	Sample Letter to Landfill
Appendix D	Treated Wood Photos
Appendix E	Asbestos Materials Photos
Appendix F	Industrial Waste Photos

The City of San Diego
ENVIRONMENTAL SERVICES DEPARTMENT
9601 Ridgehaven Court, Suite 320, San Diego CA 92123-1636

SPECIAL WASTE DISPOSAL REQUEST

GENERATOR

Name: ROICC, NAVAL BASE SAN DIEGO

Address: 1017 ECHO LANE

SAN DIEGO, CA. 92136

CONTACT

Name: JOE DREW

Title: PROJECT ENGINEER

Phone #: (619) 556-5732

Address Where Waste is Generated: NAVAL BASE SAN DIEGO, PIER #2

Transporter Name: ABC HAUL ANYWHERE CO.

WASTE INFORMATION

1. Physical description (example: dry sandblast grit, % moisture): TREATED WOODS FROM PIER PILINGS
2. Amount of waste to be disposed per unit time (example: 500 pounds/day): 1800 POUNDS/ DAY

   Estimated number of loads: 1
3. Describe the process and materials used to generate the waste: WOOD REMOVAL FROM PIER #2, NAVAL BASE SAN DIEGO

CERTIFICATION by the responsible manager(s) of the establishment.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this notification and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I certify that the waste is nonhazardous based on testing of the waste and applying knowledge of the characteristics of the waste in light of the materials or the processes used. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Name (print): JOE DREW Signature: J. Drew

Title: PROJECT ENGINEER Date: 10/11/96

Note: You must attach a copy of the laboratory results and Chain of Custody document to this form. All sampling and analysis must meet the procedures specified in California Code of Regulations, Title 22, Division 4.5, Chapter 11.

OFFICE USE

☐ Approve ☐ Disapprove – Reason:

Requirements: ☐ Special Handling ☐ Manifest ☐ None

Inspector Name: Date:

WHITE: ENVIRONMENTAL PROTECTION CANARY: RETURN TO GENERATOR AFTER REVIEW PINK: GENERATOR RETAINS

ES-101 (Rev. 8-01)

This information is available in alternative formats upon request.

CITY OF SAN DIEGO
ENVIRONMENTAL SERVICES DEPARTMENT
9601 RIDGEHAVEN COURT
SAN DIEGO, CA 92123

26099

SPECIAL WASTE MANIFEST

GENERATOR

Name: ROICC, NAVAL BASE SAN DIEGO

Address: 1017 ECHO LANE

City: SAN DIEGO Zip Code: 92136

SITE ADDRESS

Address: PIER #2 NB SAN DIEGO

City: SAN DIEGO Zip Code: 92136

Phone: 556-5777 Contact: JOE DREW

CONSULTANT/CONTRACTOR

Name: ROICC, NAVAL BASE SAN DIEGO

Address: SAME AS ABOVE

City: Zip Code:

Phone: Contact:

TRANSPORTER

Name: HAUL ANYWHERE CO.

Address: 723 HUNT AVE.

City: NATIONAL CITY Zip Code: 92100

Phone: 479-1810 Contact: MIKE SMITH

Type of Waste: TREATED WOODS

Components of Waste (percent of each component):

TREATED WOODS FROM PIER PILINGS 100%

The generator certifies the wastes are not hazardous or designated wastes as defined in the California Code of Regulations.

Generator Signature/Title: J. Drew, PROJECT ENGINEER **Date:** 10/14/96

Transporter Signature: Mike Stan **Date:** 10/14/96

(OFFICE USE ONLY)

DSR Signature: Date:

Reviewed by: Date:

Special handling ☐ Yes ☐ No

Gross Wt.:

Tare Wt.:

Net Wt.:

Documentation on file: ☐ Yes ☐ No

Comments:

LANDFILL (WHITE) GENERATOR (CANARY) TRANSPORTER (PINK)

ES-045 (Rev. 11-97)

This information is available in alternative formats upon request.

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
Ser N45JHW.cg/0171
April 23, 2007

Kirk Galarneau
Hazardous Substance Enforcement
Environmental Programs Division
City of San Diego
9601 Ridgehaven Court Suite 320
San Diego, CA. 92123-1636

Dear Mr. Galarneau:

SUBJECT: TREATED WOOD SPECIAL WASTE ONGOING PROFILE

Commander Navy Region Southwest (CNRSW) Hazardous Waste Program has relied on laboratory analysis of Treated Wood Wastes (TWWs) found at various Naval Bases in San Diego, as being representative of current materials found and used on local installations. CNRSW is updating the TWW profile with the San Diego City Miramar Landfill to incorporate the recent analytical testing of previously unexamined TWWs. The profile update incorporates three newly sampled TWWs. The 2005 analyticals from the NAVFAC Waterfront Operations revealed portions of marine fendering systems that are non-hazardous waste and other portions that are non-RCRA hazardous waste. In 2006, analyticals from Flame Retardant Woods (FRX) used on projects conducted by the Puget Sound Naval Shipyard (PSNS), resulted in a non-hazardous waste determination. In addition, analyticals from 2007 of SPAWARSYSCEN mammal pen pilings resulted in a non-RCRA hazardous waste determination.

The hazardous waste designation is based on criteria pursuant to California Health and Safety Code, Chapter 6.5 and California Code of Regulations, Title 22, Chapter 11, Articles 2 and 3. The special waste designation is based on these criteria and the acceptance criteria as a Special Waste, as specified in the City of San Diego Waste Management Regulation E-001-95. The locations covered by this profile are Department of Navy stations and facilities within or near the boundaries of the City of San Diego, as provided in the City of San Diego Waste Management Regulations D-001-94.

CNRSW finds the following treated woods meet the acceptance criteria as a Special Waste: Flame Retardant Wood (FRX) (specifically Hoquian plywood and Exterior Fire-X Type II Blue Treated FRX wood shavings); camels and sides of waterfront fenders; railroad ties; pier pilings and associated pier support structures; utility poles and associated supports; landscaping materials including planter boxes and retaining walls or other types of treated timbers or wood used in similar type applications that have become gray or faded due to weathering; and some chemically treated plywoods that are brown or gray in color.

5090
Ser N45JHW.cg/0171
April 23, 2007

Woods with pressure indentations; woods with yellow, bluish or green coatings (such as tree stakes); munitions and ordnance crates and pallets are not included in this designation and will continue to be managed separately. Analytical testing of the following treated woods have resulted in non-RCRA hazardous waste determinations: the 20x60 sections of waterfront fenders; landscaping materials (poles and decorative logs); mammal pen pilings; pressure-treated wood and Fiddler's Cove dock.

The CNRSW will update the Special Waste Management Plan (SWMP), Appendix D, which visually identifies and classifies various treated woods as either hazardous waste or special waste. If have any questions regarding this matter, please contact Ms. Christina Graulau of the Commander Navy Region Southwest, Hazardous Waste Program Office at (619) 532-2274.

Sincerely,

Brian S. Gordon

BRIAN S. GORDON
Director, Compliance and
Technical Division
By direction

cc: Mark Edson, NBSD Environmental Installation Program Director
Phil Dyck, Pt.Loma Environmental Installation Program Director
Luis Perez, NBC Environmental Installation Program Director

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
4500
Ser N44W/555
March 15, 2003

SAMPLE LETTER

City of San Diego
Attn: Hazardous Substance Enforcement Team
Environmental Services Department
Environmental Programs Division
9601 Ridgehaven Court, Suite 320
San Diego, CA. 92123

Subj: SPECIAL WASTE DISPOSAL REQUEST FOR TREATED WOOD DISPOSAL AT NAVAL BASE SAN DIEGO

Creosote treated timbers are being removed as part of a construction and repair project at Paleta Creek and adjacent Quay-wall area at Naval Base San Diego. Enclosure (1) is submitted to comply with the waste acceptance requirements for disposal of treated wood waste at the City of San Diego Miramar Landfill.

Commander, Navy Region Southwest has conducted laboratory analysis and waste determinations for this type of treated wood, which subsequently has been classified as non-hazardous as defined, pursuant Title 22 CCR and meets the Miramar Landfill waste acceptance criteria. This waste analysis was provided to your office for concurrence in October 2002. If you wish an additional copy of this analysis please contact the Regional Hazardous Waste Program Manager at (619) 524-6351.

Sincerely,

Enclosure: (1) Special Waste Disposal Request
Copy to: Send a copy of this letter to your respective installation environmental office.

Appendix D visually identifies and classifies various types of treated woods. All woods identified within this appendix must be managed as special waste or hazardous waste. It should be noted that not all landscaping materials or construction woods would be classified as special waste. These and other types of non-treated, non-coated woods or timbers may be managed as normal wood and be reused or discarded into the trash.

NON-HAZARDOUS WASTE

The types of woods identified on the following pages have been determined by laboratory analysis to be non-hazardous waste pursuant to California environmental regulations, and are authorized for disposal at the Miramar Landfill. However, even though these woods are non-hazardous as defined, they must still be managed under the special waste requirements specified in Section 10.1.

Landscaping materials, including planter boxes and retaining walls or other types of treated timbers or wood used in similar type applications that have become gray or faded due to weathering. This does not apply to Tree Stakes as identified in this appendix. Tree stakes, due to their arsenic content, must be managed as hazardous waste.

Planter Boxes

Retaining Walls

Pier Pilings and other associated pier support structures

Pier support structure

Utility Poles and associated supports and cross sections not used as pier pilings.

Supports and cross sections

Railroad Ties and similar types of gray or brown woods

Pressure treated woods that are brown or gray. Note the color differences between the two bottom boards and the rest of the stack. Green or yellow colored pressure treated

woods must *not* be sent to a Class III landfill for disposal. These types on woods must be segregated for alternate methods of disposal.

Chemically treated woods, look for a green or bluish coating on the outside of the wood with no pressure indentations.

HAZARDOUS WASTES

The woods identified on the following pages have been determined by laboratory analysis to have characteristics of hazardous waste and shall **not** be transported to any municipal landfill for disposal. Sort and separate these treated woods for additional waste determination and subsequent management.

Munitions and ordnance crates and pallets. Note the green and yellow colors of the pressure treated wood commingled in with Tree Stakes.

Only cylindrical tree stakes need to be managed as hazardous waste.

Green and yellow color treated woods with pressure indentations, regardless of size, or similar type treated woods, which contain labels identifying that the wood contains Chromated Copper Arsenic.

HAZARDOUS WASTES

The batten board have been determined by laboratory analysis to have characteristics of hazardous waste and shall **not** be transported to any municipal landfill for disposal. Sort and separate these treated woods for additional waste determination and subsequent management.

Batten Boards or Marine Fendering System is found inside amphibious ships well deck.

Batten Boards are vertically positioned.

Appendix E visually identifies various types of **Asbestos Containing Materials** (ACM). It is important to comprehend the term "Friability," which is any item that contains asbestos fibers in concentrations of greater than or equal to 1%, and when subjected to hand pressure can be crushed into a powdered, finely divided fibers, flakes or dust.

For piping insulation look for matte white coverings or identifying markings.

Piping Insulation

Older ceiling panels (above) and acoustic materials may contain asbestos.

Appendix F visually identifies various types of **Industrial Wastes**, which have the potential of being managed as special waste. Wastes identified within this appendix must first be analyzed to determine any potential hazardous waste classifications due to the nature of each specific individual waste characteristics. If landfill authorities discover these wastes within the normal refuse it will be flagged for removal and investigation.

A good example would be ship bumpers. These may or may not contain Tributyl Tin, a highly toxic substance used to reduce marine growth. These will be rejected unless a waste determination is conducted and approval was received prior to arriving at the landfill.

.

Below, process ash residuals from baking or cleaning operations. These wastes potentially contain heavy metals or dioxins if parts painted prior to 1982 are baked or polyvinyl chlorides (PVC) were present.

Desiccants and bicarbonates are normally classified as non-hazardous solid waste and may be disposed of into the trash in very small quantities.

PART III

OTHER WASTES

PART III

TABLE OF CONTENTS

INTRODUCTION 1

SECTION 11 - SOLID WASTE MANAGEMENT OVERVIEW 2

11.1 PURPOSE 2
11.2 COMMAND RESPONSIBILITIES 2
11.3 CNRSW ENVIRONMENTAL RESPONSIBILITIES 2
11.4 CNRSW HAZARDOUS WASTE FACILITIES 3

SECTION 12 - REGULATORY AUTHORITY & REQUIREMENTS 4

12.1 OVERVIEW 4
12.2 RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) 4
12.3 FEDERAL FACILITIES COMPLIANCE ACT 4
12.4 CODE OF FEDERAL REGULATIONS (CFR) 4
12.5 CALIFORNIA LAW 4
12.6 LOCAL ENVIRONMENTAL REQUIREMENTS 5

SECTION 13 - WASTE TIRE MANAGEMENT REQUIREMENTS 6

13.1 OVERVIEW 6
13.2 GENERATOR REQUIREMENTS 6
13.3 WASTE TIRE TRANSPORTATION 7
13.4 RECORD KEEPING 7
13.5 STORAGE FACILITIES 7

SECTION 14 - CHEMICAL, BIOLOGICAL & RADIOLOGICAL (CBR) FILTERS 8

14.1 DISCARDED OR EXPIRED CHEMICAL, BIOLOGICAL & RADIOLOGICAL (CBR) FILTER SETS 8
14.2 SEGREGATION 8
14.2.1 CATEGORY ONE: CHARCOAL CONTAINING SECTION 8
14.2.2 CATEGORY TWO: HEPA FILTER AND FILTER CASES 8

SECTION 15 - USED COOKING OIL 10

15.1 OVERVIEW 10
15.2 GENERATOR REQUIREMENTS 10
15.3 TURN-IN PROCEDURES 10
15.4 SPILLS 10

SECTION 16 - USED COPIER / PRINTER TONER CARTRIDGES 11

16.1 OVERVIEW 11
16.2 GENERATOR REQUIREMENTS 11
16.3 TURN-IN PROCEDURES 11

APPENDICES

Appendix AA	CNRSW Regional Waste Tire Policy
Appendix BB	CIWMB Form 203: CA Comprehensive Trip Log
Appendix CC	CIWMB Form 240: Unregistered Hauler & Trip Log Substitution
Appendix DD	Proper Segregation of CBR Filter Elements

INTRODUCTION

Part III is designed as a guidance document to support the management and disposal of specific solid waste, which are not classified as Special Wastes, that are generated from ashore and afloat commands located in CNRSW. Wastes identified within this Part may be recyclable or be classified as both hazardous and non-hazardous wastes, depending on the components, constituents or residuals. All hazardous waste must be managed under the requirements of Part I of this Plan. Non-hazardous waste may have very specific storage and handling requirements to meet compliance standards which are identified under each specific section.

Environmental laws and regulations have increased exponentially in recent years. General solid waste management requirements are specified in the Resource Recovery and Recovery Act (RCRA), Title 40, Code of Federal Regulations (CFR), and several other very specific Federal and state environmental laws. Commands located in CNRSW are required to comply with these standards, and are inspected for compliance by the California Integrated Waste Management Board (CIWMB), and San Diego County, Department of Environmental Health (DEH). Each regulatory agency has their specific environmental oversight requirement, which is reviewed for solid waste compliance. In addition, these agencies, through enforcement actions, are authorized to issue Notices of Violation (NOV) for issues of non-compliance. If violations occur, fees or fines can by levied against the overall Navy, the specific effected command or in some cases, the individual responsible for causing the violation.

Normally, state and local regulatory agencies have more stringent environmental requirements and policies than those established by Federal law. To identify and comply with these more stringent requirements, CNRSW Hazardous Waste Program Office, through the information provided within this Part, will help your command identify and understand your responsibilities for management of the specific wastes identified within the proceeding sections.

SECTION 11 - SOLID WASTE MANAGEMENT OVERVIEW

11.1 Purpose

a. To provide CNRSW commands and personnel with an environmental reference document to support solid waste management by defining responsibilities relating to solid waste accumulation, storage, record keeping, training and disposal issues. Additionally, this document will establish an effective waste management program for solid waste compliance for all areas under the cognizance of the Commanding Officer.

b. The requirements specified within this Part apply only to wastes which are not specifically classified as normal trash, and which are listed within the proceeding sections.

11.2 Command Responsibilities

a. Commands whose operations or processes generate specific solid wastes listed with this plan must comply with all Federal, state and local integrated solid waste laws or regulations.

b. Become familiar with environmental requirements or permits and their provisions that may apply to their operations or processes, and recognize solid waste disposal requirements.

c. Ensure all command personnel assigned to manage specific solid waste operations are aware of proper handling, and disposal procedures for the wastes being managed.

d. Maintain, when required, at each generator location, records for item-specific laboratory analysis, copies of manifests or any other information relating to solid waste determination or disposal.

e. Coordinate with the installation Environmental Office when necessary, when implementing new operations or processes to ensure proper compliance with applicable solid waste laws and regulations.

11.3 CNRSW Environmental Responsibilities

a. Shall research, develop and disseminate specific solid waste instructions and guidance, serve as the primary point of contact to regulatory agencies, and provide oversight for the overall management of these waste. This includes, but is not limited to:

1. Advise commands on changing environmental laws, regulations or other requirements that will effect or potentially adversely impact command specific solid waste operations or processes.

2. Develop and disseminate appropriate guidance and instructions on the proper management, storage and handling of specific solid wastes.

3. Act as liaison to address specific questions and concerns on solid waste management issues, CNRSW policy and guidance, permits, and other issues relating solid waste management and operations.

4. Coordinate submittal information for required environmental reports and data calls to the appropriate regulatory agencies or naval activities.

5. Conduct oversight inspections for host and tenant commands relating to specific areas of environmental compliance under applicable environmental waste standards.

11.4 CNRSW Hazardous Waste Facilities

a. CNRSW owns hazardous waste facilities that consolidate, store, transfer, and/or treat hazardous waste. NAVFAC-SW contracts the operation and transport of hazardous waste to and from these facilities. To the maximum extent feasible, all wastes identified within this plan will specify the appropriate waste management, recycling or disposal facility the item may be sent for proper management.

SECTION 12 - REGULATORY AUTHORITY & REQUIREMENTS

12.1 Overview

CNRSW military and civilian personnel must be aware of the environmental laws and regulations which pertain to their specific process or operation which generate, store, treat or dispose of specific solid wastes. These requirements have been established and mandated by Federal, State or local law and are not discretionary. Cited below are the federal, state and local environmental laws or requirements that outline the major components of overall waste management program.

12.2 Resource Conservation and Recovery Act (RCRA)

A 1976 amendment to the first federal solid waste legislation, the Solid Waste Disposal Act of 1965. In RCRA, Congress established initial directives and guidelines for U.S. EPA to regulate and manage non-hazardous solid waste under Subtitle D. The law requires specific procedures to be used in transporting, storing and disposing of various wastes. RCRA also addresses and establishes duties and responsibilities of waste generators regarding the storage, treatment and disposal of all solid waste, and authorizes the EPA to issue corrective actions for violators.

