U.S. Department of Transportation United States Coast Guard

Commandant (G-ECV) United States Coast Guard MAILING ADDRESS: Washington, DC 20593-0001 (202) 267-1907

COMDTINST M16455.10

### COMMANDANT INSTRUCTION M16455.10

- Subj: THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA), AND POLLUTION PREVENTION (P2)
- Ref: (a) Executive Order 12856 "Federal Compliance with Right-To-Know Laws And Pollution Prevention Requirements" (NOTAL)
  - (b) COMDTINST 6260.21B, Hazard Communication (HAZCOM) for Workplace Materials
  - (c) COMDTINST M16478.1B, Hazardous Waste Management Manual
  - (d) COMDTINST M4200.13D, Small Purchase Manual
- 1. <u>PURPOSE</u>. This instruction prescribes policies and procedures for compliance with the Emergency Planning and Community Right-To-Know Act (EPCRA); and it reinforces the concept of Pollution Prevention (P2) as our primary strategy to comply with EPCRA and all environmental regulations. This instruction is intended for all ships and shore activities that store or use hazardous materials.
- <u>ACTION</u>. Area and district commanders, commanders of maintenance and logistics commands, commanding officers of headquarters units, Commander, Coast Guard Activities Europe, and Commander, Coast Guard Activities Far East shall ensure compliance with the provisions of this instruction.
- 3. <u>DIRECTIVES AFFECTED</u>. This is a new Instruction. It builds on requirements already established in references (b), (c), and (d).
- 4. DISCUSSION.
  - a. Executive Order Number 12856 (the Eo) requires all federal agencies to comply with the planning and reporting provisions of the Emergency Planning and Community Right-To-Know Act (EPCRA) and the Pollution Prevention Act (PPA). Further, the EO requires all agencies to implement policies and practices which emphasize pollution prevention (P2) in how they achieve compliance with EPCRA, and all other environmental regulations.

#### 4. DISCUSSION cont'd

- b. To put requirements in perspective, the existing HAZCOM program, reference (b), requires that units maintain an inventory listing of "what" hazardous material is being used. EPCRA adds the requirement to track "how much" hazardous material is being used; and P2 requires that we "reduce" the amount of hazardous material that is being used.
- c. This instruction identifies the minimum requirements necessary for compliance with EPCRA. It establishes hazardous materials management and procurement controls as the initial and most fundamental Coast Guard P2 requirements, and it establishes the mechanism to measure the success of our P2 efforts.
- d. Chapter 1 of this instruction provides additional background material and an overview of new requirements. It provides an implementation strategy and a summary of deadline/report dates. It also includes a glossary of terms. Glossary terms have been italicized throughout this instruction. The remaining Chapters provide detailed guidance for units to comply with EPCRA/P2 requirements.

#### 5. SCOPE.

- This instruction in its entirety applies to all Coast Guard operational and support units that use or store hazardous materials; with several noted exceptions. The exceptions are:
  - Coast Guard units that have strictly administrative functions are exempt from all requirements of this instruction (e.g. Marine Safety Offices, Recruiting Offices, etc).
  - (2) Coast Guard units that are outside the customs territories of the United States, shall comply with the P2 requirements of this instruction (Chapters 2-4), but are exempt from the EPCRA planning and reporting requirements (Chapter 5).
  - (3) Coast Guard units and subunits below the Group level shall comply with EPCRA planning and reporting requirements (Chapter 5), but the P2 requirements (Chapters 2-4) are only required at the discretion of the Group Commander.

# 6. POLICY.

- a. The Coast Guard will use **P2 strategies** to reduce the amount and toxicity of all hazardous materials it stores and uses. We will measure the success of these efforts using the *CG Pollution Prevention Scoring System (P2S2)*. Special emphasis will be placed on reducing the use and storage of *Extremely Hazardous Substances and Toxic Chemicals* as defined by EPCRA 302 and 313.
- b. The Coast Guard will strive to meet EPCRA reporting requirements that individual states may have in addition to federal requirements. In cases where state requirements conflict with the guidance contained in this instruction, units shall consult with their servicing CEU and MLC for guidance, or COMDT(G-ECV-1) in the case of headquarters units.

#### 7. REQUIREMENTS.

a. Commanding Officers of Coast Guard operational and support units that use or store hazardous materials (Group and above) shall: 2

#### 7. REQUIREMENTS. cont'd.

- (1) Appoint in writing a unit Pollution Prevention Coordinator (PPC), to coordinate the provisions of this instruction. The provisions of this instruction are closely linked and overlap the existing duties now performed by the unit Environmental Coordinator and Hazardous Waste/Materials Coordinator. The requirements in these program areas may be streamlined into one role, namely the PPC, at the discretion of the unit Commanding Officer.
- (2) Implement and maintain a Hazardous Materials Management System (HMMS). HMMS facilitates compliance with EPCRA requirements, serves as the baseline to evaluate P2 opportunities, and provides the data to measure the success of P2 efforts.
- (3) Implement and maintain strict procurement controls for the purchase of hazardous materials. As much as 50% of all hazardous wastes that the Coast Guard generates is the result of overstock items. A Statement of Essential Need shall accompany all procurement requests for hazardous materials.
- (4) Annually prepare the P2S2 Report (RCN 16455-1).
- (5) In the case of a tenant command, coordinate with the host command at the *facility* to comply with the *facility's* regulatory planning and reporting requirements under EPCRA.
- (6) In the case of a host command or all independently located unit, make EPCRA notifications and submit reports to local and state government agencies as required.
- (7) Develop a strategy for implementation of this instruction. The strategy shall include designation of an EPCRA/P2 Implementation Team.
- (8) Develop and implement a unit level Pollution Prevention instruction. (Optional). Implementation Team.
- b. Group Commanders shall specify EPCRA/P2 program requirements for subordinate units and subunits that store and use hazardous materials. At a minimum, units and subunits shall:
  - In the case of a tenant command, coordinate with the host command at the *facility* to comply with the *facility's* regulatory planning and reporting requirements under EPCRA.
  - (2) In the case of a host command or all independently located unit, make EPCRA notifications and submit reports to local and state government agencies as required.
- c. Commanding Officers of Civil Engineering Units shall:
  - (1) Provide technical and administrative **assistance** to units within their AOR to meet the notification and reporting requirements under EPCRA.
  - (2) Maintain a database of units within their AOR; identify which units are the host command, which arc tenant units supported by the host, and what, if any, sections of EPCRA apply to each.

- 7. REQUIREMENTS. cont'd.
  - d. Commanders of Maintenance and Logistics Commands shall:
    - Implement field level EPCRA/P2 training programs as developed by COMDT(G-ECV-1).
    - (2) Provide technical and administrative **assistance** to units in their AOR for obtaining *MSDSs* and identifying hazardous materials that contain *EHSs* and *toxic chemicals*.
  - e. Commandant, Civil Engineering Division shall:
    - (1) Designate by position an EPCRA/P2 Program Manager.
    - (2) Provide technical and administrative **assistance** directly to Headquarters units.
    - (3) Monitor overall compliance with EPCRA and this instruction.
    - (4) Request Coast Guard **R&D** efforts to identify and evaluate alternative products and technologies.
    - (5) Maintain a current listing, and publish a listing of Extremely Hazardous Substances (EHSs) and Toxic Chemicals relative to EPCRA 302 and 313 compliance, as changes occur.
    - (6) Annually **publish** and distribute to all Coast Guard units, a statistical summary of Coast Guard P2S2 results.
    - (7) Provide technical assistance to those units that specifically meet EPCRA 313 reporting requirements including: identifying and applying uniform standards of estimating releases for preparation of TRI Form R reports; coordination of TRI Form R annual submissions, and preparing Facility P2 Plans.
    - (8) Prepare and submit annual EPCRA/P2 **progress reports** to the EPA, as required by Executive Order 12856.
    - (9) Develop a field level EPCRA/P2 training program.
- 8. FORMS/REPORTS.
  - (1) The Hazardous Materials Management System (HMMS forms in Chapter 2 of this instruction were created for illustration purposes. Units have the option of adapting the HMMS forms to meet local needs/software systems. Units that choose to use the forms provided in the instruction may reproduce them locally.
  - (2) The P2S2 Report (RCN 16455-1) shall be reproduced locally from Chapter 3 of this instruction. Reports are due annually on 15 February for the previous calendar year. The first report is due 15 February 1995 for the period 10/1/94 to 12/31/94. Provide an information copy to your servicing MLC and CEU.

- 8. FORMS/REPORTS. cont'd.
  - (3) Regulatory reporting under EPCRA 30Z, 303, 304, 311, and 312 requires letter correspondence or completion of specified forms submitted directly to state and local agencies, as discussed in Chapter 5 of this instruction. Only the host command at a CG facility prepares and submits these types of correspondence, and only as needed. Host commands may acquire forms by calling their state EPCRA office. See Appendix 3 for a state-by-state listing of contacts. Units shall provide an information copy of such correspondence to their servicing CEU and MLC, or directly to COMDT(G-ECV-1) in the case of a Headquarters unit. Reporting deadlines vary, and are summarized in the Chapter 1 of this instruction.
  - (4) COMDT (G-ECV-1) will correspond directly with units that potentialy meet EPCRA 313 reporting thresholds. Units will not report under EPCRA 313 unless specifically directed by COMDT (G-ECV-1).

/s/ P. A. Bunch Chief, Office of Engineering, Logistics and Development.

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  (4) Tier II Form and Instructions

### CHAPTER 1. Introduction to EPCRA/P2

#### A. Background.

- 1. Executive Order. On August 3, 1993, President Clinton signed Executive Order Number 12856 requiring all federal agencies to comply with the planning and reporting provisions of the Emergency Planning and Community Right-To-Know Act (EPCRA) and the Pollution Prevention Act (PPA). The goal of the EO is for federal agencies to set the example for pollution prevention (P2) leadership in this country. The EO requires all federal agencies to employ the principles of pollution prevention as the primary approach for ensuring compliance with all federal, state and local environmental laws, regulations and requirements. This means that Coast the Guard must put policies and practices in place which emphasize P2 as the alternative of "first choice" in how we achieve compliance with new regulations and requirements, ensure compliance with existing regulations and requirements, and return to compliance when violations are identified.
- 2. Policy Statement. The "Commandant's Environmental Policy Statement" is aligned with the philosophy of the President as expressed in the EO. The Coast Guard exists to perform its assigned operational missions, and those missions must be executed in the most environmentally sound and safest manner possible. P2 is the means to accomplish our environmental goals.
- 3. HAZCOM/EPCRA/P2. The key to understanding how EPCRA fits into the larger picture of environmental management begins with the Coast Guard's Hazard Communication (HAZCOM) Program, reference (b). The CG HAZCOM Program requires us to maintain an inventory listing of the hazardous materials we use; it requires that we know "what" hazardous materials we are using and how to use them safely. EPCRA requires that we also know "how much" of these hazardous materials we are using of our environmental development, applying pollution prevention will allow us to "reduce" the amount of hazardous materials that we use. The key to effective environmental management requires that we measure the amounts and types of hazardous materials that enter our processes.
- 4. Total Quality Management. By employing the principles of TOM into our P2 strategy, product by product, process by process, we will achieve incremental improvements that will minimize our consumption, fugitive emissions, and waste generation of hazardous materials. P2 will improve the quality of our services and lower the operating costs (dollars and workload) of our organization.
- 5. Integration. This instruction describes how the Coast Guard will integrate compliance with the EO into the organizational and procedural framework of environmental management, and guide us toward achieving our P2 goals. This instruction has been constructed in the format of a Coast Guard Manual to facilitate future changes and additions. It has been constructed to accommodate headquarters efforts to consolidate all environmental compliance directives into a single Coast Guard Pollution Prevention (P2) Manual.

- 6. Administration. Administration of EPCRA/P2 level cannot be achieved until there is standardization of hazardous materials tracking and reporting procedures throughout the Coast Guard. This instruction is a first step toward that standardization. The requirements set forth in the instruction however are not to be construed so rigidly as to preclude individual unit ingenuity. Comments for improvement to this instruction are welcome, and should be addressed to COMDT (G-ECV-1).
- 7. Training. Because of the aggressive implementation schedule specified in the Executive Order, there has not been enough time to develop and implement formal training programs. This instruction addresses short-term training requirements by incorporating enough information for the majority of Coast Guard units to comply with EPCRA/P2 requirements (e.g. interpetive guidance, chemical lists, sample illustrations, and other pertinent information have been included in the text or in Appendices). In addition, an EPCRA training film will be issued to all units that have potential EPCRA reporting requirements. Also, a "sample" of completed HMMS/P2S2 form(s) for a "typical" unit will be distributed to further illustrate the requirements of this instruction. The training film and the sample illustration will be issued in a separate COMDTNOTE.
- 8. Internal Guidance. This is internal guidance for Coast Guard personnel and is solely intended to promote efficiency and consistency in public service above and beyond the requirements of law or regulation. Any obligations discussed, flow only to the Coast Guard and Coast Guard personnel are expected to exercise broad discretion in performing the functions discussed. The Coast Guard retains the discretion to deviate from or change this guidance without notice. This document creates no duties, standard of care, or obligations to the public and should not be relied upon as a representation by the Coast Guard as to the manner of proper performance in any particular case.