12.3 Federal Facilities Compliance Act

Enacted by presidential proclamation in 1992 this law expands the enforcement authority of Federal, State and local regulators with respect to environmental management and other relevant areas of environment compliance at federal facilities. Requires the payment of fees for service, assessed in connection with regulatory inspection programs, or for the amount of waste generated at the facility. Waives government sovereign immunity, allowing regulatory agencies to issue fines and penalties for violations on issues of non-compliance.

12.4 Code of Federal Regulations (CFR)

Title 40, Code of Federal Regulations are aspects of United Stated Code and federal law which were formed from the requirements of RCRA, and several other specific environmental legislations. 40 CFR is overseen and enforced throughout the U.S. and its territories by the U.S. EPA, and by most state and local regulatory agencies. Under these regulations, come the management standards applicable for solid waste, including exclusion and exemptions from hazardous waste management requirements.

12.5 California Law

As with RCRA being federal law, the Public Resource Code (PRC), and Health and Safety Code (HSC) is state law. Within the aspects of state law, or statute, each state, has the ability to meet or exceed the standards specified by federal law. California has far more

stringent environmental requirements than addressed under federal guidelines. In addition, under the PRC, an entire classification of very specific solid waste exists, which are managed by the California Integrated Waste Management Board (CIWMB) under the title of Cal-EPA. These state specific classifications of wastes are not addressed or enforced under the previsions of RCRA, but are waste nonetheless within California, and must be managed accordingly.

12.6 Local Environmental Requirements

San Diego County, Department of Environmental (DEH) and City of San Diego, Miramar Landfill Environment Enforcement Division who is in turn regulated by permit from the Regional Water Quality Control Board under the authority of California EPA. Under these aspects city or county ordinance were enacted to manage specific wastes.

SECTION 13 - WASTE TIRE MANAGEMENT REQUIREMENTS

13.1 Overview

a. Legislation enacted by the California State Senate, in conjunction with the California Integrated Waste Management Board (CIWMB) requires activities meeting the definition of Waste Tire Generators or who transport waste tires to comply with the provisions of California's waste tire requirements and manifest system. Check the CIWMB website for updates or further details: http://www.ciwmb.ca.gov/Tires/

b. A waste tire generator is any activity, which produces used or waste tires or offers waste or used tires for shipment from your location. This would include locations such as: NEX Auto Service Centers removing tires from POVs, MWR Auto Hobby Shops, facility transportation activities, vehicle maintenance shops, activities maintaining Ground Support Equipment (GSE), EOD, MDU, and Seabee Detachments.

13.2 Generator Requirements

a. Commands accumulating waste or used tires shall comply with all the following requirements, and CNRSW Regional Waste Tire Policy provided in Appendix AA:

- Obtain a Tire Program Identification Number (TPID) from the CIWMB or utilize the current base tire program number. The installation Environmental Office can assist you in obtaining this number if necessary.

- Shipments of all waste tires must be to an authorized receiving facility, utilizing a waste tire hauler registered with the CIWMB, or transported in government vehicles as specified in Section 20.3.

- All shipments of waste tires shall be accompanied with a trip log if greater than 10 tires are shipped at one time. Read more in the following section for the specific forms if greater than 10 tires are shipped at one time.

- It is the responsibility of the waste tire generator to obtain and provide this document to the registered tire hauler. However, the generator may use the haulers manifest if one is provided. Waste Tire Manifests and Trip Logs may be obtained at no cost from the CIWMB either online at http://www.ciwmb.ca.gov or by calling toll free 1(866) 896-0600.

b. Waste tire generators shall submit to the CIWMB within 90-days of the waste tire shipment, a legible copy of each manifest. This submission may be either hard copy or if approved by the CIWMB, an electronic report may be submitted, provided the report meets all applicable requirements.

c. All used or repairable tires shall be stored and stacked by size, either on pallets, floor or placed on racks that allows the inspection of each individual tire, and shall not be stored in piles or in any manner which incites pollution or creates a nuisance. The tire generator is ultimately responsible to ensure all records are maintained, and used/waste tires stored accordingly.

d. All accumulated tires exposed to the weather shall be covered or stored in a manner which do not allow the tires to accumulate precipitation or other freestanding liquids.

13.3 Waste Tire Transportation

a. Waste tire generators hauling tires in government owned vehicles do not need to register as waste tire haulers. However, they must comply with documentation requirements anytime they transport waste tires on a public road. Appendix BB shows the mandatory CIWMB Form 203: CA Comprehensive Trip Log and Receipts. Appendix CC shows the mandatory CIWMB Form 204: Unregistered Hauler and Comprehensive Trip Log Substitution Form.

b. When transporting used or waste tires within the fence line of an installation, the shipment is exempt from any manifesting, log or reporting requirements.

13.4 Record Keeping

a. All waste tire generators shall maintain at their location a copy of the documentation for each shipment of waste tires containing the signature of the generator and registered hauler shall be retained on file for 3 years.

13.5 Storage Facilities

a. Activities that store, stockpile, or accumulate 500 or more, but less than 5,000 waste tires are classified as a Minor Waste Tire Facility. Activities meeting these criteria are required to obtain a Minor Waste Tire Facility (WTF) Permit and comply with technical standards for the safe storage of waste tires, including:

- Develop and submit to the CIWMB an Operations Plan, Emergency Response Plan, and other specific environmental information.

SECTION 14 - CHEMICAL, BIOLOGICAL & RADIOLOGICAL (CBR) FILTERS

14.1 Discarded or Expired Chemical, Biological & Radiological (CBR) Filter Sets

a. Management of CBR filter sets are, for the most part, an afloat issue. However, program support via NAVSEA (change-outs) and CNRSW Environmental (proper management and disposal) are derived from shore side environmental requirements, specific to California environmental regulations.

b. At CNRSW, CBR Filter Sets change-outs must meet specific environmental management requirements for disposal of the discarded, replaced or expired filter elements and filter set cases. Additionally, these filters are classified into two categories for proper management and disposal. Appendix DD shows the proper segregation of the filter elements after removal from the ship.

14.2 Segregation

a. CBR filter sets contain filter elements that are both hazardous waste and recyclable aluminum. These two filter sections must be separated during change-out to facilitate proper management.

14.2.1 Category One: Charcoal Containing Section

a. Regardless of NSN or NAVSEA guidance, the charcoal containing section of the CBR filter set is classified as hazardous waste for the Federal regulated metal, Silver, and for California regulated heavy metals Copper, Zinc, and Molybdenum.

b. Ships force or contractors who remove, or replace this section of the CBR Filter element must manage and dispose of this section as hazardous waste through the host command waste management and disposal procedures.

c. Contact the NAVFAC-SW hazardous waste facility headquarters at **(619) 545-6520** for hazardous waste disposal procedures.

14.2.2 Category Two: HEPA Filter and Filter Cases

a. The CBR filter section that contains the HEPA filter element and filter set outer cases are recyclable aluminum. This filter section and outer cases must be managed as recyclable scrap metal, under solid waste requirements, through the authorized QRP Program managed by the CNRSW Recycling Program.

b. Category two filter elements must be separated from the charcoal containing section during removal and accumulation.

c. Contact CNRSW Recycling Program at **(619) 556-9331** to schedule a storage bin prior to implementing the change-out of the CBR filter system. Filters are not authorized to be accumulated on the pier unless properly containerized or stacked on pallets and covered to prevent filter residues form entering the environment.

SECTION 15 - USED COOKING OIL

15.1 Overview

Used cooking oil is defined as liquefied vegetable oil, corn oil, or any other cooking oil that is liquid under ambient conditions (i.e. it does not naturally solidify at room temperature) and that is no longer useable for its intended purpose such as used deep fryer cooking oil. Used cooking oil is naturally a liquid and must be managed as such. Although under RCRA all liquids and semi-solids are classified as solid waste, aqueous and semi-solid substances and wastes are not authorized for disposal at the municipal landfill. Therefore, used cooking oil must not be disposed in solid waste or wet garbage dumpsters.

15.2 Generator Requirements

a. Used cooking oil must be stored in open (removable) top steel or plastic leak-proof containers. The containers must not have previously held hazardous materials and must be empty prior to use. A DOT approved container is recommended but not required. The containers should be 30- or 55-gallon in size since the disposal costs are much higher for smaller containers No residue can exist on the outside of the containers because used cooking oil putrefies quickly resulting in a bad odor.

b. The containers must be marked with a permanent marker “Used Cooking Oil”, with the command and POC name, directly on the container or using a label. Hazardous waste labels must not be used.

15.3 Turn-in Procedures

a. The least expensive method of disposal is through the FISC contractor Darling International at 1-800-870-8866 or 1-858-8600. However, the NAVFAC-SW hazardous waste service provider will also accept used cooking oil during routine and non-routine pickups based on customer requests, and will provide containers at no charge. **Refer to Part I, Appendix 6 for the current list of service locations and phone numbers.**

15.4 Spills

All used cooking oil spills must be immediately contained, cleaned and reported to the installation Environmental Office. The command causing the spill is responsible for clean-up. For piers, in instances where the spill source cannot be traced to a specific ship, the pier SOPA will be responsible for the clean-up.

SECTION 16 - USED COPIER / PRINTER TONER CARTRIDGES

16.1 Overview

Copier and printer toner cartridges come in a variety of sizes and can also be named image writers, fusers, etc.

16.2 Generator Requirements

Used cartridges must not be disposed in solid waste or wet garbage dumpsters. Used cartridges should be stored in the original manufacturer's cardboard boxes with styrofoam inserts. However, other similarly sized boxes and packing material are acceptable.

16.3 Turn-in Procedures

There are three methods of turn-in for recycling:

a. The preferred method of turn-in is through the installation Qualified Recycling Program (QRP). Place the boxed used cartridges next to the nearest paper recycling location for the next scheduled pick-up. If boxes are unavailable, the used cartridges may be double bagged. Using the QRP is the most beneficial and cost effective method for the Navy.

b. Another method of turn-in is directly through the manufacturer. Free, printable mailing labels are available on all manufacturers' web sites. Attach the labels to the boxes and use the applicable shipping company, e.g. UPS, FedEx, etc.

c. Lastly, the NAVFAC-SW hazardous waste service provider will, for a charge, pick-up cartridges during routine and non-routine pick-ups based on customer requests. **Refer to Part I, Appendix 6 for the current list of service locations and phone numbers.**

PART III

APPENDICES

Appendix AA	CNRSW Regional Waste Tire Policy
Appendix BB	Sample Waste Tire Manifest
Appendix CC	Sample Waste Tire Trip Log
Appendix DD	Proper Segregation of CBR Filter Elements

CNRSW Regional Waste Tire Policy

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
Ser N45JCB.bg/096
June 10, 2005

From: Commander, Navy Region Southwest
To: Distribution

Subj: REGIONAL WASTE AND USED TIRE MANAGEMENT POLICY

Ref: (a) State Senate Bill SB 876, (Escutia) Sept. 29, 2000
(b) California Public Resources Code, Division 20
(c) CIWMB Waste Tire Manifest System Guidance Manual, May 2003

1. This document establishes Commander, Navy Region Southwest policy regarding waste and used tire management and disposal in the State of California.

2. Reference (a) modified the California Public Resources Code, reference (b), resulting in significant changes in how waste and used tires are regulated in California. The California Integrated Waste Management Board (CIWMB) is the state agency responsible for enforcing the waste and used tire requirements. Activities meeting the definition of Waste Tire Generators, Haulers and End Use Facilities must comply with the provisions of reference (b). The CIWMB developed the Waste Tire Manifest System Guidance Manual, reference (c), to provide facilities information and technical assistance and can be obtained from the CIWMB at no cost.

3. A Waste Tire is a tire no longer mounted on a vehicle and is no longer suitable as a vehicle tire. A Used Tire is a tire no longer mounted on a vehicle but is still suitable as a vehicle tire. A Waste Tire Generator is any activity that generates one or more waste or used tires for shipment from your installation. This includes all locations on an installation such as NEX Auto Service Centers removing tires from privately owned vehicles, MWR Auto Hobby Shops, facility transportation activities or vehicle maintenance shops, and activities maintaining ground support equipment. This policy, and references (a) and (b) do not apply to waste and used tires removed from aircraft. Because it may be more practical, installations may choose to manage all tires, including aircraft tires, under a single program, but this does not change the non-applicability of the regulations to waste and used aircraft tires. Waste and used tires removed from aircraft are not subject to state agency oversight and enforcement.

4. All Installations in California under this command with Waste Tire Generators shall comply with the following requirements:

a. Obtain a Tire Program Identification Number (TPID). The installation Environmental Office can assist you in obtaining the number.

b. Shipments of waste and used tires must be to an authorized receiving facility utilizing a registered or certified waste tire hauler, or by using a government owned vehicle (see item 5 below). All shipments of waste and used tires, regardless of how they are shipped, shall be accompanied with a Uniform Waste & Used Tire Manifest signed by the generator and hauler. It is the generators responsibility to obtain and provide this document to the registered tire hauler. However, the generator may use the hauler's manifest if one is provided.

c. A copy of the Uniform Waste & Used Tire Manifest for each shipment of tires must be kept on file by the generator for 3 years. Each manifest must include the signature of the generator and hauler, hauler vehicle license plate and decal numbers, log number, and phone number of the registered hauler.

d. The generator shall submit a legible copy of each manifest to the CIWMB within 90 days of the tire shipment. This submission may be either the white copy of the manifest or if approved by the CIWMB an Electronic Data Transfer (EDT) report.

e. Waste tires and used tires shall be stored in a manner to prevent pollution, fire hazards, and nuisance. Waste and used tires shall be stored in a manner to prevent or minimize habitat for vectors (i.e. rats, mice, mosquitoes, etc.).

f. Used tires intended to be reused at the installation shall be stored and stacked by size on pallets, the floor, or placed on racks that allow for the inspection of each individual tire, and shall not be stored in piles or in any manner which incites pollution or creates a nuisance.

5. Activities hauling tires in government owned vehicles do not need to register as waste tire haulers. However, they must still comply with manifesting and Trip Log requirements anytime they transport waste tires to an end use facility or on a public road. The following requirements apply to activities hauling tires in government vehicles:

a. Complete a Uniform Waste and Used Tire Manifest, and Trip Log for each tire shipment. The manifest and log must accompany each shipment.

b. Uniform Waste and Used Tire Manifests containing the generators and hauler's signatures shall be submitted to CIWMB within 90 days of shipment.

c. When transporting waste or used tires within the fence line of an installation, the shipment is exempt from any manifesting, log or reporting requirements. The only exception is when tires are transported to DRMO. Manifests and Trip Logs shall be filled out when taking tires to DRMO. DRMO is considered a separate DoD entity that is providing a service for the base.

Subj: REGIONAL WASTE AND USED TIRE MANAGEMENT POLICY

d. A copy of each manifest and log must be maintained on file for 3 years.

6. Activities that store, stockpile, or accumulate 500 or more, but less than 5,000 waste or used tires are classified as a Minor Waste Tire Facility. Activities that store, stockpile, or accumulate 5,000 or more waste or used tires are classified as a Major Waste Tire Facility. Activities meeting these criteria shall comply with the following requirements:

a. Obtain either a Major or Minor Waste Tire Facility Permit and comply with technical standards for the safe storage of waste and used tires.

b. Develop and submit to the CIWMB an Operations Plan and Emergency Response Plan.

7. Contact your respective Installation Environmental Office for additional information regarding the best method and proper procedures for the management and disposal of waste and used tires.

8. Installation Environmental Offices are responsible for maintaining compliance oversight on the waste tire generators and shall provide the following services:

a. Provide training and information on state of California waste and used tire requirements.

b. Conduct periodic inspections on waste tire generators to determine compliance with applicable requirements.

c. Provide assistance to waste tire generators in manifest completion.

d. Assist the waste tire generator in identifying authorized waste tire haulers registered or certified with the CIWMB.

A. J. GONZALES
Program Director Environment

Distribution:
NAVAL BASE POINT LOMA
NAVAL BASE SAN DIEGO
NAVAL BASE CORONADO
NAVAL BASE VENTURA COUNTY
NAVAL WEAPONS STATION, SEAL BEACH
NAVAL AIR STATION, LEMOORE
NAVAL AIR FACILITY, EL CENTRO
NAVAL AIR WEAPONS STATION, CHINA LAKE
NAVAL SURFACE WARFARE CENTER, CORONA
NAVAL POSTGRADUATE SCHOOL, MONTEREY
NAVAL AIR STATION, FALLON

CIWMB Form 203

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

CA Comprehensive Trip Log and Receipts 10002

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

EXAMPLE 123 — Blue or Black Ink Pen

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
–	TYPE: ☐ Whole Tire Count ☐ Weight in Lbs. ☐ Volume Cubic Yds. ☐ Weight in Tons	Facility Business Name/Address City, State and Zip
Hauler Name	AMT . (N /A for Whole Tires)	Stamp or Label OK ☐ Address Same as Hauler
Hauler Telephone Number		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
–	TYPE: ☐ Whole Tire Count ☐ Weight in Lbs. ☐ Volume Cubic Yds. ☐ Weight in Tons	Facility Business Name/Address City, State and Zip
Hauler Name	AMT . (N /A for Whole Tires)	Stamp or Label OK ☐ Address Same as Hauler
Hauler Telephone Number		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
–	TYPE: ☐ Whole Tire Count ☐ Weight in Lbs. ☐ Volume Cubic Yds. ☐ Weight in Tons	Facility Business Name/Address City, State and Zip
Hauler Name	AMT . (N /A for Whole Tires)	Stamp or Label OK ☐ Address Same as Hauler
Hauler Telephone Number		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.

CIWMB Form 204

State of California
CIWMB 204 (Rev. 01/07)

California Integrated Waste
Management Board

Unregistered Hauler & Comprehensive Trip Log Substitution Form

Name and Address of Facility:

TPID# ☐☐☐☐☐☐☐-☐☐

Date & Name	License Plate & Decal Number (if applicable)	Hauler's Name/Address/Signature	Quantity & Type of Tires	Pick up/Delivery Status	Unregistered Tire Hauler or Exemption Status (if applicable)
/ / Name of Reporting Party	(License Plate) (State) Decal number (if applicable)	(Hauler Name) (Address) (City) (State) (Zip Code) Signature:	Quantity of Tires: Type of Load: ☐ Whole ☐ Cubic Yards ☐ Pounds ☐ Tons	Check One: ☐ Pick up ☐ Delivery	☐ Unregistered Tire hauler or Exemption (if applicable): ☐ LEA Exempt ☐ Government ☐ Commercial Carrier ☐ Agricultural Or ☐ No Manifest/CTL form
/ / Name of Reporting Party	(License Plate) (State) Decal number (if applicable)	(Hauler Name) (Address) (City) (State) (Zip Code) Signature:	Quantity of Tires: Type of Load: ☐ Whole ☐ Cubic Yards ☐ Pounds ☐ Tons	Check One: ☐ Pick up ☐ Delivery	☐ Unregistered Tire hauler or Exemption (if applicable): ☐ LEA Exempt ☐ Government ☐ Commercial Carrier ☐ Agricultural Or ☐ No Manifest/CTL form
/ / Name of Reporting Party	(License Plate) (State) Decal number (if applicable)	(Hauler Name) (Address) (City) (State) (Zip Code) Signature:	Quantity of Tires: Type of Load: ☐ Whole ☐ Cubic Yards ☐ Pounds ☐ Tons	Check One: ☐ Pick up ☐ Delivery	☐ Unregistered Tire hauler or Exemption (if applicable): ☐ LEA Exempt ☐ Government ☐ Commercial Carrier ☐ Agricultural Or ☐ No Manifest/CTL form
/ / Name of Reporting Party	(License Plate) (State) Decal number (if applicable)	(Hauler Name) (Address) (City) (State) (Zip Code) Signature:	Quantity of Tires: Type of Load: ☐ Whole ☐ Cubic Yards ☐ Pounds ☐ Tons	Check One: ☐ Pick up ☐ Delivery	☐ Unregistered Tire hauler or Exemption (if applicable): ☐ LEA Exempt ☐ Government ☐ Commercial Carrier ☐ Agricultural Or ☐ No Manifest/CTL form

Please submit this form within 30 days to: **CIWMB, Waste Tire Hauler Program, P.O. Box 4025, MS-22, Sacramento, CA 95812 or fax to (916) 319-7605**

State of California
CIWMB 204 (Rev. 01/07)

California Integrated Waste
Management Board

The Unregistered Hauler and Comprehensive Trip Log Substitution Form or the CIWMB 204 form is used for the following purposes:

1) To report an unregistered hauler who delivers waste tires to a location. The generator or end use facility shall submit the report on an unregistered hauler within 30 days to the Board.

2) In the place of a Comprehensive Trip Log if a registered hauler fails to provide a completed Comprehensive Trip Log receipt when waste or used tires are removed from the generator's location. The generator shall complete a Unregistered Hauler & Comprehensive Trip Log Substitution Form CIWMB 204 within 48 hours of the tire removal and submit the form to the CIWMB within 90 days.

3) If waste or used tires are received by an end-use facility from a registered hauler who does not have a Comprehensive Trip Log. The end use facility shall complete the CIWMB 204 within 48 hours of the tire delivery and submit the form to the CIWMB within 90 days. The end-use facility shall complete this form and submit it to the Board within 30 days of the acceptance of 10 or more waste or used tires from a person who is not registered as a waste tire hauler unless that person has written authorization by the Local Enforcement Agency for purposes of an Amnesty Day Event or a One Time Exemption and is transporting no more than 20 waste or used tires to the end-use facility.

4) If the person is hauling 20 or more waste or used tires under the written authorization of a Local Enforcement Agency for purposes of an Amnesty Day Event or a One Time Exemption, the end-use facility shall report this information on the CIWMB 204 and submit the form to the Board within 30 days of the acceptance of waste or used tires from that person.

Complete the Unregistered Hauler and Comprehensive Trip Log Substitution Form using the following instructions.

1. Print your name and address of facility in the box provided in the top center portion of the form.

2 Print your facility's seven digit Tire Program Identification Number (TPID) in the boxes provided on the top right portion of the form.

3. In the left column write the date when the delivery/pick-up occurred. Provide your name below the date.

4. In the next column, write the hauler's license plate, the state where the license plate was issued, and the hauler's CIWMB decal number (if registered) found on the lower right-hand inside corner of front windshield.

5. In the next column, write the hauler's name and address including city, state and zip code. Also, provide their signature.

6. In the column titled "quantity and type of tires" write the number of tires that were delivered or picked up. Check only one box to show the type of waste tire load.

7. In the pick up/delivery status column check only one box to indicate whether tires were picked up or delivered.

8. In the last box place a check to show whether the hauler is unregistered, exempt, or does not possess a Comprehensive Trip Log to document the pickup or delivery.

SUBMIT FORM TO: **CIWMB HAULER & MANIFEST PROGRAM**
P.O. BOX 4025
SACRAMENTO, CA 95812
OR FAX: (916) 319-7605

Proper Segregation of CBR Filter Elements

Figure 21.1 identifies the size difference between the Category One (center ground) and Category Two filters elements & filter cases prior to replacement.

Figure 21.2 shows the segregation into a roll-off of Category Two filter elements, (filters cases and the HEPA filters).

Figure 21.3 shows the segregation of the larger Category One, activated charcoal filter.

Figure 21.4 shows the staging of the roll-offs on the pier during CBR filter replacement.
Note, the roll-off containing the Category Two, (recyclable aluminum) filters are identified as scrap metal.

PART IV

MEDICAL WASTE MANAGEMENT PLAN

TABLE OF CONTENTS

INTRODUCTION **1**

SECTION 1 - ADMINISTRATION **2**

1.1 PURPOSE 2
1.2 COMMAND RESPONSIBILITIES 2
1.3 CNRSW ENVIRONMENTAL RESPONSIBILITIES 2

SECTION 2 - REGULATORY AUTHORITY **3**

2.1 MEDICAL WASTE MANAGEMENT ACT (MWMA) 3
2.2 LOCAL ENVIRONMENTAL REQUIREMENTS 3

SECTION 3 - MEDICAL WASTE MANAGEMENT **4**

3.1 MEDICAL WASTE OVERVIEW 4
3.2 MEDICAL SOLID WASTE 4
3.3 BIOHAZARDOUS WASTE 5
3.4 SHARPS WASTE 6
3.5 WASTE PHARMACEUTICALS 7
3.6 ACCUMULATION & STORAGE 8
3.7 MEDICAL WASTE MANAGEMENT PLAN 8
3.8 RECORD KEEPING 9
3.9 TRAINING 9
3.10 WASTE TURN-IN (DISPOSAL) 9

APPENDICES

Appendix A — Sample Medical Waste Management Plan
Appendix B — Flowchart: Determine Disposal Method for Medical Related Products and Supplies.
Appendix C — Navy and Marine Corps Public Health Center Pharmaceutical Waste Management Guidelines.

INTRODUCTION

Part IV is designed as a guidance document to support the management and disposal of medical waste from specific shore-based commands located at CNRSW. Afloat units must comply with provisions of the Afloat Quick Response Guide, Chapter 2, medical waste management sections available from the Waterfront Environmental Coordinator (WEC) at 556-6232.

Medical waste is regulated under the provisions of the California Medical Waste Management Act and specific San Diego County Ordnances. Under these requirements, liquids, semi-solids, solids, sharps and pharmaceuticals are classified and managed under very specific requirements, similar to other types of hazardous waste, which includes specific packaging, labeling and disposal requirements. As with hazardous waste, most medical wastes are not authorized for disposal at a municipal landfill. This plan clarifies which medical solid wastes are authorized to be placed into the trash, vice managed by a medical waste disposal facility. CNRSW hazardous waste facilities are not authorized to accept, manage or handle any type of medical waste.

Medical waste management falls under the cognizance of the Bureau of Medicine and Surgery (BUMED) The forces afloat medical waste disposal contract is funded by COMPACFLT, and includes funding for medical waste disposal and emergency clean-up Actions. The medical waste disposal contract is managed by NAVFAC SW.

As with hazardous waste, shore-based medical waste generators must comply with the requirements of the Federal Facilities Compliance Act of 1992 and other applicable environmental requirements for the overall management of medical wastes.

SECTION 1 - ADMINISTRATION

1.1 Purpose

To provide Commander Navy Region Southwest (CNRSW) personnel with a guidance document that supports the management requirements for medical waste ashore by defining your responsibilities that relate to waste identification, handling, and disposal issues.

1.2 Command Responsibilities

a. Medical waste generators shall comply with the waste acceptance criteria as specified by all applicable laws or ordinances that pertain to medical waste management and disposal.

b. Ensure command personnel assigned to manage or handle medical waste are trained to identify and segregate these wastes from other solid wastes or trash prior to disposal.

c. Retain medical waste management, disposal and training documentation at the generator location for review from regulatory agencies.

1.3 CNRSW Environmental Responsibilities

a. CNRSW Environmental shall research, develop and disseminate specific policy or guidance and provide oversight for the management of medical waste.

b. Provide guidance to all activities on changing environmental laws, regulations or other requirements that may impact medical waste operations or disposal.

c. Provide technical assistance to address questions or concerns regarding medical waste management.

SECTION 2 - REGULATORY AUTHORITY

2.1 Medical Waste Management Act (MWMA)

Established as California environmental law under the provision of the Health and Safety Code, the Medical Waste Management Act (MWMA) outlines compliance requirements to ensure the proper management and disposal of all phases of medical waste generated within the state. The MWMA also identifies and establishes storage requirements, waste disposal, and treatment standards for various classifications of medical waste.

2.2 Local Environmental Requirements

San Diego County Department of Environmental Health (DEH) is under authorization from Cal-EPA to implement state environmental requirements. Under these aspects, city/county ordinances were enacted to manage hazardous waste/materials, medical waste, and underground tanks. In some cases, these ordinances exceed state requirements or require special requirements.

SECTION 3 - MEDICAL WASTE MANAGEMENT

3.1 Medical Waste Overview

a. Any waste generated or used in the diagnosis, research, treatment, and immunization of human beings or animals, or in the production or testing of biologicals, or which contain infectious agents that may pose a substantial threat to human health is classified as medical waste. These wastes are divided and classified into four specific subcategories, each having its own unique definition and specific management requirement. They include:

- Medical Solid Waste
- Biohazardous Waste
- Sharps Waste
- Pharmaceuticals Waste

b. If a medical product meets RCRA or non-RCRA hazardous waste criteria, and is not classified as a biohazard, sharp, or pharmaceutical, the waste is disposed as a hazardous waste and not as a medical waste. Refer to the flowchart in Appendix B for guidance in determining the appropriate disposal method for medical products and supplies. (Contact the Base Environmental Office for assistance and guidance. See Part 1, Appendix 6 for contact information.)

3.2 Medical Solid Waste

a. Medical solid waste includes:

1. Empty specimen containers
2. Bandages
3. Dressings containing dried, non-fluid blood
4. Non-infectious surgical gloves
5. Unused IV tubing
6. Non-contaminated broken glassware
7. Other materials not classified as hazardous, biohazardous, sharp, or pharmaceutical waste.

b. Unused medical products (including encased sharps) that are no longer needed should be turned in to the contractor for the Medical Supplies Reverse Distribution Program (RDP) when possible. The RDP cannot be used to dispose wastes such as used IV bags containing medication or partially used containers as a way to avoid regulation. If the materials do not qualify for the RDP, and are not a hazardous, biohazardous, sharp or pharmaceutical waste, they may be discarded into standard trash receptacles. No additional labeling or security requirements are required.

c. **Medical products classified as hazardous waste are not disposed of as medical solid waste.** Medical products that meet hazardous waste criteria shall be disposed of as described in Part I, Section 3. Medical products classified as hazardous waste include, but are not limited to, the following:

1. Disinfectants such as povidone iodine, antimicrobial solutions such as Scrub Care, and alcohol based hand wipes.
2. Cidex orthophthalaldehyde (OPA) and glutaraldehyde products are non-RCRA hazardous waste due to toxicity, and must be disposed of as hazardous waste unless neutralized onsite with glycine. Healthcare facilities are exempt from tiered permitting regulation when this process is carried out onsite.

d. Medical solid waste accumulated in quantities which exceed the storage capacity of a 5-gallon container, or that is stored outside a building or work area, must be accumulated in a locked container and stored in a manner to restrict access by unauthorized persons. These containers must be labeled or otherwise identified as containing "Medical Solid Waste." For smaller quantities, ensure the waste is double-bagged and placed into the trash. However, several small bags of medical solid waste placed into the same storage unit together will trigger the management requirements for labeling and security.

e. This classification of medical waste is the least stringently regulated for management and disposal. In general, medical solid waste is managed as trash at a municipal Class III landfill with no special waste management requirements. However, **waste must be characterized as non-hazardous before it is disposed of in a landfill.** In San Diego County, most solid waste generated at Navy Facilities is disposed to Miramar Landfill.

3.3 Biohazardous Waste

a. Biohazardous waste is the most diverse classification of regulated medical wastes generated at CNRSW, and is more commonly referred to as "Red Bag" wastes. Biohazardous wastes must be disposed of at an authorized disposal facility and not discarded into the trash. All Biohazardous waste must be accumulated, managed, and disposed of in Red Bags. These bags shall be impervious to moisture, resistant to ripping, tearing, or bursting under normal conditions, and it shall be labeled "Biohazardous Waste" or have the international biohazard symbol and the word "Biohazard."

b. Biohazardous waste bags shall be securely closed to prevent any leakage or expulsion of solid or liquid waste during storage, handling, and transportation. In addition, each bag shall be clearly labeled with the following information when the bag is first placed into use.

- Generators Name
- Address
- Telephone Number

c. Biohazardous waste includes all of the following classifications of medical waste:

1. Laboratory wastes or other medical, pathological and veterinarian wastes including specimen stocks or cultures, infectious agents, vaccines, non-sterilized culture dishes or materials that may contain infectious substances that may pose a substantial threat to human health.

2. Recognizable fluid blood, regulated body fluids, containers contaminated with blood or body fluid elements that have separated from the solid portion of the waste under normal temperature. Regulated body fluids are cerebrospinal fluid, synovial fluids, pleural fluid, peritoneal fluid, pericardial fluid, and amniotic fluid;

3. Contaminated animal carcasses, body parts, or excrements of animals resulting from the production of biologicals and testing of pharmaceuticals that are suspected to be communicable to humans.

4. Surgical specimens or tissues including human or animal parts or any specimens sent to a lab for microbiologic analysis.

5. Surgical tissues placed in formaldehyde or similar chemicals.

6. Tissues and medical or surgical-type items contaminated with, or that once contained chemotherapeutic agents.

3.4 Sharps Waste

a. Sharps waste includes sharp devices and other devices having rigid edges or corners that are employed in medical or dental practices and are capable of cutting or piercing. Hypodermic needles, syringes with needles, blades, lancets, and broken glassware contaminated with biohazardous waste are all classified as sharps waste.

b. Used/contaminated sharps wastes must be accumulated in leak proof, rigid, puncture-resistant containers which when sealed, cannot be easily reopened. As with biohazardous waste, sharps waste is not authorized to be placed into the trash, and shall be managed and disposed of as biohazardous waste. All sharps containers shall be labeled with the following information when first placed into use:

- Generators Name
- Address
- Telephone Number

c. Each container shall be legible, and clearly labeled or marked with the words, “Sharps Waste” or with the international biohazard symbol and the word, “Biohazard.”

3.5 Waste Pharmaceuticals

a. Waste pharmaceuticals are any expired, damaged, or contaminated prescription or over-the-counter human or veterinary drug or medication that are no longer needed or used for their intended purpose.

b. Expired or soon-to-be-expired pharmaceuticals shall be turned in to the DLA contractor for the Medical Supplies Reverse Distribution Program (RDP) when possible. If the material does not qualify for the RDP, it needs to be segregated into categories and discarded using other disposal contracts. (Contact the Base Environmental Office for assistance and additional guidance. See Part 1, Appendix 6 for contact information.)

c. There are four categories of waste pharmaceuticals:

1. RCRA Hazardous Pharmaceuticals and Non-RCRA Hazardous Pharmaceuticals
   i. Waste pharmaceuticals that meet the definition of a hazardous waste are RCRA or non-RCRA hazardous pharmaceuticals and therefore must be segregated and managed as hazardous waste. These include nine listed antineoplastics agents. RCRA hazardous pharmaceuticals include epinephrine, acetone, and nicotine.

2. Antineoplastics not listed as RCRA Waste
   i. It is BUMED's policy to treat all non-hazardous antineoplastics as RCRA hazardous pharmaceuticals due to their inherent toxicity.

3. Investigational Pharmaceuticals
   i. Review literature provided by the manufacturer for proper handling of investigational pharmaceuticals not approved for use in the USA.

4. Non-Hazardous Pharmaceuticals
   i. All pharmaceuticals that do not meet the criteria discussed above are non-hazardous pharmaceuticals. However, pharmaceuticals that meet the criteria listed in Appendix C, Section 1(b) must be incinerated, or disposed as hazardous waste if an incinerator is not available.
   ii. As a best management practice, facilities may choose to manage all pharmaceuticals not managed as hazardous waste through incineration at a regulated medical waste or municipal incinerator permitted to accept non-hazardous pharmaceutical waste.
   iii. Non-hazardous pharmaceuticals commonly used include antibiotics and antidepressants.

d. Expired or waste pharmaceuticals managed as hazardous waste shall be placed in **clear plastic bags** and identified with the activity's name, address, and telephone number prior to proper management or pier-side disposal. Each bag shall also be labeled, "**Waste Pharmaceuticals - Incinerate Only**."

e. ***NOTE:*** *The US EPA is currently proposing adding pharmaceutical waste to the Universal Waste Rule. The proposed Pharmaceutical Waste Rule is designed to reduce the regulatory burden on pharmaceutical waste generators by simplifying the RCRA pharmaceutical hazardous waste collection requirements. If US EPA adopts the Pharmaceutical Waste Rule, facilities managing pharmaceutical waste as universal waste would become the "handler" of universal waste, rather than the "generator" of hazardous pharmaceutical waste. The rule would thus give handlers these benefits:*

1. *An increased accumulation threshold*
2. *An increased onsite accumulation limit*
3. *An increased onsite storage limit*
4. *No manifest requirement*

Because this new rule would be less stringent than the current regulation, it would have to be adopted in California before a facility can chose to manage pharmaceutical waste as universal waste.

3.6 Accumulation & Storage

a. Medical waste shall be accumulated separately from hazardous waste or materials and in an enclosed or designated location that is secure or lockable to prevent access to unauthorized personnel. Additionally, warning signs shall be posted in **both** English and Spanish identifying the accumulation area, reading:

CAUTION – BIOHAZARDOUS WASTE STORAGE AREA
UNAUTHORIZED PERSONS KEEP OUT

CUIDADO – ZONA DE RESIDOS- BIOLOGICOS PELIGROSOS
PROHIBIDA LA ENTRADA A PERSONS NO AUTHORIZADAS

b. Medical waste, including sharps, shall not be accumulated at the generator location for longer than *7 days* from the date the container becomes full if the generator produces greater than 20 pounds per month and the waste is accumulated at above 32 degrees Fahrenheit.

c. A generator producing less than 20 pounds of waste per month at above 32 degrees Fahrenheit may accumulate waste for up to 30 days from the date the container becomes full.

d. Generators may store biohazardous or sharps waste at or below 32 degrees Fahrenheit at an onsite location for not more than 90 days.