#### B. Organization olrthe Instruction.

- General. EPCRA is a complicated regulation. It becomes even more confusing when you overlay these complex regulatory requirements on the Coast Guard organizational structure (e.g. there is no direct organizational link between host and tenant commands that comprise the facility). Chapter 1 provides general information, conceptual requirements and inter-relationships. The intent is to provide the user of the Instruction some insights to more effectively deal with the complexities.
- 2. Specific. The primary focus of the instruction is P2, the secondary purpose is to provide guidance for EPCRA compliance. Therefore the P2 Chapters precede the EPCRA Chapter as a matter of logical preference. The HMMS (Chapter 2) must be implemented first. It establishes the administrative foundation for the P2 program. Once the HMMS is built, the unit PPC then has a solid basis to control procurement (Chapter 3), and the records to measure success and prepare the P2S2 Report (Chapter 4). The EPCRA guidance (Chapter 5) is very detailed. For many facilities, it may be the only reference material (including the Appendices) needed to comply with the regulations.

### C. Overview of Requirements.

- 1. **Pollution Prevention Requirements.** The P2 requirements apply in a straightforward manner to all Coast Guard units (Group and above) that use hazardous materials. Each unit is responsible for implementing and maintaining their own HMMS and procurement controls, and generating their own P2S2 report. Refer to the respective P2 Chapters for further detailed discussion.
- 2. EPCRA Requirements. The EPCRA requirements do not apply in a straightforward manner to individual units (except in the case where the unit is independently located). Rather, the requirements apply if the CG facility meets the regulatory storage or use thresholds (hazardous materials stored and used by multiple units). Further, EPCRA is composed of several different Sections. The various sections have different activity thresholds, different exemptions, and different reports/planning requirements. It is not an easy exercise to determine if the EPCRA regulations apply specifically to your unit. It requires close coordination among the commands at a facility to determine if thresholds are met. The decision logic is shown in general terms in Figures 1-1 through 1-4.

### D. Implementation Strategy.

- Required/Discretionary. All Commanding Officers/Officers-in-Charge shall develop a strategy for implementation of this instruction. The strategy shall include designation of an EPCRA/P2 Implementation Team. The team shall consist of a representative from each command at the *facility*. The CO/OIC of the host command shall designate a lead official, to head the planning and implementing effort. The remaining subparagraghs are for illustration purposes, concepts may be adapted to meet local requirements.
- 2. Team Charter. The suggested "charter" for the team is:
  - a. Implement the HMMS/Procurement Controls at each unit;
  - b. Identify what hazardous materials are stored and used at the facility meet EPCRA reporting and planning thresholds.
  - c. Decide how future storage and use information will be communicated between the host and tenant commands, and institutionalize procedures to accomplish this.
  - d. Make initial EPCRA notifications to local agencies as required. institutionalize procedures to accomplish this.
- 3. Checklist. A suggested "checklist" for team activities includes:
  - a. **POAM.** Develop a Plan of Action and Milestones (POAM) that address various elements of the implementation requirements.

### Figure 1-1



1-4









# Figure 1-4



### b. HMMS.

Initiate a physical inventory of hazardous materials in stock, and establish an "Amnesty Period" to clear the decks of unnecessary overstocked items. Subscribe to and install the HMIS CD ROM system. (See R301604Z JUN94)

Update and re-issue the unit Hazardous Materials Inventory; and create Procurement Logs for each product as required. Insure copies of MSDSs are on file for each hazardous material on the Inventory.

## c. Procurement Control.

Create or update unit instructions to implement new procurements controls.

## d. EPCRA 302 and 303

Eliminate the use of *EHSs* OR specify maximum allowable "unit" storage quantities for products that contain *EHSs*. Determine if *facility* storage exceeds *TPQ* for an *EHS*, and make notifications to local agencies accordingly.

Institutionalize how the host and tenant will coordinate *facility* storage quantities of new products that may contain EHSs. Establish strict controls and evaluation criteria.

#### e. EPCRA 304

Amend unit SPCC, RCRA Contingency Plans, etc, to include required notifications in the event of an *RQ* release.

### f. EPCRA 311 and 312 $\,$

Determine all other products stored in "large volume" at the unit; this is relative, but select some arbitrary threshold to narrow down the number of products to review, e.g. 500 pounds or 50 gallons of a product. Of these "large volume" products does the facility exceed the 10,000 pound storage threshold. (Consider separately products containing EHSs).

Specify maximum storage quantities for those products where facility storage is close to regulatory threshold.

Make notifications to local agencies as required. Institutionalize how the host and tenant will annually coordinate the information required to submit Tier II reports.

### g. EPCRA 313

Consistent with CG P2 goals, appropriately record in the HMMS all products that contain *toxic chemicals*; and focus P2 efforts in minimizing their storage and use; cstablish independent QATs as appropriate to study speficic uses or processes.

Typically, CG facilities will not have *TRI* reporting requirements; those that may, will be targeted specifically by COMDT(G-ECV-1), to conduct further comprehensive review and analysis. Those that are contacted, should be aware that guidance regarding 313 may be somewhat complex and vague. It is highly recommended that facilities follow a strategy of determining all large volume uses of toxic chemicals, and then rank the uses of each chemical as follows: 313 "clearly does apply"; "might apply"; and "clearly does not apply". The job of tracking down definitive clarifications may be avoided, if counting all "clearly does apply" and the "might apply" uses, the chemical still does not meet threshold.

### h. Train Department Heads in Key Features

NFPA Hazard Identification System (Optional) Waste Codes (Optional) Need for the MSDS Statement of Essential Need/Procurement Control P2 Goals to reduce use and storage of EHSs and toxic chemicals

# E. Implementation Schedule.

- P2 Requirements. All P2 requirements set forth in this instruction shall be implemented by 1 October 1994. The first P2S2 Report is due 15 February 1995. This first report shall reflect only HMMS data for the time period from 1 October 1994 through 31 December 1994. Thereafter, P2S2 Reports shall reflect HMMS data for a full calendar year, and submitted by 15 February for the previous calendar year.
- EPCRA Requirements. The following is a summary of reporting deadlines specified in the Executive Order. Host commands shall prepare reports and meet reporting deadlines, as required (e.g. the *facility* meets reporting threshold).

EPCRA	Due Date	Requirements
304	1/1/94	Report <i>RQ</i> spills to <i>SERC, LEPC,</i> and the <i>NRC</i> . Written follow-up to <i>LEPC</i> and <i>SERC</i> . (Ref: ALCOAST 004/94)
313	1/1/94	Track <i>toxic chemical</i> use/release for CY94. Toxic Release Inventory Report ( <i>TRI</i> ) for CY94 is due 7/1/95. TRI reporting is limited to specific units designated by COMDT.
302	3/2/94	Facility notifies <i>LEPC</i> and <i>SERC</i> of <i>EHSs</i> in excess of <i>TPQ</i> . (Ref: ALCOAST 004/94)
303	8/2/94	Designate facility coordinator to interface with <i>LEPC</i> . Provide <i>LEPC</i> with data for their Emergency Response Plan. Applies only if host command reports under 02.
311	8/2/94	Submit Inventory to local Fire Depts., <i>LEPC</i> , and <i>SERC</i> for hazardous products that meet the threshold. This is a onetime reporting requirement.
312	3/1/95	First annual <i>Tier II</i> report submitted to <i>LEPC</i> and <i>SERC</i> for materials meeting the threshold.

#### F. Acronyms and Glossary of Terms.

- Customs Territories. Custom territories are defined as all territories and possessions of the United States except: the Virgin Islands, American Samoa, Wake Island, Midway Islands, Kingman Reef, Johnston Island, and the Island of Guam.
- 2. EPCRA. Emergency Planning and Community Right-To Know Act of 1986. On December 4, 1984, a cloud of methyl isocyanate gas escaped from a Union Carbide chemical plant in Bhopal, India. Exposure to this deadly gas resulted in more than 2,500 deaths, and tens of thousands of injuries, some permanently disabling. This "Bhopal Incident", coupled with a similar, but nonfatal, and less destructive chemical release in Institute, West Virginia prompted implementation of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). This legislation was implemented at the same time that CERCLA was being reauthorized. EPCRA was enacted under Title Ill of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and is often referred to as SARA Title III.
- 3. **EPCRA HOTLINE.** 1-800-535-0202. A service provided by the EPA to answer any technical or regulatory questions regarding EPCRA. They will also provide various EPA publications and forms upon request. Hours of operation are 8:30 AM to 7:30 PM Eastern time. Other points of contact for information include the EPA Regional Offices, LEPC, SERC, and local Fire Department.
- 4. **EHS.** Extremely Hazardous Substance. In the text of EPCRA 302, an EHS is any substance listed by the EPA in 40 CFR 355. This list gives focus to the SERCs and LEPCs in their emergency planning efforts.
- 5. **CERCLA.** Comprehensive Environmental Response, Compensation and Liability Act as amended. The Statute that regulates reporting the release of hazardous substances into the environment, the cleanup of Federal hazardous waste sites, and the cleanup of National Priority List (Superfund) sites.
- 6. Facility. A "facility" includes the host command and all tenant commands located within a geographic boundary (the traditional fenceline concept recognized by EPA). This means all buildings, equipment, structures and other stationary items which are located on a single site or contiguous or adjacent sites. EPCRA requirements regarding the storage and use of hazardous materials also applies to vessels and aircraft when they are on-site at their homeport/base facility. There shall be one "facility" report from the host command, not separate reporting by tenant commands.
- 7. **Hazard Category** under the OSHA standard, is any of the following: Immediate (acute) health hazard, including highly toxic, irritant, sensitizer, corrosive, and other hazardous chemicals that cause all adverse effect to a target organ, usually occuring rapidly as a result of short term exposure, and is of short duration;

Delayed (chronic) health hazard, including carcinogens and other hazardous chemicals that cause an adverse effect to a target organ, generally occuring as a result of long term exposure, and is of long duration. Fire hazard, including chemicals designated flammable, combustible, pyrophoric, and oxidizing;

Sudden release of pressure, including explosives and compressed gas; and

Reactive, including chemicals designated unstable reactive, organic peroxide, and water reactive.

- 8. **Hazardous Material**. Any substance that poses a physical or health hazard. Office supplies and common consumer products for housekeeping or janitoriol uses are exempt from the CG HAZCOM program, and the EPCRA/P2 program. Otherwise, for purposes of this COMDT instruction, if a product is required to have a Material Safety Data Sheet (MSDS) under the OSHA standard, it shall be considered a hazardous material.
- 9. HMIS. Hazardous Materials Information System. More than 60,000 MSDSs are available through the DOD's Defense Logistics Agency HMIS, available on CD ROM. Units not having access to the DOD HMIS hardware may contact their respective MLC(k) to obtain HMIS MSDSs, or units may pursue installation of the HMIS hardware by submitting a request to MLC(k). Special notes about HMIS MSDSs related to EPCRA:

In the "ingredients" field, the MSDS may have the following notation "SARA III". This designation means the product contains an *EHS*, or it contains a *toxic chemical*. If so noted, the unit should contact the vendor or manufacturer, obtain the published version of the MSDS, and then make the *EHS/toxic chemical determination*. If there is no "SARA III" notation, it may be assumed the product contains no *EHSs or toxic chemicals*.

The MSDS may have a Hazard Identification Rating listed. This rating system is similar to the NFPA Hazard Identification Rating System, and may be entered into appropriate HMMS logs.

10. **MSDS.** Material Data Safety Sheet. The OSHA Standard requires manufactures and suppliers to prepare MSDSs that convey various physical data and safety information about the products or chemicals they market. In addition, suppliers have a regulatory obligation to make notification if the product contains *EHSs or toxic chemicals*. If such information is not on the MSDS or provided by some other means, it may be assumed the product does not contain these chemicals. If the product contains *EHSs or toxic chemicals*, the following information must be provided by the supplier:

A statement that the mixture or trade name product contains a toxic chemical or chemicals subject to the reporting requirements of EPCRA.

The name of each toxic chemical and the associated Chemical Abstracts Service (CAS) registry number of each chemical as applicable.

The percentage, by weight, of each toxic chemical conrailled in the mixture or trade name product.

11. LEPC. Local Emergency Planning Committee. The LEPCs are the local government planning and preparedness component of EPCRA. In many States, LEPCs have been established at the County level of government. The LEPC is broadly representative of the community and includes members from each of five constituent groups: elected officials; law enforcement/civil defense/firefighters; health/environmental/ transportation officials; community groups/news media; and commerce/industry. Each LEPC is responsible for:

Receiving EPCRA information reported by the local regulated community, and responding to requests from the public for that information.

Developing a plan to prepare for and respond to chemical release emergencies.

Providing public participation in emergency planning and preparedness activities.

- 12. NFPA. National Fire Protection Association. The NFPA Hazard Identification System is a diamond-shaped diagram or placard that gives, at a glance, a general idea of the inherent hazards associated with a chemical, and the order of severity of these hazards under emergency conditions. The diamond shape is color coded; a full explanation is provided in Exhibit 1-6.
- 13. NRC. National Response Center. 1-800-424-8802. A 24 hour communications center, operated by CG Headquarters which receives reports of chemical spills, and directs information to emergency response organizations.
- 14. Pollution Prevention (P2). Pollution prevention means source reduction and other practices that reduce or eliminate the creation of pollutants. Source reduction means any practice which reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal. Other practices may include increased efficiency in the use of raw materials, energy, water, or other resources; or protection of natural resources by conservation.
- 15. **PPA.** Pollution Prevention Act of 1990. The PPA establishes the hierarchy of P2 efforts for the nation:

The Congress hereby declares it to be the national policy of the United States that pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner, whenever feasible; and disposal or other releases to the environment should only be employed as a last resort and should be conducted in an environmentally safe manner.

This hierarchy is adopted as the official policy of the Coast Guard.