3.7 Medical Waste Management Plan

a. Activities that generate medical wastes shall ensure that the required site-specific Medical Waste Management Plan (MWMP) is completed and posted at or near where medical waste is accumulated. The management plan must be updated and submitted to the CNRSW Environmental Office within 30 days when any change occurs to the plan (such as POC

change or amount of waste generated). An example of a completed MWMP is provided in Appendix A. Blank MWMPs can be obtained from the installation Environmental Office.

3.8 Record Keeping

a. Copies of the Medical Waste Manifest or other waste turn-in documents are required to be maintained at the generator location for 3 years.

b. Certificates of Destruction for medical waste disposal are maintained at the Installation Environmental Office, and are available for review upon request. Destruction documents for Afloat commands are kept at ASW, Building 50 by the San Diego Metro Area Medical Waste Program Manager. Certificate of Destruction is maintained by each Base Environmental Office

3.9 Training

a. All persons handling biohazardous waste shall be trained on the aspects of the command's Medical Waste Management Plan, and all of the following:

- Definition of Biohazardous waste
- Separation & Proper Storage
- Transportation (If applicable)
- Treatment (If applicable)
- Disposal of Biohazardous waste

b. Documentation for completed training shall be maintained at the generator location until the trained employee terminates their employment or no longer performs medical waste management functions.

3.10 Waste Turn-in (Disposal)

a. There are three overlapping waste disposal mechanisms. The Region policy is to use RDP contracts first, medical waste disposal contracts as an alternate and if necessary, use hazardous waste disposal contracts for medical-related hazardous waste and RCRA pharmaceuticals that fall outside the scope of the other contracts. (Contact the Base Environmental Office for assistance and additional guidance. See Part 1, Appendix 6 for contact information.)

b. The RDP handles medical supplies, including expired or soon to be expired pharmaceuticals from organizations participating in the DOD's or VA's Pharmaceutical Prime Vendor Program. The provider (RDP contractor) must be a licensed DEA registrant to handle Schedule II-V controlled substances. The RDP contractor provides all instructions, forms, labels and approvals to ship designated items to a central processing facility. A determination of what is returnable and what is waste is performed by the RDP contractor at their central processing facility. Items qualifying for a return are credited to the originating source (vessel, activity, command). Items determined to be waste are properly disposed of and tracking documents provided to the originating source within 30 days of the disposal.

c. NAVFAC SW manages a contract for medical waste (medical solid waste, biohazardous waste, sharps and used/expired pharmaceuticals) disposal for both BUMED and non-BUMED activities with an established schedule that identifies the customer, as well as the pick-up location, days and times. PACFLT provides funding for medical waste disposal services for forces afloat that are not otherwise captured by the RDP. Funds paid by PACFLT on this contract are to service the vessels only and does not capture services needed by shore activities, tenants or commands. .

NAVFAC SW manages contracts for hazardous waste (RCRA and non-RCRA). Medical products that are RCRA and non-RCRA hazardous wastes shall be disposed of through these contracts. Hazardous waste facilities are not authorized to accept medical waste other than RCRA waste pharmaceuticals. These contracts each have an established schedule that identifies the customer, as well as the pick-up location, days and times. Pick-ups can be requested outside the routine scheduled, provided the customer has funding in place. (Contact the Base Environmental Office for assistance and additional guidance. See Part 1, Section 6 for contact information.)

APPENDIX A

SAMPLE MEDICAL WASTE MANAGEMENT PLAN

DATE: 1-Jan-05

OFFICE USE ONLY

UPFP# _____

MEDICAL WASTE MANAGEMENT PLAN

Business Name: SDU-10 Type of Business/Practice: Laboratory

Site Address: 3610 Johnson Rd. Zip: 92136 Phone: (619)556-1234x

Contact Person: JEB Stutart Title: Technician

24-Hour Emergency Phone: (619)556-1234x

GENERATION AND STORAGE OF BIOHAZARDOUS WASTE:

Describe below the type and quantity of biohazardous waste generated and managed at this facility. **SEE SAMPLE PLAN AND ATTACHMENT FOR DEFINITION OF TERMS USED IN THIS PLAN**

MEDICAL WASTE TYPE	QUANTITY (lbs/month)	STORAGE (container type)	TREATMENT METHOD	ON-SITE	OFF-SITE	HAULER NAME*
BIOHAZARDOUS WASTE **Sharp Waste** **Needles/syringes/slides**	5	Sharps Container	Autoclaving	X		R.E.Lee Corp.
Non-sharp Waste **Articles containing Fluid Blood (gauze, bandages, tubing, etc.)**	21	Biohazard Bags	Autoclaving	X		R.E. Lee Corp.
Solids (cultures, lab waste, etc.)	36	Biohazard Bags	Autoclaving	X		R.E. Lee Corp.
Liquids (urine, etc.)						
Trace chemotherapy waste	15	Biohazard Bags	Incineration		X	S.W. Jackson Disposal
Contaminated animal carcasses						
Other	11	Birhazard Bags	Incineration		X	S.W. Jackson Disposal
MEDICAL SOLID WASTE **Gloves, empty specimen containers, gauze with dry blood, treated biohazardous waste**	N/A	Trash Bags	N/A	N/A	N/A	A.P.Hill Transportation

*** If applicable, attach a copy of biohazardous waste hauler contract or Limited Quantity Hauler exemption.**

Biohazardous WASTE STORAGE LOCATION: [Please check the appropriate box(es)].

Biohazardous Waste: ☒ Inside establishment in secured area ☒ Outside in posted, secure area

Medical Solid Waste: ☒ Inside establishment ☒ Outside in Locked/secured dumpster

PERSONNEL TRAINING:

All personnel handling biohazardous waste have been trained in all aspects of this management plan. Training includes the legal definition of biohazardous waste, separation and proper storage, transportation, treatment, and disposal of biohazardous waste. Documentation for completed employee training will be kept onsite.

CERTIFICATION STATEMENT:

I certify that the above management plan is complete and accurate, and that this business will adhere to all aspects of the plan. I further understand that any violation of this plan or any applicable law or regulation may result in legal action.

R M Picket — Manager

SIGNATURE OF RESPONSIBLE PERSON — TITLE

R.M. Picket — 2-Jan-04

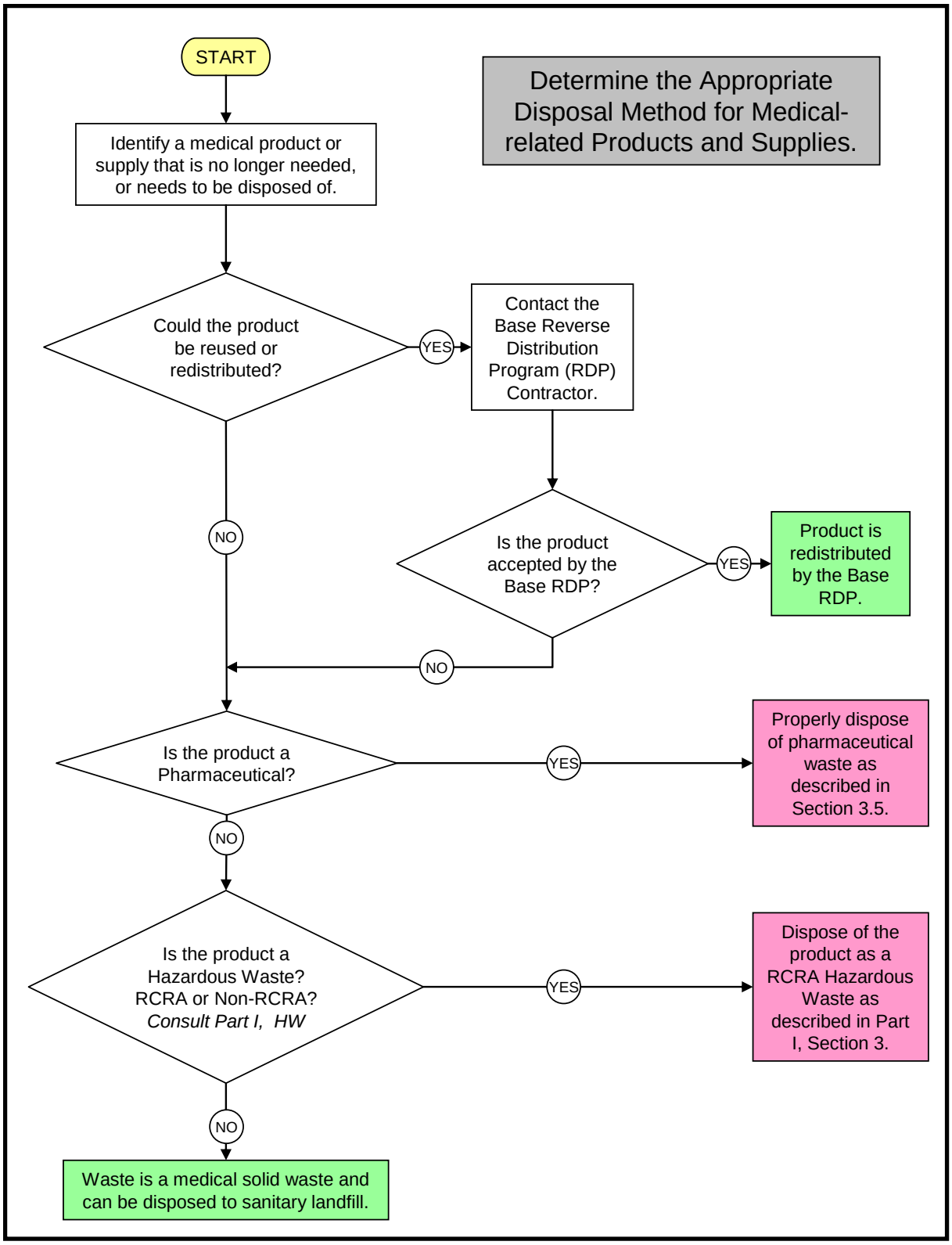
NAME OF RESPONSIBLE PERSON (please print or type) — DATE

DISTRIBUTION: WHITE - RETURN TO HMD
YELLOW – BUSINESS RETAINS

DEH:HM-9209 NCR (Rev. 8/99) Page 2 of 5 County of San Diego Department of Environmental Health

APPENDIX B

FLOWCHART: DETERMINE THE DISPOSAL METHOD FOR MEDICAL-RELATED PRODUCTS AND SUPPLIES



DEPARTMENT OF THE NAVY
NAVY ENVIRONMENTAL HEALTH CENTER
620 JOHN PAUL JONES CIRCLE SUITE 1100
PORTSMOUTH VA 23708-2103

5090
Ser EP/000671
30 MAY 2007

From: Commanding Officer, Navy Environmental Health Center
To: Distribution

Subj: PHARMACEUTICAL WASTE MANAGEMENT

Encl: (1) Pharmaceutical Waste Management Guidelines

1. The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 and governs the management of solid and hazardous waste generated within the United States. A number of pharmaceuticals and formulations of pharmaceuticals meet the definition of hazardous waste under RCRA and must be identified, segregated, contained, appropriately labeled, stored, transported, and disposed of in compliance with RCRA regulations.

2. The purpose of Enclosure (1) is to provide policy and guidelines for Naval Military Treatment Facilities generating pharmaceutical waste and to ensure the implementation of 40 CFR 260-279, EPA Hazardous Waste Management Regulations. It also provides Best Management Practice (BMP) guidelines for the management of other non-RCRA pharmaceutical waste. All facilities should complete an inventory of their pharmaceutical wastes and evaluate their management practices to determine the applicability of Enclosure (1).

3. My point of contact is Ms. Donna Watkins at (757) 953-0943 and e-mail: donna.watkins@med.navy.mil or Ms. Polly Kendall at (757) 953-0934 and e-mail: polly.kendall@med.navy.mil.

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NAVOPTHALSUPPTRACT YORKTOWN VA
CNI
NAVFAC HQ (EV)

PHARMACEUTICAL WASTE MANAGEMENT GUIDELINES

Enclosure (1)

GUIDELINES
TABLE OF CONTENTS

EXECUTIVE SUMMARY
References.....1
Background.....1
Purpose.....1
Scope.....2
Action.....2
Resources.....4

1. PHARMACEUTICAL CATEGORIES
   a. RCRA Hazardous Pharmaceuticals.....5
   b. BMP Non-Hazardous Pharmaceuticals.....6
   c. Non-RCRA Antineoplastics.....7
   d. Investigational Pharmaceuticals.....7

2. DEVELOPING A PHARMACEUTICAL WASTE PROGRAM
   a. Guidelines for Managing RCRA Hazardous Pharmaceuticals and Antineoplastics.....7
   b. Guidelines for Managing Trace Chemotherapy Waste …….....14
   c. Guidelines for Managing BMP Non-Hazardous Pharmaceuticals.....15
   d. Guidelines for Handling of Controlled Substances…… 17
   e. Guidelines for Managing Dual RCRA Hazardous Waste and Regulated Medical Waste (RMW)……..….....18
   f. Guidelines for Usage of Pharmaceutical Reverse Distribution (RD) 19
   g. Guidelines for Integrating New Pharmaceutical Procedures Into an EMS.....21
   h. Guidelines for Re-Evaluating the Hazardous Waste Generation Status of the Military Treatment Facility……...……...21

Appendix A - TOOLS AND RESOURCES……..……23
   a. Getting Started
   b. Understanding and Applying the Regulations
   c. Considering Best Management Practices for Non-Regulated Wastes
   d. Considering the Management Options
   e. Getting Ready for Implementation
   f. Launching the Program

Appendix B – OSHA Technical Manual Appendix VI: 2-1. Some Common Drugs that are Considered Hazardous…….……26

Appendix C – NIOSH Publication No. 2004-165: Preventing Occupational Exposure to Antineoplastic and Other Hazardous Drugs in Health Care Settings – Appendix A - Drugs Considered Hazardous…….……29

PHARMACEUTICAL WASTE MANAGEMENT GUIDELINES

EXECUTIVE SUMMARY

REFERENCES

(a) 40 CFR 260-279, EPA Hazardous Waste Management Regulations
(b) National Institute of Occupational Safety and Health (NIOSH) Hazardous Drug Alert Appendix A
(c) Occupational Safety and Health Administration (OSHA), Technical Manual Section 6, Chapter 2, Appendix VI: 2-1 OPNAVINST 5090.1B or most current version
(d) US Department of Health and Human Services National Toxicology Programs Report on Carcinogens (11th Edition)

BACKGROUND

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 and governs the management of solid and hazardous waste generated within the United States. In the past several years, the Environmental Protection Agency (EPA) and state environmental protection inspectors have determined that healthcare facilities have not been managing hazardous waste in compliance with RCRA. A number of pharmaceuticals and formulations of pharmaceuticals meet the definition of hazardous waste under RCRA. EPA and some state environmental agencies are now requiring healthcare facilities to identify, segregate, contain, and appropriately label, store, transport, and dispose of these hazardous wastes in compliance with RCRA regulations. As a result of this focus on the part of regulators, surveyors for the Joint Commission (JC) are also including pharmaceutical waste management in their survey questions.

PURPOSE

These guidelines discuss categorizing pharmaceutical waste, maintaining and updating an inventory of pharmaceutical waste streams, managing waste storage sites throughout the military treatment facility (MTF), and disposing of waste material. The guidelines provide suggestions on how to manage your program. MTFs can make the final decisions on the best way to develop and maintain the requirements set forth. Pharmaceutical waste that meet the requirements delineated in 40 CFR 261.33(e) (P list) or 40 CFR 261.33(f) (U list), or exhibits a characteristic of hazardous as defined in the 40 CFR 261 must be managed and disposed of in accordance to Federal, State, and local regulations. Therefore, the purpose of these guidelines is:

a. To provide policy and guidelines for MTFs generating pharmaceutical waste and to

ensure the implementation of Reference (a), 40 CFR 260-279, EPA Hazardous Waste Management Regulations.

b. To provide Best Management Practice (BMP) guidelines for the management of other non-RCRA Pharmaceutical waste included in these guidelines.

SCOPE

There are four (4) categories of pharmaceutical waste that need to be managed and they are defined as follows:

RCRA Hazardous Waste: Waste pharmaceuticals that meet the definition of a hazardous waste and must be segregated and managed as hazardous waste. These include nine antineoplastic agents.

Non-RCRA Antineoplastic Hazardous Waste: The Navy Bureau of Medicine and Surgery (BUMED) Environmental Programs (EP) Directorate has made the decision to manage all antineoplastic agents as hazardous waste regardless of whether or not they are technically listed as RCRA antineoplastic hazardous waste due to their inherent toxicity. Non-RCRA antineoplastic hazardous waste includes all antineoplastic agents used for the treatment of cancer that are not regulated by RCRA.

BMP Hazardous Waste: Pharmaceuticals which meet the criteria in these guidelines should be evaluated for possible management as RCRA hazardous waste as a best management practice. The decision will be made at the facility level. Additional guidance is provided in these guidelines.

BMP Non-Hazardous Pharmaceutical Waste: All other pharmaceutical waste not included in one of the above three definitions. As a best management practice, consider managing all pharmaceuticals not managed as hazardous waste through incineration at a regulated medical waste or municipal incinerator permitted to accept non-hazardous pharmaceutical waste. This decision can be made at the facility level.

ACTION

All medical treatment facilities use pharmaceuticals in the normal course of their treatment of patients. Pharmaceutical waste will be routinely generated during the course of compounding of specialty items, IV admixture preparation and administration, accidental spills and breakage, and other routine functions. All activities are responsible for implementing the guidelines established in these guidelines. Implementation of this guidance requires multidisciplinary participation from Environmental Programs, Pharmacy, and Nursing. It is recommended that MTFs use their Environment of Care Committee (EOCC) as the action team for implementing this guidance.

a. Commanding officers or officers in charge should: Appoint a Pharmaceutical

Waste Officer (**PWO**) to establish, manage, and monitor the pharmaceutical waste management program at the command.

b. The PWO should document the implementation of references (a) and (b) and this guidance to include:

(1) Identification and classification of all pharmaceuticals purchased by the activity, including any purchased by departments other than pharmacy which meet the criteria of a hazardous waste (federally and in the state in which the activity is located) if discarded. This list shall include the following information:

(a) National Drug Code, generic name, brand name, strength, dosage form, and package size; and

(b) Appropriate waste code: Federal P, U, or D plus specific number; state waste code if applicable.

(2) Identification of all pharmaceuticals purchased by the activity, including any purchased by departments other than pharmacy, that meet the criteria of an antineoplastic, as defined within these guidelines. This list shall include the following information: National Drug Code, generic name, brand name, strength, dosage form, and package size.

(3) A method for identifying and/or labeling all drugs received into the facility which become hazardous waste when discarded.

(4) A method for identifying and/or labeling all drugs dispensed to nursing units and other patient care units, including the Emergency Department, Surgical Suites, outpatient clinics, and any tenants residing within the activity, which become hazardous waste when discarded.

(5) A method for collecting and containerizing any drugs which become hazardous waste at or near the point of waste generation, including within the pharmacy and all patient care areas (Satellite Accumulation).