- 16. **PPC.** Unit Pollution Prevention Coordinator. This is the person designated in writing by the OIC or Commanding Officer to coordinate the unit's various environmental programs. Pollution prevention is the focus of our environmental efforts.
- 17. **P2S2.** Pollution Prevention Scoring System. The system adopted by the CG to measure the relative success of pollution prevention efforts. Basic elements include the pounds of hazardous material consumed and the number of products in the hazardous materials inventory. Scores derived from pounds consumed are adjusted for the relative environmental hazard of chemical constituents.

- RQ. Reportable Ouantity. The amount of a CERCLA hazardous substance or EHS, that if released beyond the facility boundary, must bc reported to the LEPC, SERC, and NRC.
- 19. **Release.** Release means any spilling or emmitting into the environment of any EHS or CERCLA hazardous substance.
- 20. SERC. State Emergency Response Commission. SERCs vary widely from State to State. They act primarily as a clearinghouse of information for State and Local governments, the regulated community, and the public (including citizen, environmental, or special-interest groups). SERCs also provide leadership directly to their LEPCs. This information and leadership activity includes:

Planning for chemical emergencies. Accepting emergency notifications of chemical accidents and releases. Receiving/maintaining databases of reports of hazardous chemical inventories. Receiving, processing, and analyzing toxic chemical release reporting. Providing training and community outreach to local governments, the regulated community, and the public.

- 21. **SARA Title III.** Title III, or the third part of the Superfund Ammendments and Reauthorization Act of 1986. Synonomous with EPCRA.
- 22. Source Reduction. Source reduction includes equipment or technology modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. Source reduction does not include any practice which alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity which itself is not integral to and necessary for the production of a product or the providing of a service.
- 23. **SURF SHEET.** Simplified Unit Requistion Form. This form is used to order materials through the Federal Stock System.
- 24. **TIER II Form.** A form that is completed anually and submitted to the local fire department, LEPC, and SERC. This report is required by EPCRA 312, to be submitted by facilities that meet specific hazardous material and EHS storage criteria.
- 25. Toxic Chemicals. The term toxic chemicals has specific meaning, and refers to the EPCRA 313 list of chemicals. The 313 list of toxic chemicals is specified in 40 CFR 372 and will be published by G-ECV-1 as updates occur (Appendix 1).
- 26. **TPQ.** Threshold Planning Quantity. The amount of an EHS present at a facility which requires the facility to give emergency planning notification to the SERC and LEPC.
- 27. TRI. Toxic Release Inventory. A national inventory of annual toxic chemical releases from facilities that meet certain use, processing, or manufacturing criteria. The form used to submit information is the TRI form R. This is a reporting requirement of EPCRA 313.

#### CHAPTER 2. Hazardous Materials Management System (HMMS)

#### A. General.

- 1. HMMS Definition. The Hazardous Materials Management System (HMMS) is any organized method to record data about the hazardous materials used your location. The methods, format, and amount of data recorded varies depending on the your need and use for the information. The HMMS can be as sophisticated as a centrally managed, completely integrated computer system that tracks procurement, issue, and wastes. A host of features can be designed into the system such as: links to MSDS data bases; barcode labeling for inventory control; and system security to allow materials issue only to pre-authorized personnel. At the other extreme, your HMMS can be as simple as handwritten or word processor logs.
- 2. Type of HMMS. All Coast Guard units covered by this instruction are required to implement a HMMS. What works best for your unit, depends on the amount of information that needs to be processed. A small unit can meet information requirements using handwritten or word processor logs. Large units may take advantage of the economies of scale, and support an automated system. The type of HMMS implemented at the unit level is left to the discretion of the unit commander; however, it shall meet minimum information requirements set forth in this chapter. The HMMS forms created in this Chapter are for illustration purposes; units may use the forms "as is", adapt them, or create new forms, as long as minimum data requirements are met.
- 3. Measurement at the Source. The minimum measurement requirements of the HMMS are for hazardous material "product" and "procurement" information. Measurement occurs at the "source", commonly thought of as the "beginning of the pipe"; in contrast to measurement of the "wastes generated" at the "end of the pipe". This is consistant with the philosophy of P2, which focusses efforts at the "source", where hazardous materials enter our processes.
- 4. Illustration. The HMMS process is illustrated in Figure 2-1.

Figure 2-1



#### B. Data Requirements.

- Minimum Data Requirements. The existing CG HAZCOM Program, reference (b), currently requires 4 data elements to be tracked for each hazardous material that is used at a CG unit. This instruction adds 4 additional data elements. The 4 new data elements are necessary to comply with minimum requirements of EPCRA, and to satisfy the Coast Guard P2S2 measurement system. The 8 minimum data elements to be tracked for each hazardous material are:
  - a. Existing 4 data elements required by the CG HAZCOM Program: Product name Manufacturer's name and address FSN/NSN Use location (e.g. what shop or dept.)
  - b. Additional 4 data elements required by this COMDT instruction: Contains EHS constituents (Yes/No) Contains Toxic Chemical constituents (Yes/No) Pounds of product purchased anually Cost of products purchased annually
- 2. Supplemental Data Requirements. Supplemental data tracking may be necessary or desirable depending on the circumstances at the CG facility. For example, a CG facility may consist of the host command and several tenant commands using products containing EHSs. If EHSs are used at a CG facility, the facility (host command) will have a reporting requirement if the EHSs are stored in excess of the Threshold Planning Quantity (TPQ). Specific product detail will be required to determine if the TPQ is exceeded. The host command and tenant commands can negotiate agreements to limit the amount of product stored to insure that TPQs are not exceeded, and thus eliminate EPCRA reporting. The HMMS forms developed in this instruction are designed to capture this information. Supplemental data elements include:
  - Product detail
    - Listed EHS and toxic chemical constituents
    - CAS Numbers
    - Concentrations by weight
    - Threshold Planning Quantities (TPQs)

Maximum storage quantity

3. **Optional Data.** The following data elements are strictly optional. There use is soley an enhancement that provides shop/department level personnel with summarized information regarding relative hazards and proper waste management procedures for the products they use. They are presented as an option because some units use this coding system and find it beneficial. It is recognized that not all units have a need to capture this detail.

NFPA/HMIS Hazard Ratings Waste Disposal Codes 4. EPCRA 313 Data Requirements. This requirement <u>potentially</u>, applies to large Coast Guard shore *facilities* and in special isolated cases. These *CG facilities*, because of their size and scope of operations, <u>may</u> meet EPCRA 313 reporting thresholds. Large facilities are loosely defined as Air Stations, Support Centers, Heaquarters units, and units that have Industrial Support activities. MOST CG UNITS WILL NOT MEET THE EPCRA 313 REPORTING THRESHOLDS. In cases where the thresholds are met, there will be a need to track specific uses of *toxic chemicals* and their associated releases (See Chapter 5, Section F for a more detailed discussion). As such, data tracking will need to be **custom tailored** by the *CG facility* to specifically meet *TRI Form R* reporting requirements. The detail of specific *TRI Form R* data tracking requirements is beyond the scope of this instruction; COMDT (G-ECV-1) will correspond directly with units that potentially meet EPCRA 313 reporting threshold.

### C. Recording Data.

Basic HMMS forms and procedures are provided in Exhibits (2-1 through (2-6) of this chapter, and a brief explanation of each follows. Exhibits (2-1), (2-2), and (2-3) are forms that will assist those units that choose to implement handwritten or word processor logs. The forms are designed to capture and integrate HAZCOM/EPCRA/P2 data. Units are free to upgrade to a computer spreadsheet application or other automated systems, as long as the minimum data elements are captured. Exhibits (2-4), (2-5), and (2-6) are reference material.

- 1. Hazardous Material Inventory (Exhibit 2-1). This form is an enhanced version of the Hazardous Materials Inventory listing required by the CG HAZCOM Program, reference (b). The form satisfies two purposes; it conveys summarized product safety information to the shop/department personnel who use the hazardous materials, AND it provides convenient summary data for the unit PPC who administers the HAZCOM/EPCRA/P2 program.
- 2. Procurement Control Log (Exhibit 2-2). This form is used to record certain physical data and procurement data about each product. This form satisfies two purposes; it captures the specific data to determine if EPCRA 311 and 312 reporting thresholds are met, and it captures the specific data to complete the CG P2S2 form.
- 3. EHS/Toxic Chemical Worksheet (Exhibit 2-3). This form is a worksheet used to determine if EPCRA 302 and 313 reporting thresholds are met.
- 4. Waste Disposal Codes (Exhibit 2-4). Use of Waste Disposal Codes is strictly optional. It provides useful information to shop/dept level personnel about proper waste management. This exhibit explans how the codes may be assigned.
- 5. Conversion Factor to Pounds (Exhibit 2-5). All EPCRA regulatory threshold and reporting criteria are based on weights; namely "pounds". Likewise, the P2S2 measurement standard is based on "pounds". This exhibit assists in converting measures of volume to measures of weight. For example, paint is purchased in gallons and must be converted to pounds.
- 6. NFPA Hazard Identification System (Exhibit 2-6). Use of the NFPA Hazard Identification System is strictly optional. It provides summary information to shop/dept level personnel about the relative hazards of the hazardous materials they are using. This exhibit is a brief explanation about the NFPA rating system. 2-4

#### D. Source of Data.

1. Material Safety Data Sheet (MSDS). The CG HAZCOM Program, reference (b), requires that a MSDS be obtained for every hazardous material in the workplace. MSDSs must be obtained BEFORE products are purchased (see Chapter 3 Procurement Control, for additional discussion). The MSDS is the primary document needed to satisfy the data requirements of the HMMS. MSDSs for products purchased locally must be provided by the vendor; MSDSs for products purchased through the Federal Supply System can be obtained through the DOD Hazardous Materials Information System (HMIS). The DOD HMIS is a data base of more than 60,000 MSDSs. Units not having access to the DOD HMIS on local computer hardware, may contact their respective MLC(k) to obtain HMIS MSDSs. For those units that desire installing the DOD HMIS locally, note:

DOD HMIS is in CD ROM format. It is compatible with hardware distributed to operate FEDLOG and the new CG Directives System. EECEN is the point of contact for hardware and software questions. Updated DOD HMIS CDs are distributed quarterly. The annual subscription fee will be between \$100 - \$150.

To subcribe to the DOD  $\mathit{HMIS},$  coordinate directly with COMDT(G-KSE).

 SURF/Procurement Request. Purchase quantities and costs of hazardous materials are obtained directly from SURF Sheets and Procurement Requests (PRs). Copies of SURF/PRs shall be retained by the PPC in HMMS files for one year.

### E. Routine Administrative Requirements.

The unit *PPC* is responsible for recording data, and for overall administration of the HMMS. It is the responsibility of the shop or department personnel (purchaser/user of hazardous materials) to supply the *PPC* with the information necessary to perform these HMMS duties. The unit *PPC* shall:

#### 1. As required.

Establish HMMS records and update the Hazardous Materials Inventory for each new product that is added to the inventory. A good faith effort must be made to delete one or more products from the inventory for every one that is added; and Update procurement control logs for each new purchase. from the inventory for every one that is added; and

#### 2. Quarterly (or as needed):

Publish and distribute to shops/depts (users of hazardous materials) a revised Hazardous Materials Inventory.

# 3. Annually. On or about 1 January:

Initiate a shop/dept level physical inventory to verify amounts of hazardous materials in storage;

Update the Master Hazardous Materials Inventory to delete inactive items; and,

Establish new procurement control logs for each product, for the new calendar year.

	Date	:	Exhibit 2-1 HA2 Haza	ZARDOU ardous	S MATERIA Material	LS MANAGE Inventor	MENT S Y	YSTEM			
	Un	it Name:	·		St	nop/Dept:					
	Local MSDS Broduct Nors		Mfg Name A Address and/or /		Toxic EHS Chemical		Disposal				
	Ref#		Phone #	ľ	Yes/No	Yes/No	Fire	Health	React	Other	R/Y/G
								-			<u> </u>
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			v 2010/2011/10								
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										<u> </u>	<u> </u>

### INSTRUCTIONS FOR COMPLETING HAZARDOUS MATERIALS INVENTORY

First: Obtain a copy of the MSDS for the product.

Second: Complete the Procurement Control Log for the product.

Third: Complete the Hazardous Materials Inventory form.

- Local MSDS Ref#: This is a locally generated code to identify the MSDS with a shop or dept. Example: Reserve assignment of numbers 001-099 for common use products by multiple shops/depts; 100-199 for products used exclusively by the Deck Dept, 200-299 for Engineering, etc.
- Unit Name/Shop/Dept: Self explanatory.

Product Name: List the common name as shown on the product label or the MSDS.

Mfg. Name/Address As shown on the label or MSDS. Use as many rows as or Phone: needed. (Note, if using a computer "spreadsheet" format, the MSDS Ref# should be recorded on each line to "sort" properly).

A/I Active or Active items are those currently in stock. Inactive Inactive items are not in stock but you may want to keep the item on the inventory if there is a need for the product in the near term. Inactive items for which there is no future legitimate need should be removed from the inventory.