(6) Policies and procedures for transferring the collected hazardous pharmaceutical waste to the activity's hazardous waste storage area (Storage Accumulation).

(7) Policies and procedures for profiling, labeling, manifesting, transporting, and disposing of all hazardous pharmaceutical waste in compliance with federal and state hazardous waste regulations.

c. The Hazardous Waste Program Manager and/or Environmental Program Manager shall:

(1) Develop a training program for all relevant personnel within the Environmental Programs Division, Pharmacy Department, and Nursing Department on handling and disposing of hazardous waste;

(2) Develop an inspection program to ensure compliance with state and federal hazardous waste regulations;

(3) Assure appropriate Occupational Safety and Health Administration Hazardous Waste Operations and Emergency Response (OSHA HAZWOPER) or comparable Awareness Level training is provided for any staff engaged in transporting hazardous waste from Satellite Accumulation Areas to Storage Accumulation Areas;

(4) Conduct a re-evaluation of the hazardous waste generator status of the activity based on the addition of hazardous pharmaceutical waste to the generated waste stream;

(5) Develop new Standard Operating Procedures (SOPs) to ensure implementation of the enclosed guidelines;

(6) Integrate the new SOPs into the Environmental Management System (EMS); and

(7) Modify other existing SOPs as necessary to implement this guidance and the enclosed guidelines.

RESOURCES

The following forms need to be reviewed and completed for pharmaceutical waste that may be managed as hazardous waste.

a. Hazardous Waste Manifests. Information on these forms is available at http://www.epa.gov/epaoswer/hazwaste/gener/manifest/)

b. Notification of Regulated Waste Activity (EPA From 8700-12) is available at http://www.epa.gov/epaoswer/hazwaste/data/form8700/forms.htm

1. PHARMACEUTICAL CATEGORIES

INTRODUCTION

The following pharmaceutical categories are included in these guidelines: Resource Conservation and Recovery Act (RCRA) Hazardous Pharmaceuticals, Best Management Practice (BMP) Non-Hazardous Pharmaceuticals, and Non-RCRA Antineoplastics. This section gives a brief summary of the requirements and/or best management practices for each of these materials. Appendix A of this guideline includes tools and resources for further information.

a. RCRA Hazardous Pharmaceuticals

Determine if any stocked pharmaceuticals meet the definitions of hazardous waste by applying the criteria noted below:

1) The generic or chemical name is listed in 40 CFR 261.33 (e) (P list) or (f) (U list) or comparable state regulations

   i. Empty containers which have held pharmaceuticals listed in 40 CFR 261.33 (e), or P-listed wastes, must be managed as hazardous waste except for used epinephrine syringes.

   ii. Common P-listed pharmaceuticals used in the military treatment facility setting are:
      1. P042 – Epinephrine
      2. P075 – Nicotine, & salts
      3. P081 – Nitroglycerine (R)
      4. P204 – Physostigmine
      5. P188 – Physostigmine salicylate
      6. P001 – Warfarin & salts, when present at concentrations greater than 0.3%
      7. P012 – Arsenic Trioxide

   iii. Common U-listed wastes used in the military treatment facility setting are:
      1. U034 – Chloral (as the hydrate)
      2. U035 – Chlorambucil
      3. U058 – Cyclophosphamide
      4. U059 – Daunomycin
      5. U075 – Dichlorodiflouromethane
      6. U089 – Diethylstilbestrol
      7. U129 – Lindane
      8. U150 – Melphalan
      9. U010 – Mitomycin C
      10. U200 – Reserpine
      11. U201 – Resorcinol

12. U205 – Selenium sulfide
13. U206 – Streptozotocin
14. U121 – Trichloromonofluoromethane
15. U248 – Warfarin & salts, when present at concentrations of 0.3% or less

2) The formulation exhibits a characteristic of hazardous waste as defined by the following:
   i. 40 CFR 261.21 Characteristic of ignitability
   ii. 40 CFR 261.22 Characteristic of corrosivity
   iii. 40 CFR 261.23 Characteristic of reactivity
   iv. 40 CFR 261.24 Toxicity characteristic

3) The formulation exhibits a characteristic of hazardous waste as defined by state hazardous waste regulations (note specifically California, Minnesota, Washington State, Rhode Island, and Michigan).

NOTE

EMPTY CONTAINERS WHICH HAVE HELD PHARMACEUTICALS LISTED IN 40 CFR 261.33 (E), OR P-LISTED WASTES MUST BE MANAGED AS HAZARDOUS WASTE EXCEPT FOR USED EPINEPHRINE SYRINGES.

b. BMP Non-Hazardous Pharmaceuticals

All drugs that do not meet the criteria stated above are categorized as BMP Non-Hazardous Pharmaceuticals. BMP Non-Hazardous Pharmaceuticals that meet any of the criteria listed below must be incinerated. If a regulated medical waste incinerator is not available, they should be disposed of as hazardous waste.

1) **Combo P-,U-**: Formulations containing more than one P or U-listed drug or combinations of P or U-listed drugs with other active ingredients.

2) **OSHA**: Drugs listed in the Occupational Safety and Health Administration (OSHA) Technical Manual Section 6, Chapter 2, Appendix VI: 2 -1. This list is included as Appendix B of this guideline.

3) **CARCIN**: Drugs listed in the US Department of Health and Human Services National Toxicology Program's Report on Carcinogens (11th Edition).

4) **OSHA** or **NIOSH**: Additional drugs meeting OSHA or NIOSH criteria.

5) **LD50**: Drugs with LD50s at or below 50mg/kg.

6) **EDC**: Endocrine disrupting compounds not listed in any of the above references.

7) **VITMIN**: Vitamin/mineral preparations that may fail the toxicity characteristic due to chromium, selenium, or cadmium for which there is inadequate data to make a hazardous waste determination.

c. Non-RCRA Antineoplastics

BUMED has decided to treat all non-RCRA antineoplastic agents as RCRA Hazardous Pharmaceuticals because of their inherent toxicity. Identify which pharmaceuticals are Non-RCRA Antineoplastics by applying the criteria noted below:

1) Agents are listed on the National Institute of Occupational Safety and Health (NIOSH) Hazardous Drug Alert Appendix A at http://www.cdc.gov/niosh/docs/2004-165/2004-165d.html#o. This list is also found in Appendix C of this guideline.

2) Any drug that is used in chemotherapy treatments.

d. Investigational Pharmaceuticals

For investigational pharmaceuticals not approved for use in the USA, review literature provided by the manufacturer for proper handling.

2. DEVELOPING A PHARMACEUTICAL WASTE PROGRAM

INTRODUCTION

This section is divided into Guidelines for Managing: a) RCRA Pharmaceuticals and Antineoplastics, b) Trace Chemotherapy Waste; and c) BMP Non-Hazardous Pharmaceuticals. These types of materials are to be managed differently; therefore, separate guidance is given for each.

a. Guidelines for Managing RCRA Pharmaceuticals and Antineoplastics

1) Current Pharmaceutical Inventory

   i. Obtain a complete inventory of all pharmaceuticals currently stocked within the activity. This inventory may be most easily obtained by requesting a one-year purchase history from the prime vendor. Request the data be formatted on a spreadsheet or in a database with the following data fields:

- National Drug Code
- Generic Name
- Strength
- Package Size
- Brand Name
- Manufacturer
- Dosage Form

See Table 1 for an example format.

Table 1

Report Label Name	Waste Classification	Waste Stream	EPA Code 1	Reason	Addtnl Reason
EPIPEN-JR INJ 0.15MG	Regulated as federal HW	Toxic	P042-Epinephrine	Epinephrine	
ERYTHROMYCIN PAD 2%	Regulated as federal HW	Ignitable	D001-Ignitable	Alcohol >= 24%	
ERYTHROMYCIN SOL 2%	Regulated as federal HW	Ignitable	D001-Ignitable	Alcohol >= 24%	
ETHYL CHLOR AER	Regulated as federal HW	Ignitable	D001-Ignitable	Ignitable aerosol	
ETOPOSIDE INJ 20 MG/ML	Regulated as federal HW	Ignitable	D001-Ignitable	Alcohol >= 24%	
FLUOCINONIDE SOL 0.05%	Regulated as federal HW	Ignitable	D001-Ignitable	Alcohol >= 24%	
FLURBIPROFEN SOL 0.03% OP	Regulated as federal HW	Toxic	D009-Mercury	Mercury preservative	Thimerosal Preservative
FML S.O.P. OIN 0.1% OP	Regulated as federal HW	Toxic	D009-Mercury	Mercury preservative	
FORTEO SOL 750/3ML	Regulated as federal HW	Toxic	D024-m-Cresol	M-cresol	
GENASAL SPR 0.05%	Regulated as federal HW	Toxic	D009-Mercury	Mercury preservative	
HIBTITER INJ	Regulated as federal HW	Toxic	D009-Mercury	Mercury preservative	Thimerosal 1:10,000
HUMALOG INJ 100/ML	Regulated as federal HW	Toxic	D026-Cresol	Cresol	
HUMALOG PEN INJ 100/ML	Regulated as federal HW	Toxic	D026-Cresol	Cresol	
HUMATROPE INJ 5 MG	Regulated as federal HW	Toxic	D024-m-Cresol	M-cresol	
HUMULIN INJ 70/30	Regulated as federal HW	Toxic	D024-m-Cresol	M-cresol	
HUMULIN N INJ U-100	Regulated as federal HW	Toxic	D024-m-Cresol	M-cresol	

If pharmaceuticals have been purchased from other sources, these must be added to the spreadsheet. Add two columns to the spreadsheet for the following two data fields: "Antineoplastic (Y/N)" and "RCRA Waste Code" For each pharmaceutical that meets the criteria for a hazardous waste, list the appropriate federal and state waste code.

ii. Insert a column entitled "Non-RCRA Antineoplastic Pharmaceutical Waste" in the spreadsheet and document the criteria used to make the determination from the list in Section 1.b. Use the abbreviations given in the above list of criteria.

iii. Insert a column in the spreadsheet or a field in the database entitled "BMP Hazardous Pharmaceutical Waste" and document the criteria used to make the determination from the above list. Use the abbreviations given in the above list of criteria, Section 1.c.

2) Maintenance of Inventory Spreadsheet

i. Assignment of Personnel. Assign one representative from the Pharmacy and one representative from the Environmental Programs Department (EPD) to be responsible for monitoring all new unique national drug codes entering the facility.

ii. Maintenance of Inventory Spreadsheet. Assigned personnel must continuously update the Inventory of Pharmaceutical Wastes with all new drugs that are purchased. All RCRA regulated pharmaceutical waste, antineoplastic pharmaceutical waste, and BMP pharmaceutical wastes that will managed as Hazardous Waste shall be identified in the inventory.

iii. Assignment of Waste Code. Assigned personnel must make a hazardous waste determination based on 40 CFR 261. The appropriate RCRA hazardous waste code must be assigned for all RCRA regulated pharmaceutical wastes.

iv. Assignment of Hazardous Drug Reason Code. Assigned personnel must evaluate non-RCRA pharmaceuticals against the Antineoplastic Pharmaceutical Waste criteria listed in Section 1.c. and the Best Management Practice (BMP) criteria listed in Section 1.b. The appropriate criteria should then be documented in the "Hazardous Pharmaceutical Waste Spreadsheet." Criteria can be found in bold print in Section 1.b.

v. Maintenance of Labeling Guidance. All labeling guidance must be updated in accordance with Section 2.a.3.

3) Labeling

i. Labeling Pharmacy Shelf Stickers. Place hazardous waste identification labels on the shelf stickers of all pharmaceuticals that have been identified as RCRA Hazardous Waste in Section 1.a. or Non-RCRA Antineoplastic Pharmaceutical

Waste in Section 1.c. If your installation chooses to follow the Section 1.b. proposed guidelines for Best Management Practices then place identification labels on the respective shelf stickers for these pharmaceuticals as well.

ii. Training of Pharmacy Personnel. Train pharmacy personnel to label all hazardous waste pharmaceuticals with the appropriate hazardous waste notification sticker when dispensing the pharmaceutical directly to the nursing units.

iii. Labeling Compounded Items and IV Admixtures. Develop a system for labeling all compounded preparations and IV admixtures that meet the criteria of a hazardous waste when discarded.

iv. Establishing Messages In Automated Dispensing Cabinets. For those pharmaceuticals that meet the criteria of a hazardous waste, enter an appropriate message into all automated dispensing cabinets such as "Dispose of any waste drug in hazardous waste container. Do not remove from original packaging."

4) Manifesting

The EPA mandated Uniform Hazardous Waste Manifest must be used for the transportation of all RCRA hazardous wastes after 5 September 2006 as described in Section 1.a.7. The Uniform Manifest allows a maximum of six waste codes. If state-specific codes are in use (e.g., currently Michigan and Minnesota), these must be listed first, followed by the EPA hazardous waste codes most representative of the waste. Non-RCRA antineoplastic pharmaceutical waste need not be listed on the manifest; however, all other guidance in Section 1.a.7 must be followed.

5) Satellite Accumulation of Hazardous Pharmaceutical Waste

i. Assignment of Personnel. Train EPD, Pharmacy, and Nursing personnel on the concept of satellite accumulation as defined in 40 CFR 262.34 (1) and (2). Satellite accumulation sites, which are under the control of the operator of the process generating the waste, are intended for the storage of hazardous waste generated at or near any point of generation where wastes initially accumulate. No more than 55 gallons of a U-listed or characteristic waste (as defined/ listed in 40 CFR 261) may be accumulated at one time. No more than one quart of P-listed waste (also as defined in 40 CFR 261) may be accumulated at one time. Upon reaching those limits, the containers must be transferred to a less than 90-day storage area within three days. (Some states, such as Maryland, require immediate transfer.) As indicated by the name, waste from less than 90-day storage areas must be manifested and properly transported off-site in less than 90 days.

ii. Selection of Sites. Choose satellite accumulation sites based on convenience for pharmacy and nursing personnel. Satellite accumulation sites should be secure such that patients and visitors do not have access. The control of the operator can refer to a locked dirty utility room with restricted entry.

iii. Marking of Containers. Satellite accumulation containers should bear the words "Hazardous Waste." If toxic and ignitable hazardous waste pharmaceuticals are being segregated, the additional words "Toxic" and "Ignitable" should appear on the appropriate containers. The Hazardous Waste label is affixed at the time of purchase but the additional Toxic or Ignitable labels or both will need to be affixed when the container is set up for use. In some states, the initial start date of satellite accumulation is required. There is no federal time limit; however, some states, such as California, have a one year limit for total time in residence, including satellite accumulation areas and less than 90-day storage areas. Check with your state's requirement.

iv. Choice of Containers. Black containers can be ordered using the GSA Schedule.

6) Guidelines for Less than 90 Day Storage Areas for Hazardous Pharmaceutical Waste

i. Assignment of Personnel. Proper maintenance of a less than 90-day storage area (small quantity generators as defined in 40 CFR 261 are actually allowed to have less than 180 day storage areas; however, MTFs routinely generate enough P-listed waste to be considered large quantity generators) is a highly technical function. The person assigned to this responsibility should be the Hazardous Waste Manager for the facility.

ii. Transfer of Hazardous Pharmaceutical Waste. When the pharmacy or a patient care area fills a container in a satellite accumulation area ¾ full, personnel in that area must contact the Hazardous Waste Manager or designated assistant and request a transfer to the less than 90-day storage area.

iii. Assuring Containment During Transport to Less Than 90-Day Storage Area. Precautions must be made to ensure that the lid fits tightly, is closed, and is transported in such a manner as to remain upright with no chance of tipping or spillage.

iv. Training of Transport Personnel. MTFs that are large quantity hazardous waste generators as defined in 40 CFR 261 have specific training requirements. Personnel transporting hazardous waste from satellite accumulation areas to less than 90-day storage areas must have appropriate OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) or equivalent training as required by 29 CFR 1910.120.

7) Guidelines for Profiling, Labeling, Manifesting, Transporting, and Disposing of Hazardous Pharmaceutical Waste

i. Assignment of Personnel. The Hazardous Waste Manager or Environmental Program Manager is the appropriate person to oversee this function. Defense Reutilization and Maintenance Organization (DRMO) and the contracted hazardous waste vendor must also be closely involved.

ii. Development of Profile. The "Hazardous Pharmaceutical Waste Spreadsheet" generated by following the guidance in Section 2 a.1 should be used to develop the profile. All waste codes should be submitted to DRMO and the hazardous waste vendor. Upon acceptance, six waste codes most representative of the actual waste generated will be used to complete the Uniform Hazardous Waste Manifest. The most frequently generated pharmaceutical waste codes (e.g., epinephrine P042) can be applied to all pharmaceutical waste containers, regardless of actual contents.

iii. Segregation of Ignitable and Toxic Wastes. It will be the decision of the vendor and final disposer if ignitable and toxic wastes can be combined. This option would greatly simplify the segregation and collection of waste pharmaceuticals throughout the MTF. These waste streams can only be combined if a waste profile is generated.[1] They CANNOT be combined if the waste pharmaceuticals are lab-packed.[2] Lab-packing is a time consuming process and not appropriate for pharmaceutical hazardous waste in finished dosage forms (e.g. tablets, capsules, IVs, ointments, etc.). Lab-packing is appropriate and should be used for bulk chemicals, including bulk pharmaceuticals (e.g. resorcinol, phenol, glacial acetic acid, potassium permanganate).

iv. Re-certification. The Hazardous Waste (HW) profile will need to be re-certified annually. The hazardous waste vendor should initiate this process, but the MTF should also take responsibility for ensuring this is accomplished.

v. New Waste Codes. If new pharmaceuticals are brought into the facility that are designated as hazardous waste with new waste codes, these must be submitted to the hazardous waste vendor and added to the profile at the time they are brought into the inventory.

vi. State-Specific Waste Codes. Several states have additional codes for chemicals including pharmaceuticals that must be segregated and disposed of as hazardous

[1] See 49 CFR 173.24 General requirements for packaging and packages and 49 CFR 173.24(a) Additional requirements for non-bulk packaging and packages.