Contains EHSs:	Place an "X" in this column if the product contains an Extremely Hazardous Substance.
Contains Toxic Chemicals:	Place an "X" in this column if the product contains any Toxic Chemicals. Note: some chemicals are listed by EPCRA as both an EHS and a Toxic Chemical, and some products may contain both EHSs and Toxic Chemicals. Place an "X" in both columns as needed.
NFPA/HMIS Hazard Rating:(Optional)	The ratings range from 0 to 4 in each category. This information may be available on the MSDS, it may not. If information is not on the MSDS, or not commonly known, then place an "UNK" standing for "unknown" in each box as applicable.
Waste Disposal Code: (Optional)	"R" = Red, "Y" = Yellow, or "G" = Green

	Last Re Date:	vision	Ex F	hibit 2- Procureme	2 HAZARI	OUS MA	TERIAL:	s mana (Shop	GEMENI or Dep	sys St Na	STEM ames) Sheet 1 of			
	MSDS 1	Ref#:	NFPA/HMIS Rating:					P2S2 Reporting Category						
	Prod Name:					Fire	React	Other		Re	Reportable Product:			
	Stored: Unit of Issue:										Contains EHS(s)			
					Max Sto	Max Storage Qty:					Contains Toxic Chemical(s)			
	Specific Gravity:										Regulated (Other)			
	Conve	Conversion factor				Disposal Code:					Green:Landfill Disposable			
					Ređ	Yell	ow G	reen		Exe	empt:Fuel/Office/Janitorial			
	(A)	(B)	(C)	(D)		(E)	(F)		(G)					
2-9	PR Date	PR Number	Unit of Issue	Quanti Purchas	ty Conv ed Fa	version actor	Pound	ls	Cost		Comments			
		Beginn	ing Inve	ntory 00	A ( dat	e)								
	1.							\$						
	2.							\$			and the second and second s			
	3.							\$						
	4.							\$						
	5.							\$	,					
	6.					•••••		\$						
		<u></u> 1	Total	Purchas	es:		+=====	+-  \$		==≖⊥				
		Ending Inventory (												
		d:	(=)			Amount	rep	ported on P2S2)						

Instructions for Completing Procurement Control Log: (Separate Sheet for each product) Local MSDS Ref#: This is a locally generated code to identify the MSDS with a shop or dept. Example: Reserve assignment of numbers 001-099 for common use products by multiple shops/depts; 100-199 for products used exclusively by the Deck Dept, 200-299 for Engineering, etc. Prod Name: Product Name. Stored: Location where the product is stored. As obtained from the MSDS, Part III, Physical Data. This Specific Gravity: may be needed to calculate the pounds of product if the unit of measure is volumetric, e.g. gallons, etc. Conversion Factor: As needed to convert gallons to pounds, etc. See Exhibit 2-5. \_\_\_\_\_ Optional Items: Waste Disposal Circle or highlight. Waste disposal codes are explained in Exhibit 2-4. the unit PPC. Code: NFPA/HMIS Hazard: The ratings range from 0 to 4 in each category. This information may be available on the MSDS, it may not. If information is not on the MSDS, or not commonly known, then leave blank or use "UNK" standing for "unknown".

Max Storage Qty: You may want to specify the maximum allowable storage limit for a given product to remain under EPCRA reporting thresholds. Consult with the host command as needed to specify storage quantities.

\_\_\_\_\_

P2S2 Reporting Category:

- Reportable or Place an "X" in the appropriate box. Products Specifically
- Exempt: EXEMPT from reporting on the P2S2 Form include: fuels, office supplies, housekeeping/janitorial supplies, and MWR/NAFA resale products. All other products should be reported under one of the following categories:
- Contains EHSs: Place an "X" in this column if the product contains an Extremely Hazardous Substance(s).
- Contains Toxic Place an "X" in this column if the product contains a Chemicals: Toxic Chemical(s). Note: some chemicals are listed as both an EHS and a Toxic Chemical OR some products contain both. For P2S2 reporting purposes, products in these situations shall be reported on the P2S2 Report in the EHS category, to prevent double counting.
- Other Regulated: This is a catchall category, if the product does not contain EHSs or Toxic Chemicals, and you would not dispose of it in the dumpster or landfill (green product), then place an "X" in this box. Generally, disposal of any wastes would be regulated under federal or state environmental laws.
- Green: These are products that may have an MSDS under the OSHA standard, but are considered environmentally safe and are acceptable for landfill disposal.

\_\_\_\_\_

Beginning Inventory: Record the total product in stock as a result of a physical inventory conducted On Or About (OOA) 1 Jan. Convert to "pounds" and record this in column (F). Do not estimate its value or fill-in column (G).

- (A) PR Date: Enter the Procurement Request date.
- (B) PR Number: Enter the Procurement Request number. This is the internal Shop/Dept assigned number. There is no need to track the actual Purchase Order Number (PONO).
- (C)Unit of Issue: Pounds, gallons, quarts, etc. Do not use terms like "cases" or "packs".
- (D)Qty Purchased: Total quantity purchased.
- (E)Conversion Factor: As needed to convert gallons to pounds, etc. Conversion factors are provided in Exhibit 1-5.
- (F)Pounds: Multiply the quantity purchased by the conversion factor as needed to record the total pounds purchased, round to the nearest whole number. (You aren't an accountant... you're a Coastie! Don't sweat the small stuff.)
- (G)Total Cost: Record the cost of merchandize; round to the nearest dollar. Ignore shipping, handling and other miscelaneous expenses.
- Ending Inventory: Record the total pounds in stock as a result of a physical inventory 31 December. Note, new logs shall be created each calendar year; (Ending inventory for the previous year = Beginning inventory in the new year.)

	Date:	Exhibi	t 2-3 HAZAI EHS/Tox	RDOUS ic Che (Suppl	MATERIALS MANAGEMENT emical Worksheet .emental)	SYSTI	Sheet 2 of 2
			MSDS Ret	£#:			
			Prod Nar	me:			
	Comments:			-		<b>ŕ</b>	
				-	Reason	tor ca	
<u>،</u>				-	( ) EPCRA §302, TPQ for EHSs		( ) EPCRA §313, Annual Use
-		T	<u></u>	l	Maximum Storage: ()Est () Allo	w.	Total Consumed: ( ) Est ( ) Act
	Constituent Name	CAS Registry Number	% by Weight	х	1	bs	lbs
				=	1	bs	lbs
-					1	bs	lbs
_				11	1	bs	lbs
				=	1	bs	lbs
				=	1	bs	lbs
				=	1	bs	lbs
					Constituent Weigh	ts	Constituent Weights

Instructions for Completing EHS/Toxic Chemical Worksheet

Unit Name/Shop/Dept: Self explanatory.

Product Name: List the common name as shown on the product label or the MSDS.

Local MSDS Ref#: This is a locally generated code to identify the MSDS with a shop or dept. It should cross reference to the Hazardous Materials Inventory, and the Procurement Control Log.

Constituent Name: List the EHS or toxic chemical constituents of the product as obtained from the MSDS.

CAS Registry Number: List the CAS registry number for each constituent as obtained from the MSDS (If available).

% by Weight: List the percent by weight of each constituent as obtained from the MSDS. If a range of percentages is given for the constituent, then use an average value. Example; Xylene 10-20% by weight; use an average value of 15%.

( )EPCRA 302: Place an "X" in this box if the constituent is an Extremely Hazardous Substance (EHS); and the calculation is being performed to compare amounts of EHS in storage, to the Threshold Planning Quantity (TPQ) for the substance.

( )EPCRA 313: Place an "X" in this box if the constituent is a toxic chemical; and the calculation is being performed to determine if annual use exceeds threshold. Note, some chemicals are being listed by the EPA both as an EHS and as a toxic chemical; in which case both "storage" and "annual use" calculations may need to be performed.

Maximum Storage: Enter the maximum storage quantity in pounds for this (Optional) Unit/dept. Enter an "X" as indicated, whether this is an "Estimate" from past records OR if this is a Command specified maximum Allowable storage quantity.

Total Consumed: Enter the total amount of product consumed in pounds for this unit/dept. Enter and "X" as appropriate whether this is an estimate or actual consumption.

Constituent Weights: Multiply the % by weight for each constituent by the "storage", or "consumption" weights respectively to calculate the partial weights of each constituent.
## Exhibit 2-4 HAZARDOUS MATERIALS MANAGEMENT SYSTEM Waste Disposal Codes (Optional)

- This is the last link in the hierarchy of Pollution Prevention; pollution that cannot be eliminated at the source, recycled or treated, must be disposed of properly. This system of waste codes provides the end user of the material a clear "signal" of what is or is not acceptable for disposal in the landfill (dumpster). The unit PPC assigns the waste disposal code based on the best information available. In cases where available information is confusing or contradictory, assign a conservative code.
- Waste disposal codes may be recorded in the Hazardous Materials Inventory and the Procurement Control Log. Consider placing color coded stickers on the MSDS as well; stickers are available from most office supply stores or catologes.

Exhibit 2-4



These PRODUCTS and their CONTAINERS shall not be disposed of in the landfill; they shall be processed for proper treatment, recycled, or disposed of through a permitted Treatment Storage or Disposal Facility (TSDF). Examples include: aerosol cans, ATON, Nicad and mercury batteries.

These products shall not be disposed of in the landfill, but if the CONTAINERS are EMPTY they may be landfilled (preferably recycled). Examples include: acids, adhesives, cleaners and degreasors, coatings and paints, removers, thinners, solvents, waxes, oils, fuels, and pesticides.

These are products that may be disposed of in the landfill. They may have an MSDS because of some physical hazard, but they do not contain chemicals or possess characteristics that are regulated under environmental regulations.

## Exhibit 2-5 HAZARDOUS MATERIALS MANAGEMENT SYSTEM Conversion Factors to Pounds

1. When an item is issued by volume and the actual weight is not known, convert the total quantity of product (e.g. gallons, quarts, etc) to pounds using the following general formula:

## Quantity x Conversion Factor = Pounds

2. The conversion factor is found in the following table where the row for the specific gravity (SG) of the material intersects the column for the particular unit of issue. Specific gravity of the hazardous material is listed on the MSDS III Part III, Physical Data. Specific gravity (also referred to as density) of a solid or liquid substance is the ratio of the weight of the substance to the weight of an equal volume of water; S.G. of water is 1.0.

	Table 2-1 Conversion Factors						
	S.G.	FT 3	GALLON	QUART	PINT	FL OZ.	LITER
	1.20	74.88	10.01	2.50	1.25	.078	2.65
	1.16	72.38	9.68	2.42	1.21	.075	2.56
-	1.12	69.89	9.34	2.34	1.17	.073	2.31 2.47
	1.08	67.39	9.01	2.29	1.13	.072	2.43
	1.04	64.90	8.67	2.21 2.17	1.08	.069	2.29
Water	1.02 1.00	62.40	8.34 9.17	<b>2.1</b> 3 <b>2.09</b>	<b>1.00</b> <b>1.04</b>	.000	<b>2.24</b> <b>2.20</b>
	0.96	59.90	8.01	2.04	1.00	.062	2.12
	0.92	57.41	7.67	1.92	0.96	.060	2.03
- 18	0.88	54.91	7.34	1.84	0.92	.057	1.94
	0.84	52.42	7.01	1.75	0.88	.055	1.85
	0.80	49.92	6.67	1.67	0.83	.052	1.76
	0.76	40.07 47.42	6.34 6.17	1.58	0.79	.049	1.68
	0.72 0.70	40.18 44.93 43.68	6.01 5.84	1.50 1.46	0.75	.049	1.59 1.54

## Table 2-1 Conversion Factors

## Exhibit 2-6 HAZARDOUS MATERIALS MANAGEMENT SYSTEM NFPA Hazard Identification System (Optional)



- 1. The NFPA Hazard Identification System is designed to assist firefighters in responding to emergency situations. For purposes of the Coast Guard HMMS, by providing this information in the Hazardous Materials Inventory, it provides the personnel using the materials readily available information to apply in emergency situations. The diagram identifies the "health, "flammability" and "reactivity" (instability and water reactivity) of a chemical and indicates the order of severity of each hazard by use of one of five numeral gradings, from four (4), indicating the severe hazard or extreme danger, to zero (0), indicating no special hazard. In the diamond-shaped diagram "health" hazard is identified at the left, "flammability" at the top and "reactivity" at the right.
- 2. The bottom space is primarily used to identify unusual reactivity with water. A "-W-" alerts emergency response personnel to the possible hazard in use of water. Oxidizing chemicals are identified in the bottom space by "OXY". The bottom space may be also used to identify a radiation hazard.
- 3. For a detailed description of the hazard identification system used here, see "Recommended System for the Identification of the Fire Hazards of Materials, NFPA No. 704M."

2-15

#### Chapter 3. Procurement Control

#### A. General.

Purchases. Unnecessary purchases of hazardous materials is a
problem that we must control; it is a problem we can control. We
pay for the hazardous materials when we order them, and we pay
again double or triple the original cost to dispose of those
materials as hazardous wastes. It is estimated that as much as
50% of the hazardous wastes the Coast Guard currently generates is
the result of overstock items. In addition to the purchase/disposal
expense, we increase our environmental risks, we take on added
regulatory burdens, and we become liable for those waste materials.
Procurement control is a critical aspect of P2. The problem must be
addressed at the source; preventing unnecessary materials from
entering our system, and choosing the safest products available.
 Procurement Control Process. All Coast Guard units shall

implement hazardous material procurement controls. Those controls shall meet the minimum requirements specified herein. The procurement control process is illustrated in Figure 3-1; it is modeled as follows:

The OIC/Commanding Officer. Pollution Prevention and procurement control, starts with leadership. Procurement control saves resources (money, and personnel). It is a means to funnel resources back in to the unit. Subordinates must be held accountable for their role in hazardous material control. One positive way to elevate P2 priority and expectations, is to include measures of success in the routine performance evaluations of key personnel (Page 7s and OERs for military, and CJEs for civilians). Another is through individual awards and recognition.

The Shop/Dept Supervisor. The procurement process begins when the shop or department supervisor initiates a Procurement Request or *SURF* sheet for a hazardous material. The most basic requirement is to order minimum quantities. In addition, the supervisor has the obligation, to ensure that the hazardous material is listed in the unit Hazardous Materials Inventory, and that an MSDS is in the unit inventory file. When new products are proposed for addition to the unit Hazardous Materials Inventory, the supervisor must acquire the MSDS so it can be evaluated BEFORE it is purchased. The "on hand" quantity of hazardous materials should never exceed a 60 day supply (Ref: COMDTINST M17440.13 Comptroller Manual Vol III)

The Unit PPC. The unit PPC has the authority to control what hazardous materials, and how much of them, enter the system. This is accomplished by reviewing all Procurement Requests and SURF sheets for hazardous materials, and by controlling the hazardous materials that are added to or deleted from the unit Hazardous Materials Inventory. The unit PPC has the obligation to maintain an up-to-date Hazardous Materials Inventory for shop/dept level use, and to expeditiously review procurement requests and new-product reviews.



The Shop/Dept Supervisor. The procurement process begins when the shop or department supervisor initiates a Procurement Request or SURF sheet for a hazardous material. The most basic requirement is to order minimum quantities. In addition, the supervisor has the obligation, to ensure that the hazardous material is listed in the unit Hazardous Materials Inventory, and that an MSDS is in the unit inventory file. When new products are proposed for addition to the unit Hazardous Materials Inventory, the supervisor must acquire the MSDS so it can be evaluated BEFORE it is purchased. The "on hand" quantity of hazardous materials should never exceed a 60 day supply (Ref: COMDTINST M17440.13 Comptroller Manual Vol III)

The Unit PPC. The unit PPC has the authority to control what hazardous materials, and how much of them, enter the system. This is accomplished by reviewing all Procurement Requests and SURF sheets for hazardous materials, and by controlling the hazardous materials that are added to or deleted from the unit Hazardous Materials Inventory. The unit PPC has the obligation to maintain an up-to-date Hazardous Materials Inventory for shop/dept level use, and to expeditiously review procurement requests and new-product reviews.

The Statement of Essential Need. Unit *PPCs* cannot perform their management and control function without basic information. A P2 adaptation to the "Statement of Essential Need" (SEN) satisfies this requirement. The SEN is provided in Exhibit 3-1. A SEN shall be prepared by the shop/dept supervisor, and accompany all Procurement Requests and SURF sheets, for routing through the *PPC*. The SEN allows the *PPC* to administer the HMMS, and provides a basis for approving hazardous material purchases.

#### B. Clarifications.

1. Federal Supply System. There are several aspects of the federal supply system that present barriers to effective management of hazardous materials. Efforts are in progress to fix the system to make it more P2 friendly. But milestones have not been clearly established, nor is it a system that the Coast Guard controls. We can exercise some measure of control by fine tuning the procedures as follows:

Quantity of Issue. One problem area is the "quantity of issue". The standard quantity of issue for many supply system products may be a several year supply for the typical small CG unit, or simply more than the unit needs for a specific project. For example, a project at the unit is planned that will require 6 gallons of paint, and the quantity of issue is multiples of 4 gallons. The SURF sheet may be processed for 6 gallons, but in the vast majority of cases, the unit will receive from the Supply Systems Command a status code of "BJ" (Quantity changed to conform to unit pack; adjust due-in records accordingly. Unit of issue is not changed.) This means the request is being processed, but the CG unit will receive and be billed for 8 gallons of paint. The CG unit now has at least two gallons of overstock paint it has paid for; and then it must handle, process, and pay for waste disposal. Where circumstances at the unit require materials that do not conform to standard unit packing, the unit should consider the disposal cost of unused product, and pursue commercial procurement if it is more cost effective.

Multiple Products for Each NSN. Another problem area occurs because a purchase is typically specified only by National Stock Number (NSN): NSNs typically have numerous manufactures that can meet requirements. It is common for CG units to have numerous products all serving the same basic purpose, for different manufacturers in stock. This bloats the unit Hazardous Materials Inventory, creates substantial non-productive workload for additional training, tracking, and recording; MSDS files are incomplete; and a lack of control over the performance, relative safety, and environmental hazard associated with the products ultimately delivered. It is technically feasible to specify the product by manufacturer using procedures that already exist in supply system. There is a tradeoff, specifying the exact product solves the P2 problem, but it requires "exception" processing of the SURF sheet that may add a week to the delivery time. All SURF Sheets processed for hazardous materials shall specify the manufacturer in addition to the NSN. If the federal supply system cannot deliver within the unit's time constraints, then commercial procurement shall be pursued.

2. **PPC Evaluation of Products**. The goal is for the *PPC* to evaluate the relative environmental merits of various products; and given satisfactory performance among product candidates, approve the safest, least toxic alternative. As a practical matter, this evaluation is difficult; it requires dedicated staff time, accessible information about product characteristics, and experience. Over time, our goal is to achieve this level of review. Until we reach that point, the *PPC* should conduct evaluations to satisfy the following considerations:

EHS and <u>Toxic Chemical</u> Constituents. In the case of pesticides with *EHSs*, their use is only authorized by exception/waiver (See Chapter 5, Section A). For other products in the existing unit Hazardous Materials Inventory, the purchase quantity should not exceed that product's storage ceiling if one has been established. For new products proposed for addition to the unit inventory, those with *EHSs* shall only be approved if substitutes are not available, consult with your host command for EPCRA reporting impacts, and then with your servicing CEU or MLC(kse) as necessary for technical advice. Products without toxic chemicals, or those with lower relative concentrations, are desired. Substitutions should be pursued as time and experience permit. (At CG facilities with EPCRA 313 TRI reporting requirements, additional controls/review may be necessary for specific products, see Chapter 5, Section F, for additional detail).

NFPA or HMIS Hazard Ratings. Hazard ratings of "4" in any category shall only be approved if substitutes are not available. Consult with your servicing CEU or MLC(kse) as necessary for technical advice. Products with lower ratings and equal performance are desired. Substitutions should be pursued as time and experience permit.

**Performance.** Does the "greener," "safer" product substitute really work for the intended purpose? Does it require considerably more material to accomplish the same task? Would the product need approval first by higher authority (e.g. SHIPALT)? 3-4 3. Authorized Use Lists (AULs). One strategy being pursued by the headquarters P2 Committee is the development of "Authorized Use Lists". These are pre-screened and approved lists of materials that can be used to conduct the routine operations and maintenance at the unit. AULs have been developed and implemented by (G-EAE) for various types of airframe maintenance. Similiar efforts are underway by (G-ENE) for cutter maintenance. Development of AULs is an on-going initiative. Also, by exercising the procurement controls specified in this Chapter, you are in effect creating an AUL for your unit.

## C. Requirements.

1. Authorized Requisitioners. The authorized requisitioners (Shop/Dept personnel) that prepare the Procurement Request (PR) and *SURF sheets* for hazardous materials shall:

**Prepare the SEN.** Units may adapt wording to capture local requirements. The SEN shall by stamped, printed, or attached to the PR or *SURF sheet*, and routed to the unit *PPC* for approval.

**Specify the Manufacturer.** If ordering hazardous materials through the Federal Supply System, the requisitioner must specify the manufacturer on the *SURF Sheet*.

Acquire the MSDS. This is required for all products proposed for addition to the unit Hazardous Materials Inventory, and submitted to the *PPC* for review.

2. **Unit PPC**. The requirement for *PPC* approval of hazardous materials is specified in the CG Small Purchase Manual, reference (d). The unit *PPC* shall perform the following reviews:

**Procurement Review.** Review all PR and *SURF sheets* for hazardous materials and approve or disapprove in accordance with established EPCRA/P2 criteria. The *PPC* shall retain a copy of the PR or *SURF sheet* and record required information in the HMMS. Approved PRs and *SURF sheets* will be forwarded to the procurement official; disapproved PRs and SURF sheets will be sent back to the requisitioner.

New Product Review. Review products for *EHS*, *toxic chemical*, and *NFPA/HMIS* hazard rating. Consult with the requisitioner, host command, CEU, or MLC(kse) as necessary to identify suitable substitutes. For approved products, update the unit Hazardous Marerials Inventory, and establish the HMMS Procurement Control Log.

3. **Procurement Officials.** Procurement Officials shall:

**Only Process PPC Approved Requests.** Only process PRs and *SURF* Sheets for hazardous materials that have been approved by the unit *PPC*, as noted on the SEN. Procurements for hazardous materials without an accompanying SEN shall be returned without procurement action to the requisistioner. **Specify the Manufacturer**. Only process Procurement Requests and *SURF sheets* if the manufacturer is specified. When processing SURF requests through ARMS, specify the manufacturer by using **Code AOE**, meaning "exception". The corresponding data field allows you to enter data to <u>specify</u> the exact product. Alternatively, the SURF request shall be processed by "Narrative MILSTRIP Message" to <u>specify</u> the exact product. Additional details are contained in Enclosures (VI-20) and (VI-23) to COMDTINST M4400.13.

Exhibit 3-1 Statement of Essential Need

I certify that this hazardous materials procurement is essential to the mission of this unit, and that the minimum quantities are being ordered; in addition,

\_\_\_\_\_The MSDS for this product is currently on file, and listed in the Hazardous Materials Inventory (MSDS Ref#\_\_\_\_\_), and personnel are properly trained in its use. There is currently \_\_\_\_\_\_ in inventory. \_\_\_\_\_\_ (qty)

#### OR

This is a new product not currently on file in the Hazardous Materials Inventory; the MSDS for the product is attached. Personnel will be trained in proper use.

/	
Authorized Requisitioner/	date
Approved Disapproved	
/	
Pollution Prevention Coord/	date

#### Chapter 4. CG Pollution Prevention Scoring System (P2S2)

#### A. General.

1. **P2 Success.** Success of our P2 efforts depends on how effectively we manage and reduce the amounts of the hazardous material we use. Over time, an effective P2 program will yield more efficient use of resources (personnel and funding), as we eliminate some of the administrative burdens, and reduce our operating costs for material procurement, waste disposal, and remediation. P2S2 will measure the success of our efforts.

2. P2 Measures of Success. P2S2 measures the number of products in the inventory and the pounds of product consumed. In order to account for the relative environmental risk, products in various categories are adjusted by a "P2 Factor" (pounds in each category are multiplied by the "P2 Factor" to yield a "P2 Product Score"); and product scores are added to yield the unit "P2 Composite Score". The composite scores can be compared over time; and with insightful leadership we can precipitate a downward trend in score. Commanding Officers shall establish unit goals to reduce the P2 Composite Score. We can reward low scoring units, and assist high scoring units to reduce their scores. The net effect will be to reduce our consumption of hazardous materials.

3. HMMS/P2S2. The data required to support the P2S2 is obtained from the unit HMMS Procurement Control Log for each product. The process for completing the P2S2 Report is illustrated in Figure 4-1. B. Clarifications.

1. Assumptions. P2S2 measures products at the source where hazardous materials enter our system. P2S2 assumes that procurement of hazardous materials equates to consumption of hazardous materials. This is not always true, but measurement of actual consumption is overly complex and counter productive.

Recycling. Consider the case where a shop/dept declares 5 gallons (45 pounds) of paint excess, and gives it to another shop/dept that can use the material. As long as the transfer is within the unit, it is transparent to the P2 score because the data was originally recorded to the purchasing shop/dept; the PPC need not be in the business of continually reconciling the data to reflect actual consumption and transfers between shops/depts.

Waste. There is no accounting in this system if a product was overstocked, and then declared a waste designated for disposal. The product was not actually consumed in a process, but again as above, the PPC need not reconcile the data to show actual consumption. In fact, the score associated with excess product purchase is reflected (as a "penalty") in the total P2S2 score.

2. Accuracy. Data accuracy of 95% or better is our goal.

#### C. Reporting Requirements.

1. Annual P2S2 Report. The unit PPC shall annually OOA 1 January, initiate a physical inventory of hazardous products in storage, and update HMMS records accordingly. Prepare Exhibit 4-1; P2S2 Report (RCN 16455-1). The report shall be submitted to COMDT(G-ECV-1) by 15 February for the previous calander year. Provide an information copy to your CEU and MLC.

2. The first P2S2 Report. The first P2S2 Report is due 15 February 1995. The first report shall reflect only HMMS data for the time period from 1 October 1994 through 31 December 1994. Annually thereafter, P2S2 Reports shall be due on 15 February and reflect HMMS data for a full calendar year.

3. **Historical Record.** *P2S2 Reports* shall be retained by the unit *PPC* for three years.

4. Annual Statistical Summary. COMDT(G-ECV-1) will summarize unit *P2S2* reports and publish an annual statisical summary.



Exhibit 4	-1 POLLUTION PREVENTION	SCORI	NG SYS	TEM (P2S	52) ANNUAL REP	ORT
	Calendar Year					
Unit Name:			OPFAC	:		
NON-FUEL PRODUCTS:	NUMBER: POUNDS:	x	P2 F	ACTOR:	= P2 PRODUC	T SCORE:
Containing EHSs:			X 1	0 =		
Containing Toxic Chemicals:			х [	5 =		
Other Regulated: (Non-Landfill Disposable)			х 🗌	1 =		
Green: (Landfill Disposable)			x	0 =	00000	0 0 0 0
TOTAL						
EXEMPT: FUEL PRODUCTS, HO OFFICE SUPPLIES; MWR AND	DUSEKEEPING, JANITORIAL NAFA RESALE PRODUCTS				PZ COMPOSIT	( / /
RCN 16455-1 To: COMDT (G~ECV-1)				Polluti	on Prevention	Coordinator ( / /
Copy: MLC, CEU					Commanding O	fficer

## INSTRUCTIONS FOR COMPLETING P2S2

CY-Calendar Year: Reports are due to COMDT(G-ECV-1) by 15 February for the preceding calendar year ending 31 December.