[2] See 49 CFR 173.12 Exceptions for shipments of waste materials (b)(2)(iii).

waste. These waste codes should also be submitted to the hazardous waste vendor for review. These codes take priority on the Uniform Hazardous Waste Manifest and must be listed before federal EPA waste codes.

vii. Labeling. If the satellite accumulation containers are to be shipped for disposal they must be re-labeled with the required EPA/DOT hazardous waste shipping label. The Hazardous Waste Manager, DOT-trained designated employee, or hazardous waste vendor should complete this function. If the contents are removed and consolidated, the final shipping container must be labeled with the EPA/DOT hazardous waste shipping label.

viii. Manifesting. The hazardous waste vendor should prepare the manifests based on the accepted waste profiles. The Hazardous Waste Manager or appropriately-trained employee should sign the manifests prior to shipment. A tickler file should be maintained to assure the signed copy of the manifest from the receiving hazardous waste facility is received by the MTF within the required timeframe. If not, the vendor must be contacted and the contact documented. For large quantity generator facilities (such as MTFs) if the signed manifest is not received within 35 days, contact the hazardous waste vendor. For Large Quantity Generators, if the signed manifest is not received within 45 days, an exception report must be filed with the EPA Regional Office or state environmental protection agency. State regulations may be more stringent and should be consulted. Information regarding the new Uniform Hazardous Waste Manifest may be accessed at http://www.epa.gov/epaoswer/hazwaste/gener/manifest/. Check for state-specific manifesting requirements at http://www.epa.gov/epaoswer/hazwaste/gener/manifest/registry/states.htm.

ix. Transporting and Disposing. A permitted hazardous waste hauler/transporter or a permitted Transfer, Storage, and Disposal (TSD) facility must take custody of the hazardous waste at the time of shipment. This vendor may be the final disposer or may be a broker that transfers the waste to a final disposer. Copies of permits, notices of violation, and other due diligence documents should be on file for all vendors within the chain of custody.

8) Guidelines for Segregating and Containerizing Hazardous Pharmaceutical Waste

i. Determination of Placement of Hazardous Waste Containers. Determine size, placement, and number of hazardous waste containers that will be needed.

1. Pharmacy – in the central pharmacy and satellites; ensure that each assigned area has an appropriate number of hazardous waste containers.

2. Nursing – in each nursing area, the Emergency Department, Surgical Suites, and outpatient clinics; ensure that each dirty utility room has an appropriate number of hazardous waste containers.

ii. Training of Personnel. Train personnel in the proper use and management of the hazardous waste containers. Training shall include the following components:

1. All nursing personnel must be trained on the meaning of the hazardous waste notification labels.

2. Any discarded pharmaceutical that has a hazardous waste notification label must be placed into the appropriate hazardous waste container.

3. The hazardous waste container must remain closed when not in active use.

4. If P-listed waste is routinely added to the container, a log must be maintained if one quart of P-listed waste may accumulate before the container is filled. This is most likely during orthopedic and ophthalmic surgery and in the cardiac intensive care units.

5. If one quart of P-listed waste accumulates, Environmental Program Department (EPD) must be notified immediately to come and remove the container as soon as possible and replace it with an empty container. In any event, replacement should occur within 24 hours.

6. When the container is ¾ full, nursing unit and other patient care area personnel should notify EPD for timely removal.

7. Empty stock containers should be available in or near the soiled utility rooms at all times to ensure proper containment when a current container is full.

8. Nursing personnel should not retrieve items that have been placed into the hazardous waste container for any reason.

9. Nursing and housekeeping personnel should not transfer filled containers to EPD or other storage locations.

b. Guidelines for Managing Trace Chemotherapy Waste

1) Assignment of Personnel. The Regulated Medical Waste Manager is the appropriate person to oversee this function.

2) Definition of Trace Chemotherapy Waste. Trace chemotherapy waste is not a federally defined term but is referenced in California and Wisconsin state regulated medical waste regulations. These definitions include but are not limited to the following items when they have come into contact with, or had the potential to come into contact with, chemotherapy agents: syringes, drug dispensing devices and broken or empty chemotherapy drug vials, gloves, disposable gowns, towels, empty intravenous solution bags and empty tubing. For the nine listed chemotherapy agents, the containers must be "RCRA Empty."

3) "RCRA Empty." For the eight U-listed chemotherapy drugs, the containers are considered "RCRA empty" if all the contents have been removed that can be removed by normal means, including aspiration with a needle and syringe, AND there is no more than 3 percent left in the container. These are then considered trace chemotherapy waste. For arsenic trioxide, which is a P-listed hazardous waste, all containers shall be managed as hazardous waste, not trace chemotherapy waste, since "RCRA empty" would require triple rinsing with the rinsate disposed as hazardous waste.

4) Trace Chemotherapy Containers. Containers labeled as Chemotherapy Waste can be purchased in both yellow and white, and as floor units and needleboxes. These should be used for all trace chemotherapy items to clearly differentiate them from red bag and red sharps containers. Yellow trace chemotherapy bags may be used in trolleys for soft trace chemotherapy items such as gloves, gowns, and wipes as a cost savings measure.

5) Trace Chemotherapy Is Also Regulated Medical Waste. Trace chemotherapy containers are also labeled as regulated medical waste, enabling bloody tubing, used syringes, and other contaminated materials used in chemotherapy preparation and administration to be placed in these containers.

6) Disposal of Trace Chemotherapy Containers. Trace chemotherapy bags and sharps containers must be incinerated at a regulated medical waste incinerator. They should not, under any circumstances, be autoclaved (per NIOSH Hazardous Drug Alert[3]).

7) Rationale for Yellow/White Color Coding. There is a misperception in healthcare facilities that all red-bagged waste is still being incinerated. Due to the closure of most medical waste incinerators under the Clean Air Act, the majority of red-bagged waste, with the exception of pathology waste, is autoclaved or microwaved and then landfilled. Autoclaving of chemotherapy causes aerosolization which can expose waste management employees (see NIOSH Hazardous Drug Alert). Disposal in the landfill is also not appropriate. Color-coding is an effective method for assisting employees in proper labeling of containers for incineration and provides one more quality assurance check.

c. Guidelines for Managing BMP Non-Hazardous Pharmaceuticals

1) Assignment of Personnel. The Hazardous Waste Manager or Regulated Medical Waste Manager is appropriate to manage this function, based on the Best Management Practices followed by the installation.

2) Definition of Non-Hazardous Pharmaceutical Waste. Non-hazardous pharmaceutical waste represents about 85 percent of the inventory of most hospital pharmacies. For

[3] The NIOSH Hazardous Drug Alert can be accessed at http://www.cdc.gov/niosh/docs/2004-165/.

the purposes of these guidelines, non-hazardous pharmaceutical wastes are those waste pharmaceuticals that do not meet the definition of RCRA hazardous pharmaceuticals, or the definition of non-RCRA antineoplastics or the definition of BMP Hazardous Pharmaceutical wastes (see Section 1. a-c). Non-hazardous pharmaceutical waste does include antibiotics, antidepressants, controlled substances, and a number of other potent pharmaceuticals that have the potential or have been shown to cause endocrine disruption in aquatic species and antibiotic resistance in bacterial populations.

3) Background Information. Additional negative effects on human health and the environment are being intensively researched. Some state environmental protection agencies, such California and Washington, prohibit the disposal of waste drugs through sewering, with some exceptions for controlled substances. Some municipalities, such as Little Rock, AR, also prohibit sewering of most pharmaceuticals. With the continuing documentation of the prevalence of pharmaceuticals in surface, ground, and drinking water, it is reasonable to assume that wastewater treatment facilities will become more aggressive in prohibiting the entry of waste pharmaceuticals into their system.

4) Options available for Non-Hazardous Pharmaceutical Waste Management. The most effective alternative to sewering and landfilling of non-hazardous waste pharmaceuticals is incineration at either a municipal solid waste incinerator or a regulated medical waste incinerator. These facilities must be permitted to handle non-hazardous pharmaceuticals. The facility will request a list of drugs that may be sent for treatment. The list generated in Section 1 should provide those pharmaceuticals that do not meet the criteria of RCRA and related items. The regulated medical waste vendor that currently incinerates pathology waste and trace chemotherapy waste is a logical choice for this function.

5) Containerization of Non-Hazardous Pharmaceutical Waste. There are currently two companies manufacturing containers dedicated to this waste stream. The Tyco Kendall Sharp Safety Division manufactures a white container with a blue top in various sizes. It is labeled PharmaSafety and includes needleboxes with restricted entry. The Daniels Company Pharmasmart containers are reusable and can save considerable money. They are white with a purple top and also include needleboxes with restricted entry.

6) Placement of Non-Hazardous Pharmaceutical Waste Containers. These containers should be placed in close proximity to the hazardous waste containers discussed in Section 2.a.1. of these guidelines.

7) Landfilling as an Option. Landfilling is not an optimum option for several reasons. The landfill should require a Material Safety Data Sheet (MSDS) for all pharmaceuticals that may be sent to it. Usually landfills will not accept liquids, which would preclude unused IVs from being managed through this option. As containers are crushed, the contents will eventually leach and the leachate of most

landfills is added to the sewer system. The goal of keeping the waste pharmaceuticals out of the aquatic ecosystem is therefore not met, and potentially exposes the hospital to environmental risks and liabilities.

8) Training. All pharmacy and nursing personnel must be trained to dispose of all pharmaceuticals that are NOT labeled for special disposal as non-hazardous pharmaceutical waste in the appropriate containers.

9) Manifesting. There are no official manifests for non-hazardous pharmaceutical waste. The selected vendor should provide their usual and customary manifest or shipping document, specifying the contents as non-hazardous pharmaceutical waste or a related term.

10) Security. It is imperative that whatever option is chosen, security be maintained throughout the transport and disposal process. Pharmaceutical waste should always be incinerated through a witnessed conveyor system, never through a pit feed process, due to the opportunity for diversion.

d. Guidelines for the Handling of Controlled Substances

1) The Drug Enforcement Administration (DEA) requires that controlled substances that are to be wasted at a healthcare facility must be destroyed "beyond reclamation" and that process must be witnessed and documented by two healthcare professionals (licensed doctor, nurse, mid-level practitioner or pharmacist). (Pharmacist's Manual available at http://www.deadiversion.usdoj.gov/pubs/manuals/pharm2/index.htm.)

2) The least expensive and most convenient method of disposing of controlled substances in liquid, tablet, or capsule form has traditionally been through drain disposal. In some cases, items such as used fentanyl patches have also been disposed through flushing into the sewer system. While this approach satisfies DEA requirements, it is not the most environmentally-sound method of disposal. To ensure that no state or municipal regulations are being violated by this practice, the facility that wishes to continue this practice should contact the appropriate local and state wastewater treatment authorities in writing and request permission to continue this practice. Since all quantities are documented, estimated quantities can be provided per month to assist regulatory agencies in making an informed decision.

3) A second option for the disposal of significant quantities of unwanted waste controlled substances, such as unused or partial IV morphine drips, is to transfer these items to a reverse distributor that is registered with the Drug Enforcement Administration to accept DEA schedules II through V. This is considered a transfer between DEA registrants and all relevant paperwork and inventory requirements must be met. These are defined in the DEA regulations (see 21 CFR 1300 to 1316). Expired controlled substances in the original manufacturers' containers should routinely be sent through reverse distribution to obtain credit whenever possible.

4) A third option is the transfer of waste controlled substances to a hazardous waste vendor that is registered as a reverse distributor with the Drug Enforcement Administration to accept DEA schedules II through V. This is also considered a transfer between DEA registrants and all relevant paperwork and inventory requirements must be met. These are defined in the DEA regulations (see 21 CFR 1300 to 1316). This option is also appropriate for the disposal of chloral hydrate, U034, a schedule IV controlled substance that is also a RCRA hazardous waste.

5) If sewering is not an option due to state or municipal regulations, such as in the State of California, and the other options are not viable due to location or cost constraints, contact the local or regional DEA office for additional guidance.

6) Regardless of the option selected, ensure that all reporting procedures meet DEA reporting requirements for that option.

e. <u>Guidelines for Managing Dual RCRA Hazardous Waste and Regulated Medical Waste (RMW)</u>

1) <u>Definition of Dual RCRA Hazardous Waste and Regulated Medical Waste (RMW)</u> - A waste which meets the definition of both a RCRA hazardous waste (40 CFR 261) and a regulated medical waste as defined by state medical waste regulations. An example would be a syringe and needle that were used for the transfer of arsenic trioxide, a P-listed hazardous waste. The needle, being a sharp, meets the definition of regulated medical waste in most states. Because the syringe held a P-listed waste, it is not considered "RCRA empty" unless it has been triple rinsed, which is not a good management option. Therefore the used syringe is a dual waste as defined in these guidelines.

2) <u>Containment and Labeling of Dual Waste</u>. Specially-marked containers should be set up in appropriate areas where dual wastes are most likely to be generated. Where sharps are expected, a needlebox (white/blue top) is ideal since access is restricted in the same manner as a red needlebox. The original labeling should be augmented with two additional labels. One label should say "Hazardous Waste." The second label should contain the traditional designation of a biohazardous or regulated medical waste. Each must be in plain view. Note that the needlebox is not adequate packaging for shipment and must be overpacked within a spill-proof, leak-proof container meeting Packing Group II standards. An alternative is a black Kendall hazardous waste container (no black needlebox was available on the market at the time of issuance of these guidelines). In this case, a biohazardous or regulated medical waste label must be added to the hazardous waste label. This container is designed for shipping of hazardous waste.

3) <u>Storage of Dual Waste</u>. The hazardous waste classification of the dual waste takes precedence for storage requirements. Therefore, dual waste must be stored in the Satellite Accumulation Area. At that time the more detailed hazardous waste

shipping label should be affixed and completed. The biohazardous label must remain prominently displayed also.

4) Shipping of Dual Waste. The vendor must be permitted to transport and dispose of both RCRA hazardous waste and regulated medical waste and should demonstrate that capability by providing permit information. Two hazardous waste vendors which have this capability are Veolia (formerly Onyx) and Clean Harbors. The dual waste must be manifested as hazardous waste. Check with the vendor for additional manifesting requirements for your state.

5) Minimization of Dual Waste Generation. The management of this waste stream is more costly than either RCRA hazardous waste alone or regulated medical waste alone and generation of dual waste should be minimized whenever possible. The 1994 EPA Hotline exemption of used syringes containing epinephrine residue should be considered to enable these sharps to be managed as regulated medical waste. This is the only exemption for a P-listed drug and applies only to used syringes.

f. Guidelines for the Usage of Pharmaceutical Reverse Distribution (RD)

1) Definition of Pharmaceutical Reverse Distribution. Pharmaceutical reverse distribution is the process of returning outdated, expired pharmaceuticals in the original manufacturer's packaging to a third-party company (reverse distributor) for the purpose of obtaining credit for the expired pharmaceuticals from the manufacturer.

2) Functions of a Pharmaceutical Reverse Distributor. The pharmaceutical reverse distributor maintains current return policies for all pharmaceutical manufacturers and compares each returned outdated product to these policies. If the conditions of the product meet the return policies of the manufacturer, the item is returned to the manufacturer or its designated agent (which may be the same or another reverse distributor) and a credit is issued to the pharmacy, most often through the prime vendor (drug distributor).

3) Use of Pharmaceutical Reverse Distribution by the DoD. The DoD routinely uses pharmaceutical reverse distribution for the management of outdated, expired products in their original manufacturer's packaging to maximize credits back to the government. The Pharmacy Department manages this process.

4) Limits of Pharmaceutical Reverse Distribution. Based on two interpretive letters from the USEPA to Merck & Co. (a pharmaceutical manufacturer) in 1981 and to Browning-Ferris Industries (BFI) Pharmaceutical (a pharmaceutical reverse distributor) in 1991, the EPA regards outdated, expired products in their "original manufacturer's container" as "products" as they move back through the supply chain, and until a final decision has been made as to their disposition. The decision to declare the product as "waste" may occur at the reverse distributor or at the manufacturer or its designated agent. The interpretive letters are clear that reverse

distribution is NOT to be used in lieu of a waste management system for waste-like items. "EPA does not intend for hazardous waste brokers to use a reverse distribution system to relieve generators of the responsibility for making determinations about the discarding of materials as wastes. It remains the generator's responsibility to properly identify what becomes waste. Second, a reverse distribution system cannot be used as a waste management service to customers/generators without the applicable regulatory controls on waste management being in place."[4] The reverse distributor must distinguish waste from creditable products, and hence must properly notify the original waste generator regarding the amount and characteristics of the wastes to be disposed of at a third-party permitted waste management facility.

5) Applicability to MTF PHARMACEUTICAL WASTE MANAGEMENT GUIDELINES. Regardless of the claims of some reverse distributors that they can accept pharmaceutical waste from facilities in addition to legitimate outdated, expired products, this is not the official position of the USEPA. Opened vials, unused IVs solutions, repackaged tablets and capsules, and other obviously "waste-like" items must be managed as waste and not sent through reverse distribution.

6) Exception for Controlled Substances. Due to the difficulty in disposing of controlled substances regulated by the Drug Enforcement Administration (DEA), reverse distributors are registered with DEA to accept controlled substances. In Schedules II through V, reverse distributors provide a disposal option for non-hazardous controlled substances as a transfer between registrants. Some hazardous waste transporters and Treatment, Storage, or Disposal Facilities (TSDFs) have also obtained DEA registration as reverse distributors and provide appropriate disposal options for hazardous controlled substances, such as chloral hydrate, a listed hazardous waste (U034) and a controlled substance in Schedule IV. These firms do not provide the traditional reverse distribution function of evaluating the returned item for credit; however, and are focused exclusively on waste management. Expired products in the original manufacturer's packaging which are controlled substances should routinely be returned for possible credit through traditional reverse distributors, again as a transfer between registrants. Refer to Section 2.d. for additional information on managing expired and waste controlled substances.

7) Regional and State Regulatory Considerations. In the original EPA interpretive letters noted above, USEPA made the ruling that some returned products being accepted by reverse distributors might be reused or recycled. For expired products, this has not been the case. Therefore, some USEPA Regions, such as Region 2, and some states, have tightened the interpretation to the effect that if credit is never given for a particular drug product, and that product would become a hazardous waste if discarded, the healthcare facility must no longer send that product through reverse distribution but must manage it as a hazardous waste at the facility. The itemized waste records of the reverse distributor are used to make this determination. Some states have completely prohibited the shipment of any outdated drugs through reverse

[4] Excerpt from a letter from Sylvia K. Lowrance, Director, Office of Solid Waste, to Mark J. Schulz, President, Pharmaceuticals Division, Inc., Browning-Ferris Industries on May 16, 1991.

distribution if they would become hazardous waste when discarded, citing that the lack of the real potential for recycling and reuse removes them from eligibility. Federally, only 5% of pharmacy inventories fall into this category; however, the management burden is increasing significantly. Since this is a relatively fluid situation, it is important that all facilities contact their USEPA Region and state environmental regulatory authority to determine the current requirements for the use of reverse distribution.

8) Florida Universal Waste Rule. There is a pending regulation in the State of Florida that would include pharmaceutical hazardous waste in the definition of Universal Waste within that state. It appears that the regulation would permit Florida-licensed reverse distributors to become Universal Waste Handlers. Since there are no permitted RCRA incinerators in the State of Florida, any universal waste pharmaceuticals would need to be properly identified, labeled, and manifested prior to leaving the State of Florida for final disposal. The US Navy sees no advantage to introducing a third party into what is essentially a waste management process. Facilities in Florida are not encouraged to utilize this option at the present time. BUMED will continue to monitor the implications of this pending regulation after it becomes law.

g. Guidelines for Integrating New Pharmaceutical Procedures Into an EMS

1) Assignment of Personnel. The Hazardous Waste Manager and the Hazardous Materials Manager are the appropriate persons to oversee this function in close communication with the contractor or other personnel responsible for developing and maintaining the EMS.