Unit Name/OPFAC: Self explanatory.

- Non-Fuel Products: These are all products listed in the unit HMMS, except for: fuels, office supplies, housekeeping/janitorial supplies, and all products sold through MWR or NAFA activities.
- Number: The number of products in the unit HMMS, in each respective category that were "on board" listed in the Inventory during the previous calendar year. Each product shall be counted only once; e.g. a product containing a mixture of EHSs and Toxic Chemicals shall be counted in the EHS category; e.g. a product in storage, but not used shall be counted in the total.
- Pounds: The pounds of products consumed in each respective category during the previous calendar year: this information comes directly from the Procurement Control Log for each hazardous material listed in the unit Inventory (excluding fuels and exempt office/janitorial supplies).
- P2 Score: Pollution Prevention Score; Multiply the pounds by the P2 Factor in each respective category.

Total: Add the column entries as indicated.

- Containing EHSs: These are products listed in the unit HMMS that contain any Extremely Hazardous Substances as defined in 40 CFR 355. A product that is a mixture of EHSs and other substances shall be counted in this category.
- Containing Toxic These are products listed in the unit HMMS that contain Chemicals: Toxic Chemicals as defined by 40 CFR 372. Products that are a mixture of Toxic Chemicals and other substances (other than EHS) shall be counted in this category.
- Other RCRA Regulated: These are products listed in the unit HMMS that has a Waste Disposal Code of Red or Yellow (other than already listed as containing EHs or Toxic Chemicals); e.g. products that must be disposed of as hazardous waste.
- Green: These are green products listed in the unit HMMS that are environmentally safe, and can be acceptably disposed of in the local landfill.

## Chapter 5. Compliance with the Emergency Planning and Communtiy Right-To-Know Act (EPCRA)

## A. EPCRA Section 302 Notifications Required for the Storage of Extremely Hazardous Substances (EHSs)

#### 1. General.

If a CG facility has stored on-site at any given time, more than the *Threshold Planning Quantity (TPQ)* of an *Extremely Hazardous Substance (EHS)*, then the *facility* must report under EPCRA 302. EPCRA 302 regulations, and the list of *EHSs/TPQs*, are published in 40 CFR 355. All federal 302 regulatory requirements have been incorporated into the requirements set forth in this section. Chemical lists are included in the Appendices (1) and (2). A complete state listing of State EPCRA points of contact is provided in Appendix (3); to assist units in determining state-specific information/requirements.

## 2. Notifications.

a. One-Time Notification. CG facilities that meet threshold shall make a one-time notification, in writing, to their: State Emergency Response Commission (SERC) Local Emergency Planning Committee (LEPC)

b. **Update Notifictions.** CG facilities that begin handling products containing *EHSs* not previously reported to the *SERC* and *LEPC*, shall submit subsequent notifications to these agencies within 60 days of first storing the product at the facility. If the EPA makes additions to the *EHS* list, products with these additionally listed chemicals shall be reported within 60 days. COMDT(G-ECV-1) will issue an alert and a revised listing of chemicals when the EPA adds chemicals to the *EHS* list.

c. Notification Content. Initial and/or subsequent notifications shall contain:

Facility name, address, and phone number;

A listing of those *EHSs* stored in quantities above *TPQ*; Contact person available to answer questions about the facility. (Provide an information copy of these notifications to your servicing CEU, or COMDT(G-ECV-1) for headquarters units.)

#### 3. Exemptions.

The EPA has promulgated certain exemptions to the reporting provisions of *EPCRA*. CAUTION, the exemptions differ for each Section of *EPCRA*, and therefore apply only to that Section. The reporting exemptions that apply to EPCRA 302 are explained below:

a. Calculating TPQ. To determine whether a CG facility stores a quantity of an EHS that exceeds the *TPQ*, the facility must determine the total amount of the substance stored at any one time. Storage of the substance at several different locations or several commands at the facility, the method of storage of the substance, or the number of containers the substance is stored in, does not matter. The factor that determines whether the TPQ is met is the total amount of the substance stored at the facility. A worksheet for making threshold calculations has been developed as part of the HMMS (See Exhibit 2-3).

b. **TPQ for Mixtures**. The EPA has adopted the 1 percent deminimus limit for mixtures that contain *EHSs*. This means that products containing less than 1 percent of an *EHS* by weight do not need to be included in the aggregate amount for the facility. This exemption is for making *TPQ* calculations only. There is no deminimus exemption, for example, if the product were spilled, and a report is required because the spill quantity exceeded the *Reportable Quantity (RQ)* for that chemical; (See Chapter 5, Section C for a more detailed discussion.)

c. **TPQ for Solids**. *EHSs* that are solids are subject to either of two *TPQs*, 10,000 pounds or some lesser number (1, 10, 100, or 500 pounds as specified in the 302 list). The lower quantity applies only if the solid exists in powdered form, and has a particle size of less than 100 microns; or is handled in solution or in molten form; or meets the criteria for a National Fire Protection Rating (*NFPA*) of 2, 3, or 4 for reactivity. If the solid does not meet any of the above criteria, it is subject to the 10,000 pound threshold.

## 4. Clarifications.

Common Coast Guard situations have been reviewed to provide consistant CG-wide *EPCRA* reporting.

a. **General Note**. Facilities that store products with EHSs above TPQ will also have reporting requirements under EPCRA 311 and 312. Facilities may store products with EHSs below the TPQ, but will still have reporting requirements under EPCRA 311 and 312 if they store more than 500 pounds of the EHS at the facility. (See Chapter 5, Sections D and E for further discussion.)

b. Fuels, Lubricants, Waxes, Oils, and Fats. Products in these categories that are used in routine Coast Guard applications have been found not to contain *EHSs*. There is no EPCRA 302 reporting requirement and no need to perform threshold calculations for these products.

c. Ordnance and Munitions. Ordnance and munitions that are used in routine Coast Guard applications have been found not to contain EHSs. There is no EPCRA 302 reporting requirement and no need to perform threshold calculations for these products.

d. **Batteries**. Lead-acid batteries contain sulfuric acid (CAS 7664-93-9) which is a listed *EHS*; the *TPQ* is 1000 pounds. All other battery types used in common Coast Guard applications have been found not to contain *EHSs*, (except perhaps in trace amounts below de minimus concentrations). Lead-acid batteries are commonly used for ATON and other equipment. Coast Guard facilities may potentially meet the 1000 pound *TPQ*, and threshold calculations must be performed. (Use Exhibit 2-3 to make this calculation; the concentration of sulfuric acid by weight ranges from 14% to 37% depending on the battery type; MSDSs have the specific data). Consider only lead-acid batteries that are "stored" at the facility; do not count what is in the equipment or in an ATON structure, offsite or onsite.

e. **Paints**. The constituents of paints are too diverse to draw general conclusions. Products in this category should be evaluated by CG facilities for *EHS* constituents. Several types of coating systems commonly used and known to contain *EHSs* are aviation polyurethanes, and vessel bottom isocyanate paints.

f. **Pesticides**. Many pesticides (herbicides and insecticides) contain *EHSs*. Products that contain *EHSs* are banned from storage at Coast Guard units. Coast Guard units currently using and storing pesticides with EHSs shall find suitable substitutes, or contract for services through liscensed commercial applicators.

g. All Other Products. Other product categories for example, cleaners and degreasors, fluxes, preservatives and disinfectants, thillners, adhesives, coating removers and other chemicals are too diverse to draw general conclusions. Products in these categories need to be evaluated by CG facilities for *EHS* constituents to determine if their storage is above *TPQ*, and reporting is required.

#### 5. Tenant Command Requirements.

a. Establish Storage Amounts (Optional). For each product that contains an *EHS*, establish the **minimum** amount that **needs** to be stored to meet operational requirements. Establish strict inventory and procurement controls to ensure that this storage amount is not exceeded. This is an optional requirement for CG facilities to manage storage quantities that are below *EPCRA* reporting thresholds.

b. **Institutionalize**. Institutionalize routine unit HMMS procedures to review new products for *EHS* constituents before adding them to unit Hazardous Material Inventory. Coordinate with the host command to inform them of any additions or deletions to the Inventory, and/or any changes in storage quantities.

c. TQM. Employ TQM techniques to reduce and/or eliminate the use of products containing  $\ensuremath{\textit{EHSs}}$  .

#### 6. Host Command Requirements.

a. **Coordinate Initial Notifications.** Coordinate notifications to local agencies if *EHS* storage exceeds *TPQ*. Provide info copy to your servicing CEU, or if a headquarters unit, directly to COMDT(G-ECV-1).

b. **Institutionalize**. Institutionalize procedures, to annually validate the notifications on file with local and state government agencies.

#### B. EPCRA Section 303, Emergency Planning Requirements

## 1. General.

One of the primary reasons for *EPCRA* is to engage local communities in planning for chemical disasters. CG facilities have a mandatory requirement to participate in the local emergency preparedness planning process **only** if they are required to make EPCRA 302 notifications. EPA regulations regarding EPCRA 303 are published in 40 CFR 355. All federal 303 regulatory requirements have been incorporated into the requirements set forth in this section.

#### 2. Planning Requirements.

Facilities that meet criteria must appoint a facility Emergency Response Coordinator, and provide the name, phone number, and address to the *LEPC*. The facility Emergency Response Coordinator shall act as liason with the *LEPC*, and participate in the planning activities of the *LEPC*. The *EPCRA* statutes give broad information gathering powers to the *LEPC*, enabling them to anticipate various disaster scenarios and plan responses. The regulations do not specify exact reporting requirements for facilities. Given our mission, and our standing policy to promote good community relations, CG facilities that meet criteria shall devote reasonable efforts to participate in the emergency planning activities of the LEPC.

#### 3. Tenant Command Requirements.

**Participation in Emergency Planning (As Required Only).** Participation by tenant commands in emergency planning efforts are required to the extent deemed appropriate by the host command (Emergency Response Coordinator).

## 4. Host Command Requirements.

Participation in Emergency Planning (As Required Only). The host command as required shall:

Coordinate any required notifications to the LEPC, Appoint a Emergency Respons Coordinator, and Participate in emergency planning activities of the LEPC.

#### C. EPCRA Section 304, Emergency Release Notifications

#### 1. General.

Under 304 of EPCRA, Coast Guard units must report accidental releases for certain hazardous substances if the release is above a specified *Reportable Quantity (RQ)*. These substances include *EHSs* and *CERCLA hazardous substances*. CERCLA hazardous substances appear in Table 302.4 of 40 CFR 302. The EPA regulations regarding EPCRA 304 reporting are contained in 40 CFR 355. All federal 304 regulatory requirements have been incorporated into the requirements set forth in this section. Chemical lists are included in the Appendices (1) and (2). A complete state listing of EPCRA points of contact is provided in Appendix (3); to assist units in determining state-specific information/requirements.

## 2. Reporting.

a. Agencies to Notify. In the event of an RQ release, it must be immediately reported by telephone to the:

State Emergency Response Commission (SERC), Local Emergency Planning Committee (LEPC), and National Response Center (NRC).

b. Immediate Notification. The initial telephone report to each organization shall include:

The chemical name or identity of any substance involved in the release;

The location of the chemical;

Whether the substance is an EHS;

An estimate of the quantity of the substance that was released into the environment;

The time and duration of the release;

Whether the chemical was released into the air, water, soil, or a combination of the three;

Any known or expected acute or chronic health risks associated with the emergency; and, where appropriate, advice concerning medical attention for exposed individuals;

The proper precautions to be taken as a result of the release, including evacuation; and

The names and telephone numbers of the person or persons to be contacted for further information.

c. Follow-up Notification. Written follow-up to the LEPC and SERC is required as soon as practicable after a release. The post accident/spill report shall provide greater detail about initial notification. The written report shall include: Actions taken to respond to and contain the release; Any known or expected acute or chronic health risks associated with the release; and Advice regarding medical attention for exposed individuals, when appropriate.

## 3. Exemptions.

The EPA has promulgated certain exemptions to the reporting provisions of EPCRA. CAUTION, the exemptions differ for each Section of EPCRA, and therefore apply only to that Section. The reporting exemptions that apply to EPCRA 304 are explained below:

a. Federally permitted releases as determined under CERCLA. The CG currently has no such permits.

b. Releases which result in exposure only to persons within the boundaries of the facility.

c. Routine releases of pesticides being applied in accordance the regulatory requirements of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). This does not include the accidental spill of pesticides.

d. Continuous releases as defined under CERCLA.

## 4. Clarifications.

Fuels and fuel oil product spills. Fuel and oil product spills are not reportable under EPCRA 304, and therefore the *SERC* and *LEPC* do not need to be notified. Spills are still reportable under various state Clean Water Act provisions, and notifications to the *NRC* and other state agencies are still required. Units shall coordinate with their host command to ascertain local requirements.

#### 5. Tenant Command Requirements.

a. Update Existing Emergency Response Plans. Update existing emergency response plans to include notification to the SERC and LEPC (and NRC if not already included). There is no need to create a new plan, unless one does not already exist. Units that use hazardous materials already have a variety of requirements to have emergency response plans as specified in reference (c), Hazardous Waste Management Manual (e.g. Spill Prevention Control and Countermeasure Plan, RCRA Contingency Plan, Facility Response Plan, etc). Verify that the existing plan(s) contain the required reporting elements specified in the EPCRA regulations.

b. Spill Notifications. In the event of a spill, make notifications as required. Provide information copies of any reports and/or correspondence to the host command; including all "after action items" such as correcting the cause of the spill or any amendment to existing emergency plan procedures. Note, the requirement for the spill notifications at some CG *facilities*, has been negotiated in written local host/tenant agreements to be the responsibility of the host command.

## 6. Host Command Requirements.

**Custody of Spill Case Files.** Host commands shall retain copies of **all** spill case files reported by the *facility*.

#### D. EPCRA Section 311, Chemical Storage Reporting

#### 1. General.

If a CG facility has stored on-site at any given time, more than 10,000 pounds of a hazardous chemical, or in the case of an EHS, more than the TPQ or 500 pounds (whichever is less), then the facility must report under EPCRA 311. There are no "chemical lists" associated with EPCRA 311 (except as applicable to EHSs). Any hazardous chemical or product stored in excess of 10,000 pounds is a potential candidate for EPCRA 311 reporting. A hazardous chemical or product is anything that its manufacturer or distributor is required to prepare a Material Safety Data Sheet (MSDS) for under the OSHA standard. It is estimated that more than 500,000 chemicals and products have MSDSs. EPA regulations regarding EPCRA 311 are found in 40 CFR 370. All federal 311 regulatory requirements have been incorporated into the requirements set forth in this section. A complete listing of state EPCRA points of contact is provided in Appendix (3); it also lists the state's reporting

## 2. Reporting.

a. Agencies to Notify. Reports shall be submitted to the following local agencies:

Local Fire Department, State Emergency Response Commission (SERC), and Local Emergency Planning Committee (LEPC).

b. MSDS or Inventory Listing. The regulations allow facilities the option of submitting copies of MSDSs OR a product listing for which an MSDS is available. CG facilities shall report in accordance with state preference. This is to be a onetime report, updated only if the storage quantity changes, or there is a significant change stemming from new or revised MSDS information. Updates are due to these agencies within 90 days after the storage quantities or the MSDS information changes.

c. **Mixtures (Products)**. The regulations allow facilities two options for the reporting of "mixtures" of chemicals (the vast majority of products that the CG uses are mixtures of chemicals).

- <u>Option 1</u>: Submit a listing of the individual chemical components in the mixtures. This option requires substantially more recordkeeping, and is counter productive. **DO NOT report under this option**.
- Option 2: Submit a listing of the mixtures (products) themselves. All CG facilities shall report to local agencies under this option, either by providing a copy of the MSDS, or listing the product.

d. **Sample "Inventory Listing" Format.** A sample reporting format, for those facilities that report the "Inventory Listing" (as opposed to copies of MSDSs), is provided in Exhibit 5-1. Information to be provided to the local agencies is available from the MSDS, and includes:

The chemical name or common name of the product, Hazard category.

## 3. Exemptions.

The EPA has promulgated certain exemptions to the reporting provisions of EPCRA. CAUTION, the exemptions differ for each Section of EPCRA, and therefore apply only to that Section. The reporting exemptions that apply to EPCRA 311 are explained below:

a. Foods, food additives, drugs, or cosmetics regulated by the Food and Drug Administration

b. Chemicals present in solid manufactured items to the extent that exposure does not occur under normal circumstances, for example, paint on furnishings. Such articles must meet a three part test: they are formed to a specific shape or design during manufacture; they have end use functions dependent in whole or in part upon the shape or design in end use; and they do not release, or otherwise result in exposure to hazardous chemicals under normal conditions of use.

c. Consumer products to the extent they are used for personal, family, or household purposes, **OR** products used in the same form and concentrations available to a consumer. The term "form" refers to the packaging rather than the physical characteristics of the product.

d. Chemicals used in research laboratories, hospitals, or other medical facilities under the direct supervision of a qualified individual.

e. Chemicals used for routine agricultural operations (includes grounds maintenance activities).

f. Tobacco or tobacco products.

g. Wood or wood products.

h. Hazardous wastes as defined by the Solid Waste Disposal Act.

### 4. Clarifications.

The following are common situations that shall be reported consistently CG-wide:

a. **Fuel**. The reporting criteria is based on storage <u>capacity</u>; this differs from other hazardous materials where threshold is based on actual or estimated *HMMS*/<u>inventory</u> data. It is assumed that the fuel tanks are full. If the aggregate total of storage capacity in each respective fuel category exceeds 10,000 pounds, the the facility has a reporting requirement. Fuel in the tanks of the following shall be excluded from threshold calculations to eliminate accounting for small or transient quantities: visiting vessels and visiting aircraft, boats 55' and below; equipment, and vehicles. Fuel storage capacity in the tanks of homeported cutters and homeported aircraft would be counted towards the total storage for the *facility*, and fuels stored in shore-side Aboveground Storage Tanks and Underground Storage Tanks (ASTs/USTs) will be counted.

The following table equates gallons of fuel to pounds of fuel. *Facilities* that exceed the storage capacity thresholds have a reporting requirement under 311:

Fuel	Unit Weight	Facility Threshold
Туре	Pounds/Gallon	#Gallons = 10,000 Pounds
Gasoline (all)	7.30	1370
Diesel(all)	7.31	1370
Htg Fuel No. 2	7.31	1370
JP-4	6.37	1570
JP-5	6.65	1504
JP-8	6.65	1504
Jet-A	6.65	1504

b. **Engine fluids**. Engine fluids in the engine would not be counted towards the total, but storage, for example, of drums of lube oil would. Likewise, the same principle would apply to refrigerants, boiler chemicals, etc. Count what is stored in the drum or container, not what is in the equipment.

c. **Ordnance**. Ordnance and all type of munitions shall not be reported to local agencies. Ordnance and munitions do not have MSDSs, and there is no requirement to report. Reporting storage quantities and locations publicly would seriously compromise safety and security.

d. **Batteries**. Installed batteries in the equipment or in an ATON structure, offsite or onsite, would not be counted towards threshold; batteries in storage would be counted. Each class of battery would be aggregated separately to determine if threshold is met for that class of battery. Lead-acid batteries contain sulfuric acid (CAS 7664-93-9) which is a listed *EHS*; the *TPQ* is 1000 pounds, but the TIER II reporting threshold of 500 pounds would apply. (Use Exhibit 2-3 to make this calculation; the concentration of sulfuric acid by weight ranges from 14% to 37% depending on the battery type; consult MSDSs for specific data.)

#### 5. Tenant Command Requirements.

a. **Coordinate with Host Command.** Reporting under 311 is a one-time occurance. Coordinate closely with the host command to determine what products are stored in large volume at the facility that may require reporting. (See Chapter (1) Implementation Strategy).

b. **TQM.** Employ TQM techniques to reduce storage of large volume hazardous materials.

c. **Specify Storage Quantities (Optional)**. Specify maximum storage quantities where facility storage is close to regulatory threshold, and establish strict inventory and procurement controls to ensure that this storage amount is not exceeded.

d. **Update Notifications to Host Command.** Notify the host command as needed of any significant changes in storage quantities or product information.

## 6. Host command Requirements.

Notifications to Local Agencies. Coordinate determination of those products at the facility that meet threshold, and provide notifications to local agencies as required.

(Note: this may be provided as an enclosure to the notification letter to SERC, and LEPC)

Chemical or		Hazaı	Hazard Category						
	Common name	(1)	(2)	(3)	(4)	(5)			
-	Gasoline,	Х	Х	Х					
	Regular Unleaded								
-	Turbine Fuel,	Х	Х	Х					
	JP-5								
-	Diesel Fuel,	Х	Х	Х					
	Marine								
-	Diesel Fuel,	Х	Х	Х					
	No. 2 Heating								

## Hazard Category:

(1) Immediate (acute) health hazard

(2) Delayed (chronic) health hazard

(3) Fire hazard

(4) Sudden release of pressure

(5) Reactive

#### E. EPCRA Section 312, Tier II Reporting

## 1. General.

Facilities that must report under EPCRA 311, must also report under 312. The EPA regulations regarding EPCRA 312 are found in 40 CFR 370.

## 2. Reporting

a. Tier II Reports. CG facilities must annually submit by 1 March, a report on the products that meet the 10,000 pound or EHS storage threshold. States vary in their requirements; reports are required on either the federal Tier I or Tier II form, or States have their own form. CG facilities shall report in accordance with specific State requirements. Most States require the Tier II form. The information requirement in the Tier II form includes basic facility identification, chemical description, and inventory data; a copy is provided in Appendix (4). Appendix (3) is a complete state listing of EPCRA points of contact; it also lists the state's reporting requirements.

b. Agency Reports. Tier II reports shall be submitted to the following local agencies:

Local Fire Department, State Emergency Response Commission (SERC), and Local Emergency Planning Committee (LEPC).

c. Mixtures (Products). The regulations require that if the "mixture" (product) option is chosen for reporting under 311, then "mixtures" (products) must be reported in 312 as well. CG facilities shall report mixtures (products) on Tier II forms, in lieu of individual chemicals.

#### 3. Exemptions/Clarifications.

a. **Exemptions.** With the exception of reporting of *EHSs*, exemptions and clarifications that apply to Section 311 of EPCRA (as previously explained in Chapter 5 Section D) apply to 312 reporting.

b. **EHSs.** Determination of the need to report *EHSs* on the Tier II forms must be based on the total amount of *EHS* in all forms present at the facility. All products that have *EHSs* in pure form or mixtures must be aggregated to determine if threshold is met. Products with non-EHS constituents should not be aggregated.

#### 4. Tenant Command Requirements.

Institutionalize Annual Procedures. Coordinate closely with the host command to annually validate product storage information, and provide the host command with information necessary to complete the Tier II reports. This can best be accomplished after conducting the annual physical inventory On Or About 1 January, required for HMMS administration (See Chapter 2).

## 5. Host Command Requirements.

Annual Reporting. Coordinate determination of those products at the facility that meet threshold, prepare and submit the Tier II Report to local agencies NLT 1 March.

#### F. EPCRA Section 313, Toxic Release Inventory Reports

## 1. General.

a. Activity Thresholds. CG facilities that "Manufacture", "Process" or "Otherwise Use" toxic chemicals in quantities that exceed thresholds, will need to complete a *Toxic Chemical Release Inventory Form R (TRI Form R)*. EPCRA 313 regulations are found in 40 CFR 372. Federal 313 regulatory requirements, and EPA interpetive guidance have been incorporated into the requirements set forth in this section. Chemical lists are included in the Appendices (1) and (2). A brief definition and the quantity thresholds for the three covered activities are:

Manufacture: The term "manufacture" means to produce, prepare, compound, or import a listed toxic chemical. The threshold is <u>25,000</u> pounds per year. Process: The term "process" means the preparation of a listed toxic chemical (after its manufacture) for distribution. The threshold is 25,000 pounds per year.

Otherwise Use: The term "otherwise use" encompasses any activity involving a listed toxic chemical at a facility that does not fall under the definitions of "manufacture" or "process". The threshold is 10,000 pounds per year.

b. Small Coast Guard Facilities. Consistant with CG pollution prevention policy, all CG units are required to identify products that contain *toxic chemicals*, record this information appropriately in the unit HMMS, and take proactive steps to reduce unnccessary storage and use of these products. The vast majority of CG *facilities* do not have EPCRA 313 reporting requirements. Unless you have been directed by your host command to participate in EPCRA 313 threshold calculations, SKIP IMMEDIATEDLY TO PARAGRAPH 5 OF THIS SECTION.

c. Large Coast Guard Facilities. Analysis of the scope of CG operations, in comparison to 313 thresholds and regulatory exemptions, indicate that only those *facilities* that have industrial activity, or use large quantities of jet fuel will potentially have EPCRA 313 reporting requirements. However, at those facilities where these operations and activities are present, all tenant commands are required to evaluate their hazardous material uses for 313 applicability. Only facilities specifically notified by COMDT are required to make threshold determinations.

## 2. Reporting.

a. **TRI Form R.** TRI Form Rs are submitted by July 1 for the preceding calendar year to the *SERC* and the EPA EPCRA Reporting Center. Facilities required to prepare TRI Reports shall submit Draft Reports to COMDT(G-ECV-1) by 1 May for the preceding calendar year. COMDT(G-ECV-1) will review and clarify these reports for CG-wide consistancy; and send rcports to respective agencies by 1 July.

b. Estimating TRI Releases. General guidance for completing the TRI Form R is available in EPA Pub 745-K-93-001 entitled "Toxic Chemical Release Inventory Reporting Form R and Instructions", and EPA Pub 560/4-88-002, entitled "Estimating Releases and Waste Treatment Efficiencies for the Toxic Release Inventory Form". These publications may be ordered through the *EPCRA HOTLINE*. Specific guidance on the methods to be used by covered CG units to estimate releases will be coordinated by COMDT(G-ECV-1).

c. **Release Reduction Goals.** As required by the EO, covered *facilities* shall reduce TRI releases by at least 50% by the year 1999. Calendar year 1994 establishes the baseline year for reporting TRI releases. Releases include any fugitive emissions, spills, and any off-site transfers for waste disposal.

d. **Facility P2 Plans**. The EO requires facilities preparing TRI Reports to have Facility Pollution Prevention Plans that specify how TRI releases will be reduced by 50% by 1999. Facilities shall prepare these Plans after calendar year 1994 baseline data is established. COMDT(G-ECV-1) will coordinate and provide assistance in preparing these plans through direct correspondence with the unit.

c. Weight of toxic chemicals. The EPCRA 313 quantity thresholds apply to the actual concentration/weight of the *toxic chemical* in the product, not the weight of the total product. Calculation of the weight of *toxic chemical* is generally determined from information available on the MSDS. All weights shall be expressed in pounds. A worksheet for making threshold calculations has been developed as part of the HMMS, see Exhibit 2-3.

f. Chemical Name Synonyms. There are numerous synonyms for each of the toxic chemicals on the 313 List. MSDSs may list the synonym, not the actual listed chemical. Recognizing this problem, the EPA has issued Pub 744-B-92-001, entitled "Common Synonyms For Chemicals Listed Under 313 of EPCRA". Units may order this publication by calling the EPA *EPCRA HOTLINE*.