2) Areas Impacted. Virtually every section of the EMS must be revisited for possible revisions, especially those dealing with hazardous waste generation.

3) Impact on Hazardous Materials Management. The list of hazardous pharmaceutical wastes should be closely reviewed with the Pharmacy and Nursing Departments to determine how they are routinely handled and if employee exposure is an issue. The hazardous materials list should be updated to include those pharmaceuticals listed in Appendix A of the NIOSH Hazardous Drug Alert.[5]

h. Guidelines for Re-Evaluating the Hazardous Waste Generation Status of the Military Treatment Facility

1) Assignment of Personnel. The Hazardous Waste Manager or Environmental Program Manager is the appropriate person to oversee this function.

2) Current Hazardous Waste Generator Status. If the current hazardous waste generator status of the activity is that of a Large Quantity Generator (LQG), no further action is necessary. If the current hazardous waste generator status of the activity is that of a

[5] The NIOSH Hazardous Drug Alert can be accessed at http://www.cdc.gov/niosh/docs/2004-165/.

Small Quantity Generator (SQG) or a Conditionally Exempt Small Quantity Generator (CESQG), the recommendations of this guidance should be followed and any changes in generator status made accordingly. State designations of generator status may vary slightly and must be complied with accordingly.

3) Documentation of P-listed Waste Generation. All P-listed pharmaceutical wastes must be documented per calendar month if the activity is a SQG or CESQG. If the total quantity of P-listed wastes, including from areas other than pharmaceutical waste, exceeds 1 kg (2.2 lbs) for any calendar month, the activity must meet the requirements of a LQG for that month, which essentially requires re-notification to EPA of LQG status and compliance with LQG regulation requirements. Additional storage limits also apply but are not usually the determining factor with respect to hazardous pharmaceutical waste. Check with state and federal regulations to ensure that all requirements have been considered.

4) P-listed Waste Epinephrine. The most common areas in a MTF that generate P-listed pharmaceutical waste are the operating room suites (IV epinephrine for orthopedic and ophthalmic surgery), and the cardiac intensive care units (IV epinephrine for cardiac management). It is very difficult for a full service hospital to remain either a SQG or a CESQG due to the volumes of waste epinephrine generated. Since the containers are not "RCRA empty" unless they are triple rinsed,[6] all containers that have held epinephrine, except in a used syringe, must also be managed as P-listed hazardous waste.

5) P-listed Waste Nitroglycerin. Medicinal nitroglycerin has been excluded federally from hazardous waste status under revisions to the Mixture and Derived-From Rules.[7] Each state must adopt this revision before medicinal nitroglycerin is excluded as a P-listed waste in that state. Check with your state environmental protection agency for the status of this exclusion.

6) Updating Generator Status. If the MTF must update its generator status, a re-notification must be made to EPA using the forms available at http://www.epa.gov/epaoswer/hazwaste/data/form8700/forms.htm or to the state environmental protection agency. Check with the state environmental protection agency to determine the required procedure.

7) Modifying the Hazardous Waste Management Plan and EMS. If the activity is moving from a SQG or a CESQG to a LQG, extensive changes in the Hazardous Waste Management Plan and Environmental Management System must be made to ensure compliance.

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[6] RCRA Online # 13718
http://yosemite.epa.gov/osw/rcra nsf/0c994248c239947e85256d090071175f/1c1deb3648a62a868525670f006bccd2!OpenDocument

[7] Hazardous Waste Identification Rule (HWIR): Revisions to the Mixture and Derived-From Rules.
http://www.epa.gov/fedrgstr/EPA-WASTE/2001/May/Day-16/f11411.htm

TOOLS AND RESOURCES
(APPENDIX A)

a. Getting Started

- EPA Pharmaceutical Industry Sector Notebook: http://www.epa.gov/compliance/resources/publications/assistance/sectors/notebooks/pharmaceutical.html
- Cradle-to-Cradle Stewardship of Drugs for Minimizing Their Environmental Disposition While Promoting Human Health Parts 1 and 2: http://www.epa.gov/nerlesd1/chemistry/ppcp/images/green1.pdf and http://epa.gov/nerlesd1/chemistry/ppcp/images/green2.pdf
- USEPA Region 2 Guidance on Healthcare Hazardous Wastes, including pharmaceuticals: http://www.epa.gov/region2/healthcare

b. Understanding and Applying the Regulations

General

- The RCRA Orientation Manual: http://www.epa.gov/epaoswer/general/orientat/
- RCRA hazardous waste regulations on e-CFR: http://ecfr.gpoaccess.gov

Hazardous Waste Identification

- RCRA Online # 13718: Epinephrine Residue In A Syringe Is Not P042 (December 1994): http://yosemite.epa.gov/osw/rcra.nsf/0c994248c239947e85256d090071175f/1c1deb3648a62a868525670f006bccd2!OpenDocument
- Nitroglycerin Exclusion 66 FR 27286 Hazardous Waste Identification Rule (HWIR): Revisions to the Mixture and Derived -From Rules can be accessed at: http://www.epa.gov/EPA-WASTE/2001/May/Day-16/f11411.htm

Chemotherapy Waste

- Recommendations for Chemotherapy Spill Response detailed in the OSHA Technical Manual C.5: http://www.osha.gov/dts/osta/otm/otm_vi/otm_vi_2.html#5
- Recommendations for Respirator Protection detailed in the OSHA Technical Manual B.6.c: http://www.osha.gov/dts/osta/otm/otm_vi/otm_vi_2.html#5
- Chemotherapy spills on carpet: http://www.des.nh.gov/nhppp/Healthcare_P2/default.asp?link=faq6
- The NIOSH Hazardous Drug Alert: http://www.cdc.gov/niosh/docs/2004-165/

Controlled Substances

- Controlled substance schedules: http://www.deadiversion.usdoj.gov/schedules/index.html
- The DEA Diversion website: http://www.deadiversion.usdoj.gov/new.htm
- The regulations applying to controlled substances, 21 CFR 1300 to 1399: http://www.deadiversion.usdoj.gov/21cfr/cfr/index.html

- The Pharmacist's Manual, a summary of the DEA disposal requirements: http://www.deadiversion.usdoj.gov/pubs/manuals/pharm2/index.htm/

Generator Status

- Small and large quantity generators must register with EPA for an Identification Number. Registration forms and instructions for small and large quantity generator identification numbers: http://www.epa.gov/epaoswer/hazwaste/data/form8700/forms.htm#waste

Drain Disposal

- Tri-TAC Memo to POTW Pretreatment Coordinators and Managers, September 23, 2003: http://www.ciwmb.ca.gov/WPIE/HealthCare/TriTACMemAtt.pdf

Aerosol Cans

- RCRA Online #11782: Regulatory Status Of Used Residential And Commercial/Industrial Aerosol Cans (October 1993): http://yosemite.epa.gov/osw/rcra.nsf/ea6e50dc6214725285256bf00063269d/0c95b3d30e33cdb68525670f006bece7!OpenDocument

c. Considering Best Management Practices for Non-Regulated Wastes

- The NIOSH Hazardous Drug Alert: http://www.cdc.gov/niosh/docs/2004-165/
- The Occupational Safety and Health Administration (OSHA) Technical Manual Section 6, Chapter 2, Appendix VI: 2: http://www.osha-slc.gov/dts/osta/otm/otm_vi/otm_vi_2.html
- The Toxicology Program's Report on Carcinogens (11th Edition): http://ntp.niehs.nih.gov/ntp/roc/toc11.html
- The full Precautionary Principle statement: http://www.gdrc.org/u-gov/precaution-3.html

d. Considering the Management Options

- The OSHA Hazardous Waste Operations and Emergency Response Standard: http://www.osha.gov/html/faq-hazwoper.html

e. Getting Ready for Implementation

Locating Your Satellite Accumulation Areas

- USEPA's Frequently Asked Questions about Satellite Accumulation Areas, March 17, 2004: http://www.epa.gov/osw/specials/labwaste/memo-saa.htm

Selecting the Right Vendor(s)

- Licensed hazardous waste transport, storage, and disposal facilities nationwide: http://www.epa.gov/enviro/html/rcris/rcris_query_java.html

Reverse Distribution

- RCRA Online # 11012 Applicability of 261.33 to Discarded Products: http://yosemite.epa.gov/osw/rcra.nsf/0c994248c239947e85256d090071175f/b630cd51dc85edc58525670f006bce84!OpenDocument

- RCRA Online # 11606 Returned Pharmaceutical Products: http://yosemite.epa.gov/osw/rcra.nsf/ea6e50dc6214725285256bf00063269d/a3a7a7a8f297438b8525670f006be5d8!OpenDocument

Pharmaceutical Waste Management Policies and Procedures

- Healthcare Guidance to Pollution Prevention Implementation through Environmental Management Systems can be accessed at: http://www.epa.gov/region2/ems

f. Launching the Program

Filling out the Forms

- Information about hazardous waste manifests: http://www.epa.gov/epaoswer/hazwaste/gener/manifest/.
- 40 CFR 173.24 contains general requirements for packaging and packages
- 40 CFR 173.24(a) for additional requirements for non-bulk packaging and packages.
- 49 CFR 173.12 (b)(2)(iii) has exceptions for shipments of waste materials
- Information on the 40 CFR Part 268 Land Disposal Restrictions: http://www.epa.gov/epaoswer/general/orientat/rom36.pdf.

OSHA TECHNICAL MANUAL APPENDIX VI: 2-1 SOME COMMON DRUGS THAT ARE CONSIDERED HAZARDOUS (APPENDIX B)

APPENDIX VI: 2-1. SOME COMMON DRUGS THAT ARE CONSIDERED HAZARDOUS.

Appendix VI:2-1 is not all-inclusive, should not be construed as complete, and represents an assessment of some, but not all, marketed drugs at a fixed point in time. Appendix VI:2-1 was developed through consultation with institutions that have assembled teams of pharmacists and other health care personnel to determine which drugs should be handled with caution. These teams reviewed product literature and drug information when considering each product.

Sources for this appendix are the "Physicians Desk Reference," Section 10:00 in the *American Hospital Formulary Service Drug Information*,[68] IARC publications (particularly Volume 50),[43] the Johns Hopkins Hospital, and the National Institutes of Health, Clinical Center Nursing Department. No attempt to include investigational drugs was made, but they should be prudently handled as hazardous drugs until adequate information becomes available to exclude them.

Any determination of the hazard status of a drug should be periodically reviewed and updated as new information becomes available. Importantly, new drugs should routinely undergo a hazard assessment.

CHEMICAL/GENERIC NAME	SOURCE*
ALTRETAMINE	C
AMINOGLUTETHIMIDE	A
AZATHIOPRINE	ACE
L-ASPARAGINASE	ABC
BLEOMYCIN	ABC
BUSULFAN	ABC
CARBOPLATIN	ABC
CARMUSTINE	ABC
CHLORAMBUCIL	ABCE
CHLORAMPHENICOL	E
CHLOROTIANISENE	B
CHLOROZOTOCIN	E
CYCLOSPORIN	E
CISPLATIN	ABCE
CYCLOPHOSPHAMIDE	ABCE
CYTARRABINE	ABC

DACARBAZINE	ABC
DACTINOMYCIN	ABC
DAUNORUBICIN	ABC
DIETHYLSTILBESTROL	BE
DOXORUBICIN	ABCE
ESTRADIOL	B
ESTRAMUSTINE	AB
ETHINYL ESTRADIOL	B
ETOPOSIDE	ABC
FLOXURIDINE	AC
FLUOROURACIL	ABC
FLUTAMIDE	BC
GANCICLOVIR	AD
HYDROXYUREA	ABC
IDARUBICIN	AC
IFOSFAMIDE	ABC
INTERFERON-A	BC
ISOTRETINOIN	D
LEUPROLIDE	BC
LEVAMISOLE	C
LOMUSTINE	ABCD
MECHLORETHAMINE	BC
MEDROXYPROGESTERONE	B
MEGESTROL	BC
MELPHALAN	ABCE
MERCAPTOPURINE	ABC
METHOTREXATE	ABC
MITOMYCIN	ABC
MITOTANE	ABC
MITOXANTRONE	ABC
NAFARELIN	C
PIPOBROMAN	C
PLICAMYCIN	BC
PROCARBAZINE	ABCE
RIBAVIRIN	D
STREPTOZOCIN	AC
TAMOXIFEN	BC
TESTOLACTONE	BC

THIOGUANINE	ABC
THIOTEPA	ABC
URACIL MUSTARD	ACE
VIDARABINE	D
VINBLASTINE	ABC
VINCRISTINE	ABC
ZIDOVUDINE	D

*** Sources**

A - The National Institutes of Health, Clinical Center Nursing Department
B - Antineoplastic drugs in the [italicize the following text name] Physicians' Desk Reference
C - American Hospital Formulary, Antineoplastics
D - Johns Hopkins Hospital
E - International Agency for Research on Cancer

NIOSH PUBLICATION NO. 2004-165: PREVENTING OCCUPATIONAL EXPOSURE TO ANTINEOPLASTIC AND OTHER HAZARDOUS DRUGS IN HEALTH CARE SETTINGS / APPENDIX A – DRUGS CONSIDERED HAZARDOUS

(APPENDIX C)

The listing below will be updated annually on this website.

Sample list of drugs that should be handled as hazardous*		
Drug	**Source**	**AHFS Pharmacologic-Therapeutic Classification**
Aldesleukin	4,5	10:00 Antineoplastic agents
Alemtuzumab	1,3,4,5	10:00 Antineoplastic agents
Alitretinoin	3,4,5	84:36 Miscellaneous skin and mucous membrane agents (Retinoid)
Altretamine	1,2,3,4,5	Not in AHFS (Antineoplastic agent)
Amsacrine	3,5	Not in AHFS (Antineoplastic agent)
Anastrozole	1,5	10:00 Antineoplastic agents
Arsenic trioxide	1,2,3,4,5	10:00 Antineoplastic agents
Asparaginase	1,2,3,4,5	10:00 Antineoplastic agents
Azacitidine	3,5	Not in AHFS (antineoplastic agent)
Azathioprine	2,3,5	92:00 Unclassified therapeutic agents (immunosuppressant)
Bacillus Calmette-Guerin	1,2,4	80:12 Vaccines
Bexarotene	2,3,4,5	10:00 Antineoplastic agents
Bicalutamide	1,5	10:00 Antineoplastic agents
Bleomycin	1,2,3,4,5	10:00 Antineoplastic agents
Busulfan	1,2,3,4,5	10:00 Antineoplastic agents
Capecitabine	1,2,3,4,5	10:00 Antineoplastic agents
Carboplatin	1,2,3,4,5	10:00 Antineoplastic agents
Carmustine	1,2,3,4,5	10:00 Antineoplastic agents
Cetrorelix acetate	5	92:00 Unclassified therapeutic agents (GnRH antagonist)
Chlorambucil	1,2,3,4,5	10:00 Antineoplastic agents
Chloramphenicol	1,5	8:12 Antibiotics
Choriogonadotropin alfa	5	68:18 Gonadotropins
Cidofovir	3,5	8:18 Antivirals
Cisplatin	1,2,3,4,5	10:00 Antineoplastic agents
Cladribine	1,2,3,4,5	10:00 Antineoplastic agents
Colchicine	5	92:00 Unclassified therapeutic agents (mitotic inhibitor)
Cyclophosphamide	1,2,3,4,5	10:00 Antineoplastic agents

Cytarabine	1,2,3,4,5	10:00 Antineoplastic agents
Cyclosporin	1	92:00 Immunosuppressive agents
Dacarbazine	1,2,3,4,5	10:00 Antineoplastic agents
Dactinomycin	1,2,3,4,5	10:00 Antineoplastic agents
Daunorubicin HCl	1,2,3,4,5	10:00 Antineoplastic agents
Denileukin	3,4,5	10:00 Antineoplastic agents
Dienestrol	5	68:16.04 Estrogens
Diethylstilbestrol	5	Not in AHFS (nonsteroidal synthetic estrogen)
Dinoprostone	5	76:00 Oxytocics
Docetaxel	1,2,3,4,5	10:00 Antineoplastic agents
Doxorubicin	1,2,3,4,5	10:00 Antineoplastic agents
Dutasteride	5	92:00 Unclassified therapeutic agents (5-alpha reductase inhibitor)
Epirubicin	1,2,3,4,5	10:00 Antineoplastic agents
Ergonovine/methylergonovine	5	76:00 Oxytocics
Estradiol	1,5	68:16.04 Estrogens
Estramustine phosphate sodium	1,2,3,4,5	10:00 Antineoplastic agents
Estrogen-progestin combinations	5	68:12 Contraceptives
Estrogens, conjugated	5	68:16.04 Estrogens
Estrogens, esterified	5	68:16.04 Estrogens
Estrone	5	68:16.04 Estrogens
Estropipate	5	68:16.04 Estrogens
Etoposide	1,2,3,4,5	10:00 Antineoplastic agents
Exemestane	1,5	10:00 Antineoplastic agents
Finasteride	1,3,5	92:00 Unclassified therapeutic Agents (5-alpha reductase inhibitor)
Floxuridine	1,2,3,4,5	10:00 Antineoplastic agents
Fludarabine	1,2,3,4,5	10:00 Antineoplastic agents
Fluorouracil	1,2,3,4,5	10:00 Antineoplastic agents
Fluoxymesterone	5	68:08 Androgens
Flutamide	1,2,5	10:00 Antineoplastic agents
Fulvestrant	5	10:00 Antineoplastic agents
Ganciclovir	1,2,3,4,5	8:18 Antiviral
Ganirelix acetate	5	92:00 Unclassified therapeutic agents (GnRH antagonist)
Gemcitabine	1,2,3,4,5	10:00 Antineoplastic agents
Gemtuzumab ozogamicin	1,3,4,5	10:00 Antineoplastic agents
Gonadotropin, chorionic	5	68:18 Gonadotropins
Goserelin	1,2,5	10:00 Antineoplastic agents
Hydroxyurea	1,2,3,4,5	10:00 Antineoplastic agents
Ibritumomab tiuxetan	3	10:00 Antineoplastic agents
Idarubicin	1,2,3,4,5	Not in AHFS (antineoplastic agent)
Ifosfamide	1,2,3,4,5	10:00 Antineoplastic agents

Imatinib mesylate	1,3,4,5	10:00 Antineoplastic agents
Interferon alfa-2a	1,2,4,5	10:00 Antineoplastic agents
Interferon alfa-2b	1,2,4,5	10:00 Antineoplastic agents
Interferon alfa-n1	1,5	10:00 Antineoplastic agents
Interferon alfa-n3	1,5	10:00 Antineoplastic agents
Irinotecan HCl	1,2,3,4,5	10:00 Antineoplastic agents
Leflunomide	3,5	92:00 Unclassified therapeutic agents (antineoplastic agent)
Letrozole	1,5	10:00 Antineoplastic agents
Leuprolide acetate	1,2,5	10:00 Antineoplastic agents
Lomustine	1,2,3,4,5	10:00 Antineoplastic agents
Mechlorethamine	1,2,3,4,5	10:00 Antineoplastic agents
Megestrol	1,5	10:00 Antineoplastic agents
Melphalan	1,2,3,4,5	10:00 Antineoplastic agents
Menotropins	5	68:18 Gonadotropins
Mercaptopurine	1,2,3,4,5	10:00 Antineoplastic agents
Methotrexate	1,2,3,4,5	10:00 Antineoplastic agents
Methyltestosterone	5	68:08 Androgens
Mifepristone	5	76:00 Oxytocics
Mitomycin	1,2,3,4,5	10:00 Antineoplastic agents
Mitotane	1,4,5	10:00 Antineoplastic agents
Mitoxantrone HCl	1,2,3,4,5	10:00 Antineoplastic agents
Mycophenolate mofetil	1,3,5	92:00 Immunosuppressive agents
Nafarelin	5	68:18 Gonadotropins
Nilutamide	1,5	10:00 Antineoplastic agents
Oxaliplatin	1,3,4,5	10:00 Antineoplastic agents
Oxytocin	5	76:00 Oxytocics
Paclitaxel	1,2,3,4,5	10:00 Antineoplastic agents
Pegaspargase	1,2,3,4,5	10:00 Antineoplastic agents
Pentamidine isethionate	1,2,3,5	8:40 Miscellaneous anti-infectives
Pentostatin	1,2,3,4,5	10:00 Antineoplastic agents
Perphosphamide	3,5	Not in AHFS (antineoplastic agent)
Pipobroman	3,5	Not in AHFS (antineoplastic agent)
Piritrexim isethionate	3,5	Not in AHFS (antineoplastic agent)
Plicamycin	1,2,3,5	Not in AHFS (antineoplastic agent)
Podoflilox	5	84:36 Miscellaneous skin and mucous membrane agents (mitotic inhibitor)
Podophyllum resin	5	84:36 Miscellaneous skin and mucousmembrane agents (mitotic inhibitor)
Prednimustine	3,5	Not in AHFS (antineoplastic agent)
Procarbazine	1,2,3,4,5	10:00 Antineoplastic agents
Progesterone	5	68:32 Progestins
Progestins	5	68:12 Contraceptives
Raloxifene	5	68:16.12 Estrogen agonists-antagonists

Raltitrexed	5	Not in AHFS (antineoplastic agent)
Ribavirin	1,2,5	8:18 Antiviral
Streptozocin	1,2,3,4,5	10:00 Antineoplastic agents
Tacrolimus	1,5	92:00 Unclassified therapeutic agents (immunosuppressant)
Tamoxifen	1,2,5	10:00 Antineoplastic agents
Temozolomide	3,4,5	10:00 Antineoplastic agents
Teniposide	1,2,3,4,5	10:00 Antineoplastic agents
Testolactone	1,2,3,4,5	10:00 Antineoplastic agents
Testosterone	5	68:08 Androgens
Thalidomide	1,3,5	92:00 Unclassified therapeutic agents (immunomodulator)
Thioguanine	1,2,3,4,5	10:00 Antineoplastic agents
Thiotepa	1,2,3,4,5	10:00 Antineoplastic agents
Topotecan	1,2,3,4,5	10:00 Antineoplastic agents
Toremifene citrate	1,5	10:00 Antineoplastic agents
Tositumomab	3,5	Not in AHFS (antineoplastic agent)
Tretinoin	1,2,3,5	84:16 Cell stimulants and proliferants (retinoid)
Trifluridine	1,2,5	52:04.06 antivirals
Trimetrexate glucuronate	5	8:40 Miscellaneous anti-infectives (folate antagonist)
Triptorelin	5	10:00 Antineoplastic agents
Uracil mustard	3,5	Not in AHFS (antineoplastic agent)
Valganciclovir	1,3,5	8:18 Antiviral
Valrubicin	1,2,3,5	10:00 Antineoplastic agents
Vidarabine	1,2,5	52:04.06 Antivirals
Vinblastine sulfate	1,2,3,4,5	10:00 Antineoplastic agents
Vincristine sulfate	1,2,3,4,5	10:00 Antineoplastic agents
Vindesine	1,5	Not in AHFS (antineoplastic agent)
Vinorelbine tartrate	1,2,3,4,5	10:00 Antineoplastic agents
Zidovudine	1,2,5	8:18:08 Antiretroviral agents

ANNEX A

GLOSSARY OF ENVIRONMENTAL TERMS

Annex A

Glossary of Environmental Terms

Acids: A class of compounds whose water solutions produce hydrogen ions (H+). Acids are referred to as strong or weak according to the amount of hydrogen ions produced. The pH range of acids is from weak (6.9) to strong (1), where water is considered neutral with a pH of 7.0.

Acute Hazards: Hazards associated with short-term exposure to relatively large amounts of toxic substances or to a highly dangerous substance.

Alkaline (caustic): Having the properties of a base, a pH greater than 7.1.

Aqueous: Refers to a water-based or liquid substance.

Arsenic: A highly poisonous substance (metal), used in insecticides, weed killers and applied in treated woods.

Asbestos: A fibrous substance used mainly for insulation and as a fire retardant material in ships and building construction industries.

Base : A class of compounds whose water solutions produce hydroxyl ions (OH^-). The strength of a base is expressed by pH. The pH range of basic solutions is from 7.1 to 14.

Berm: A curb, ledge, wall or mound of various materials used to prevent the spread of contaminants.

Bioaccumulation: The process by which the concentrations of some toxic chemicals gradually increase in living tissue.

Boring: A vertical hole drilled into the ground or other substance from which samples can be collected and analyzed to determine the presence of chemicals substances.

California Integrated Waste Management Board (CIWMB): The regulatory agency included within Cal-EPA that has compliance oversight of non-hazardous solid waste issues.

Caustic: A strongly alkaline material, which has a corrosive or irritating effect on living tissue. As an adjective, it refers to any compound similar to sodium hydroxide.

Chemically Treated Woods: Woods used for various applications that have been coated with chemicals to retard deterioration. Many such types of these woods are used in the construction of munitions and ordnance crates or boxes. These items can be identified by the green or bluish color tint with pressure indentations.

Chromated Copper Arsenate: An insecticide and herbicide containing three metals: copper, chromium and arsenic. This is used extensively as a wood preservative in pressure-treating operations. It is highly toxic and dissolves in water, making it a relatively mobile contaminant in the environment.

Chronic Exposure: Repeated contact with a chemical over a long period of time, often involving small amounts of toxic substance.

Class III Landfill: A waste management treatment unit designed with a liner and leachate collection system and permitted to accept only non-hazardous wastes.

Combustible Vapor: The concentration range over which air containing vapor of an organic compound will burn or even explode when set off by a flame or spark.

Compatibility: Ability of two or more substance to remain chemically or physically stable when stored or mixed together.

Consent Decree: A legal document, approved and issued by a judge, formalizing an agreement between DTSC and the parties potentially responsible for site contamination or non-compliance violations. The decree describes cleanup and other actions that the potentially responsible parties are required to perform and the costs incurred by the government that they will reimburse, together with the roles, responsibilities and enforcement options that the government may exercise in the event of non-compliance.

Container: Any device that is open or closed and is portable which a material stored, handled, transported or disposed of.

Containment: Enclosing or containing hazardous substances in a structure to prevent the migration of contaminants into the environment.

Corrosivity: A characteristic of acidic and basic hazardous wastes. The characteristic is defined by a waste's pH and its ability to corrode steel. A waste is corrosive if it has a pH less than or equal to 2.0 or greater than or equal to 12.5.

Cradle to Grave: A phrase used to describe the entire cycle of hazardous waste management activities, from the initial hazardous waste generation to final disposal.

Creosotes: Chemicals used in wood preserving operations that are produced by distilling coal tar. Creosotes contain polycyclic aromatic hydrocarbons and polynuclear aromatic hydrocarbons.

Cyanide: A highly toxic chemical often used in metal finishing or in extraction of precious metal from ore, or in pest control. A compound containing the CN group, for example, potassium cyanide, KCN; calcium cyanide, $Ca(CN)_2$; and hydrocyanic (or prussic) acid, HCN.

Degrease: To remove grease from machinery, tools, etc., usually using solvents.

De minimis Risk: A level of risk that the scientific and regulatory community asserts is too insignificant to regulate.

Department of Toxic Substances Control (DTSC): A department within the California Environmental Protection Agency charged with the regulation of hazardous waste from generation to final disposal.

Dioxins: A group of generally toxic organic compounds that may be formed as a result of incomplete combustion (as may occur in incineration of compounds containing chlorine). They are rapidly absorbed through the skin and gastrointestinal tract and are listed as cancer-causing chemicals

Discharge: The accidental or intentional spilling, leaking, pumping, emitting or emptying a hazardous waste into the environment.

Disposal: Means the discharge, deposit, spilling, leaking, pumping, emitting or emptying a hazardous waste, or any constituent thereof into the environment.

Down gradient: The direction in which groundwater flows.

Effluent: Wastewater, treated or untreated, that flows out of a treatment plant, sewer or industrial outfall.

Emulsifiers: Substances that help in mixing liquids that don't normally mix; e.g., oil and water.

Flammables: A class of compounds that ignite easily and burn rapidly.

Flash Point: The lowest temperature at which a liquid generates enough vapor to ignite in air. If a waste has a flash point of less than 140° F, then it is an ignitable hazardous waste.

Free Liquids: Any liquid, which readily separates from the solid portion of a waste under ambient temperature and pressure.

Generator: The producer or person by site whose act, process or operation first causes a hazardous waste to be subject to regulation.

Halogens: The group of elements that includes fluorine, chlorine, bromine and iodine. They are also commonly used in cleaning solvents and insecticides. Many hazardous organic chemicals -- such as polychlorinated biphenyls (PCBs), some volatile compounds (VOCs) and dioxins contain halogens, especially chlorine.

Hazardous Waste: Waste substances that can pose a substantial or potential hazard to human health or the environment when improperly managed. Hazardous waste possesses at least one of these four characteristics: ignitability, corrosivity, reactivity or toxicity; or appears on specific Federal and/ or California lists.

Hazardous Material Business Plan (HMBP): The document which identifies the organized plan and coordinated course of action to be followed for a fire, explosion or release of hazardous waste or hazardous waste constituents into the environment.

Heavy Metals: A group of elements (such as arsenic, chromium, lead, copper and zinc) that can be toxic at relatively low concentrations.

Ignitability: A characteristic of hazardous waste. If a liquid (containing less than 24% alcohol) has a flash point less than 140° F, it is a hazardous waste.

Incompatible Wastes: Wastes that create a hazard of some form when mixed together. This could be intense heat or toxic gases, for example.

Irritant: A chemical or substance that can cause temporary irritation at the site of contact.

Landscaping Materials: Woods coated or treated with any chemical substance used for decorative or landscaping purposes, such as tree support stakes, planters and pilings. These woods are normally non-dimensional types of lumber. Greenish or golden in color may indicate that the woods are hazardous waste. Review Appendix D for specific types of wood applications.

Leachate: The liquid produced when water percolates through any permeable material. It can contain either dissolved or suspended material, or usually both. It is most commonly encountered in connection with landfills where it is produced as a result of rain percolating through the waste and reacting with the products of decomposition, chemicals and other materials in the waste.

Manifest: A shipping document for the transportation of hazardous waste over public roads.

Milligram per Kilogram (mg/kg): A unit of concentration for a solid. (A kilogram is 1,000 grams or approximately 2.2 pounds). Also equals one part per million for a solid.

On-Site: Refers to the same or geographical contiguous property.

Over-Packing: Process used to prevent further spread or leakage of contaminating materials from leaking containers, prior to removal and final disposal.

Oxidizers: A group of chemicals (peroxides, chlorates, nitrates, and permanganates) that are very reactive, spontaneously evolving oxygen. Some oxidation reactions can release large amounts of heat and gases, and, under the right conditions, cause an explosion. Others can cause rapid corrosion of metal, damage to tissue, burns and other serious effects

Parts per million (ppm): A measuring unit for the concentration of one material in another. When looking at contamination of water and soil, the toxins are often measured in parts per million. One part per million would be equivalent to one drop of water in twenty gallons.

Perchlorate: A white or colorless powder that can dissolve easily in water. Many industries use perchlorate to make products such as explosives and solid rocket fuel.

Pesticide: A general term for insecticides, herbicides and fungicides. Insecticides kill or prevent the growth of insects. Herbicides control or destroy plants. Fungicides control or destroy fungi.

Pier Pilings: These consist of timbers, stabilizing supports or other wooden materials that are contaminated or coated with cresols used in conjunction or associated with the construction of piers or wharfs.

pH: The method used in describing the strength of an acidic or basic aqueous solution. The values range from 0 to 14, with a pH of 7 corresponding to neutral. As the pH number becomes smaller by one unit, the acidity increases by a factor of 10 (for 2 units, it changes by 100, and so on). Likewise, as the pH number increases by one unit, the alkalinity (basic property) increases by a factor of 10, etc.; tap water may lie in a region from above 6 to below 8. Strongly acidic waste solutions (pH less than 2) and strongly basic ones (pH greater than 12.5) are defined as hazardous wastes

Plume: A body of contaminated groundwater flowing from a specific source. Specifically, the movement of the groundwater is influenced by such factors as local groundwater flow patterns, the character of the aquifer in which the groundwater is contained, and the density of contaminants.

Polychlorinated biphenyls (PCBs): A group of toxic chemicals, mainly oils, used for a variety of purposes including electrical applications, and transformers.

Polyvinyl chloride (PVC): A plastic made from the gaseous chemical vinyl chloride. PVC is used to make pipes, records, raincoats and floor titles. It produces hydrochloric acid when burned.

Potentially Responsible Party (PRP): An individual, company or government body identified as potentially liable for a release of hazardous substances to the environment. By federal law, such parties may include generators, transporters and storage facilities of hazardous waste, as well as present and past site owners and operators.

Pressure Treated Wood: Wood used in standard construction that contain preservative chemicals, normally arsenic, infused or impregnated into the wood. This type of wood can be identified by the short pressure slits over the entire surface and either green or yellow in color. Note: Pressure treated woods which have had long-term exposure to the elements are brown or gray in color. These woods for the most part have leached their hazardous substances and are not classified as hazardous waste.

Railroad Ties: Dimensional timbers containing cresol or other preservative chemicals, normally 6”x 6” or larger, and associated with rail lines or used in other applications such as landscaping boxes, traffic barricades, retaining walls, or building materials.

Reactive: A class of compounds which are normally unstable and readily undergo violent change, react violently with water, can produce toxic gases with water, or possess other similar properties. Reactivity is one characteristic that can make a waste hazardous.

Recyclable Material: Is any hazardous waste that is capable of being recycled. Includes residues and retrograde materials.

Regional Water Quality Control Board (RWQCB): Agencies that maintain water quality standards for areas within their jurisdictions and enforce state water quality laws.

Responsible Party: An individual or corporate entity considered legally liable for contamination found at a property or in violation of environmental requirements, and therefore is responsible for cleanup of the site, payment fees, fines and penalties or other required corrective actions.

Representative Sample: Refers to a sample of the whole or complete waste, which is expected to exhibit the overall waste property.

Retrograde Material: Is any hazardous material that will not to be used, sold, or distributed for its original intended use or application.

Secondary Containment: A structure designed to capture spills or leaks, as from a container or tank. For containers and aboveground tanks, it is usually a bermed area of coated concrete. The construction of such containment must meet certain requirements, and periodic inspections are required.

Seismic Stability: The likelihood that soils will stay in place during an earthquake.

Solidification: Mixing additives, such as fly ash or cement, with soil containing hazardous chemicals, especially metals, to make it more stable.

Soluble Threshold Limit Concentration (STLC): The limit concentration for toxic materials in a sample that has been subjected to the California Waste Extraction Test (WET), for the toxicity characteristic that is designed to subject a waste sample to simulated conditions of a municipal waste landfill. If the concentration of a toxic substance in the special extract of the waste exceeds this value, the waste is classified as hazardous in California. This is distinct from the Total Threshold Limit Concentration (TTLC). The California Waste Extraction Test procedure is more stringent than the federal Toxicity Characteristic Leaching Procedure (TCLP).

Solvent: A liquid capable of dissolving another substance to form a solution. Water is sometimes called “the universal solvent” because it dissolves so many things, although often to only a very small extent. Organic solvents are used in paints, varnishes, lacquers, industrial cleaners and printing inks.

Sump: A pit or reservoir designed to catch and contain liquids for drainage or disposal. Sumps, which accumulate and store hazardous waste or substances are classified as tanks and must be managed accordingly. Any sump that is designed as emergency containment and kept empty and dry before and after specific incidents are exempt from this requirement.

Tank: Is any stationary or non-portable storage unit constructed of non-earthen material that provides structural support and is designed to accumulate, transfer or treat hazardous waste.

Toxic Substances Control Act (TSCA): A federal law of 1976 to regulate chemical substances or mixtures that may present an unreasonable risk of injury to health or the environment.

Toxicity: Ability to harm human health or environment, such as injury, death or cancer. One of the criteria that is used to determine whether a waste is a hazardous waste.

Toxicity Characteristic Leaching Procedure (TCLP): A federal test for the Toxicity Characteristic (TC). If the concentration of a toxic substance in a special extract of a waste exceeds the TC value, the waste is classified as hazardous in the United States (a "RCRA waste"). The extraction procedure is different from that of the California Waste Extraction Test (WET).

TPH: Total Petroleum Hydrocarbons as found in contaminated soils.

TRPH: Total Recoverable Petroleum Hydrocarbons as found in contaminated soils.

Total Threshold Limit Concentration (TTLC): A test for the toxicity characteristic: If the total concentration of a soluble, extractable or persistent toxic substance in a waste is greater than the specified level, the waste is classified as hazardous in California.

Treatment: Means any method or process which changes, removes, reduces any physical or chemical property or composition of a hazardous waste or hazardous consistent.

Used Tire: Is a tire that is no longer mounted on a vehicle but is still suitable for use.

Utility Pole: Standardized telephone poles or cross supports coated with cresol type materials employed as parking bumpers, landscaping or used in normal applications.

Viscosity: A measure of the ease with which a liquid can be poured or stirred. The higher the viscosity, the less easily a liquid pours.

Waste Tire: Means a tire that is no longer mounted on a vehicle and is no longer suitable for use as a vehicle tire due to wear, or damage.

Waste Tire Hauler: Means a person engaged in the transportation of 10 or more waste tires, who has in their possession a Hauler Decal affixed to the lower right-hand corner of the vehicle's windshield and is registered as a tire hauler with the CIWMB.

Work Plan: The site work plan describes the technical activities to be conducted during the various phases of a remediation project or the steps taken to return to compliance.