#### 3. Exemptions.

The EPA has excluded certain "uses" of toxic chemicals from threshold determinations and reporting because of the difficulties in tracking small or diffuse quantities of these listed chemicals. These exemptions can be applied at CG *facilities* in making EPCRA, 313 threshold calculations as explained in the following subparagraphs. The exemptions stated previously in this Chapter for other sections of EPCRA do not apply in making EPCRA 313 threshold calculations.

a. Ancillary Support. Executive Order 12856 makes EPCRA applicable to all federal facilities. The EPA requires that threshold determinations for federal facilities focus efforts on the uses of 313 toxic materials which support the "primary mission" of the facility. The primary mission refers to the facility's chief responsibility, including activities integral to the fulfillment of that responsibility. Generally, the "Primary Mission" criteria means that uses of toxic materials in "Ancillary Support" activities are exempt from EPCRA 313 threshold calculations, and that some of the regulatory exemptions applicable to industry do not apply to federal facilities. For example, routine janitorial and facility grounds maintenance is ancillary support. Consequently, products or items containing toxic chemicals that are used for routine janitorial and facility grounds maintenance are exempt from a. Ancillary Support (cont'd) reporting (e.g. cleaning supplies, fertilizers, and pesticides similiar in type or concentration available in consumer products). Therefore, facilities do not have to report the use of toxic chemicals for lawn maintenance, building maintenance, and grounds maintenance.

b. Determining Ancillary (Exempt) Status. A matrix of exempt and non-exempt activities is provided in Exhibit 5-2. This matrix is intended as a guide, and the Commanding Officers of the host and tenant commands shall determine exempt/non-exempt activities/uses. Organizational elements that perform both exempt and non-exempt activities may have difficulty differentiating uses of chemicals. Where uses cannot be determined "exempt" by some logical method, the chemical use shall be included in threshold calculations.

c. **Deminimus limits**. Products with "de minimus" concentrations of "toxic chemicals" are exempt. This means less than 1% by weight if non-carcinogenic, less than 0.1% if carcinogenic. Deminimus concentrations are tabulated in the 313 list of chemicals provided in the appendices.

d. Chemicals Contained in Equipment, Tools, and Other Articles. "Article" uses are exempt. These are manufactured items that have been formed into a specific shape or design, and "use" does not change that shape or design. For example, copper is a 313 listed chemical category, but reporting the use of copper pipe in plumbing installations, or the copper wiring in electric motors, is exempt. Batteries (all types) are another common example of "articles" that are exempt.

e. Motor Vehicle Maintenance. Products containing toxic chemicals used in maintenance performed on the administrative vehicles operated by the facility are exempt from reporting (e.g. cars, trucks, vans, forklifts, private vehicles or any other vehicle that can be categorized as ancillary support).

f. Offsite Maintenance. Maintenance performed offsite on tactical vehicles (e.g. boats, ships, and planes) is exempt. For example, maintenance performed on a cutter in-port by unit personnel is exempt, maintenance performed by the Group Engineer, Industrial Support Activity, or NESU is not exempt.

g. Laboratory Activity. Toxic chemicals used in a laboratory for quality control, research and development, and other laboratory uses are exempt from reporting. To be exempt, the chemical must be used directly in, or produced as a result of, a laboratory activity; and the use must occur under the direct supervision of a technically qualified individual.

h. Structural Component Use. This exemption applies to toxic chemicals that are used in or as a result of passive use and includes passive dedgradation such as corrosion or abrasion which naturally occurs in buildings, pipes, and other structural components. Toxic chemicals which become part of the structure are also exempt. For example, solvents and other toxic chemicals in paints used to maintain the physical integrity of a facility (as well as such structures as port cranes, hangars, barracks, etc) are exempt.

i. **Personal Use**. Products containing toxic chemicals used by employees or other persons for their own personal use are exempt from reporting (e.g. galley, CGES, MWR, or medical clinic activities). Types of products that are used for "personal use" include food, drugs, cosmetics, office supplies, and other personal items. The exemption also covers refrigerants used solely for employee climate control; it would not cover for example climate control for the communications center. Similarly, chlorine used in on-site swimming pools for employee recreational use and chlorine used in treating drinking water is exempt. However, chlorine used for treating swimming pools used soley for training of CG personnel would not be exempt.

j. Intake Water/Air Use. Process water or non-contact cooling water drawn from the environment or municipal sources, and air drawn for compressed air or combustion, and then returned to the environment is exempt from reporting.

## 4. Clarifications.

a. Fuels. Fuels are the largest and most complex category of products for which the CG must prepare TRI reports. Fuels contain literally hundreds of chemicals, some of which are listed 313 *toxic chemicals*. The following guidance applies to the "use" of fuels:

**Use Default Constituent Concentrations.** A great deal of effort can be spent at the unit to research fuel constituents, instead, all CG units shall use the default values listed in Exhibit 5-3 of this Section to make threshold calculations. Fuels are produced using performance based specifications, e.g. they are not specified by constituent. Constituent contents vary greatly depending on the source of crude oil and the manufacturing process used in producing the fuel. For these reasons, the MSDSs for fuel products do not provide enough information for constituent calculations.

**Exempt Fuels.** Diesel fuels, heating Fuels, JP-5, JP-8, and Jet-A are exempt from TRI reporting; they do not contain toxic chemicals above deminimus concentrations. Threshold calculations do not need to be performed for these fuels.

- Non-Exempt Fuels. Gasoline and JP-4 contain toxic chemicals above deminimus concentrations. Threshold calculations must be performed for these fuel uses. *Facilities* may use the "ancillary support" criteria and the "personal use" exemption where appropriate to eliminate certain fuel uses (e.g. count only the "primary mission" fuel uses).
- Vessels and Aircraft. Fuels for vessels and aircraft are not "used" at the facility. Fuel is used in flight or underway, therefore no "releases" occur at the *facility* stemming from fuel "use". However, there are releases from shore-side ASTs and USTs in the form of vapor and leaks or spills. The relevant "use" for determining if threshold quantity is met, is the quantity of fuel throughput in Coast Guard <u>owned</u> ASTs and USTs. For example, when CG vessels or aircraft receive their fuel directly from a vendor or some other Agency, the CG has no reporting requirement. When fuel comes from a CG owned AST or UST, it is considered "used" for purposes of 313 threshold calculations.

b. Engine and equipment fluids. For engine and equipment fluids, the quantity "used" applies to the 313 chemicals, (e.g. halons and refrigerants) changed/added throughout the year. "Use" does not include what is in the equipment.

c. **Ordnance**. The Coast Guard follows DOD position on ordnance and munitions. Uses and releases of ordnance will not be included in 313 threshold calculations.

d. **Sandblasting**. Sandblasting operations may meet reporting thresholds for copper, lead, and mercury. The appropriate activity category to apply is "manufacturing"; e.g. use the 25,000 pound threshold. Note, it is the concentration/weight of these chemicals in the throughput process that is important in making threshold calculations, not amounts contained in the wastes generated.

e. Warehousing. If the warehouse is only storing toxic chemicals, then the warehouse contents **are not** used in threshold calculations. Repackaging (e.g., pouring the contents of a 55 gallon drum into smaller containers) at a warehouse is considered processing and the quantities of the toxic chemicals repackaged **would** have to be factored into threshold determinations for the chemical. Simply relabeling or removal and distribution of prepackaged quantities from a shrink wrapped shipment of such packages **is not** considered processing.

## 5. Tenant Command Requirements.

a. HMMS Records. Identify products that contain toxic chemicals, and record this information appropriately in the unit HMMS records (See Chapter 2).

b. **TQM.** Employ TQM techniques to reduce uneccessary storage and use of products that contain toxic chemicals.

c. Threshold Determinations (Limited Applicability). Unless otherwise directed by your host command, there is no requirement to make EPCRA 313 threshold determinations.

## 6. Host Command Requirements.

a. Threshold Determinations (Limited Applicability). If directed by COMDT to proceed with 313 threshold determinations, coordinate data collection from tenant commands at the facility.

b. **TRI Data Collection**. Develop TRI data collection and tracking plans to meet Form R requirements, for each chemical at the facility that meets threshold. Coordinate closely with COMDT(G-ECV-1) in making these calculations.

c. **TRI Report Submission**. Prepare and submit TRI Form R Reports to COMDT(G-ECV-1) by 1 May.

d. Facility P2 Plans. Coordinate development of Facility P2 Plans with COMDT(G-ECV-1).

# Exhibit 5-2 Activity Exemptions

	Require	es 313
	Three	shold
Activity	Calcu	lations
Description	YES	NO
"Ancillary Support" Functions		
Facility Operations and Maint		Х
Utility Operation and Maintenance		Х
Grounds Operations and Maintenance		Х
Administrative Vehicle O&M		Х
Cars, trucks, vans, heavy equip		
Medical Support		Х
Family Housing Support		Х
NAFA Support		Х
Administrative Support		Х
MWR Support		Х
Comptroller/Warehousing Support		Х
Other Office/Staff Support		Х
Small Arms Ranges; personal use		Х
CC Operations and		
UD peralions and		
Amon of M	V	
AION OWM	A	
Industrial/NESU Activities	X	
Vessel/Small Boat U&M	X	
Alrcrait U&M	X	
Electronic/EMD U&M	X	
VTS U&M	X	
Small Arms Ranges; official training Tactical Vehicle O&M	Х	
Aircraft Ground Support Equipment	Х	
Ind/Ops Forklifts, Mules, Cranes	Х	

Fuel Category/	*TRI Components	Deminimus	Percent	**Annual Use
Primary Use	Concentration	Concentration	By Wieght(Avg)	(Gallons)
Gascline,	Benzene	0.1	2.2	
Premium	Cyclohexane	1.0	2.0	
Unleaded	Ethylbenzene	1.0	1.5	
(7.30 lbs/gal)	Toluene	1.0	12.7	10,786
	1,2,4 Trimethyl- benzene	1.0	4.3	
	Xylene(o,m,& p)	1.0	7.6	
Gasoline,	Benzene	0.1	1.8	
Regular	Cyclohexane	1.0	1.3	
Unleaded	Ethylbenzene	1.0	1.6	
(7.30 lbs/gal)	Toluene	1.0	6.4	19.026
	1,2.4 Trimethyl- benzene	1.0	2.6	
	Xylene(o.m.& p)	1.0	7.2	
Jet Fuel, JP-4	Cyclohexane	1.0	1.2	No longer
(6.37 lbs/gal)	Benzene	0.1	1.0	available
	Toluene	1.0	3.2	through DLA
	Xylene(o,m,& p)	1.0	3.2	as of
	1,2,4 Trimethyl- benzene	1.0	1.0	April 1994
Jet Fuel, JP-5	None above	N/A	N/A	Exempt
[0.00 105/981]	None shove	N/h	N/1	Frent
(6.65 lbs/gal)	deminimus	N/ K	.,	Excupt
Jet Fuel, Jet-A	None above	N/A	N/A	Exempt
(6.65 lbs/gal)	deminimus			
Diesel, All types (6.65 lbs /gal)	None above deminimus	N/A	N/A	Exempt
No. 2 Htg Fuel Oil	None above	N/A	N/A	Exempt
((*51 TD8/de1)	Gemining		_	·····

## Exhibit 5-3 313 Toxic Chemical Constituents of Fuel Products

\* Only TRI constituents above deminimus concentrations are listed.

\*\* The gallon threshold is the maximum amount of "primary mission" fuels that can be used at a facility before exceeding TRI reporting threshold. The threshold is based on the largest (by weight) TRI constituent in the fuel. CAUTION, if more than one type of fuel is used at a facility, then calculate cummulative total of each chemical in the various fuels (and other products used at the facility) to determine if the 10,000 pound reporting threshold is met. (Pounds used = Unit weight x quantity x percent concentration/100).
## Appendix 1

## SARA TITLE III CONSOLIDATED CHEMICAL LIST Sorted by Chemical Abstract Registry Number

## A. General.

1. The consolidated chemical listing includes all chemicals subject to *EPCRA* planning and reporting requirements, specifically EPCRA 302, 304, and 313. The chemical listing contains additional information as well, e.g. CAS registry number, *TPQ*, *RQ*, and deminimus concentrations where applicable.

2. The EPA does add and delist chemicals on occasion. COMDT (G-ECV-1) will issue updates as the list changes. The list has been sorted two ways:

Appendix 1 - Sorted by Chemical Abstract Service (CAS) registry number.

Appendix 2 - Sorted by Alphabetical Name of the chemical.

## B. Column Explanations.

- Column (A) Chemical name; note that a given chemical may be listed several times because it has synonyms that are commonly used.
- Column (B) Commonly known alternate name.
- Column (C) CAS Registry number. The Chemical Absract Service registers chemicals by assigning discrete identifying numbers. More than one chemical name may be listed for one CAS number because the same chemical may appear on different lists under different names.
- Column (D) An "X" denotes that the chemical is an Extremely Hazardous Substances (EHS) and listed under EPCRA 302. The Threshold Planning Quantitiy (TPQ) is listed under column (H).
- Column (E) An "X" denotes that the chemical is listed under EPCRA 313.
- Column (F) An "X" denotes that the chemical is listed under the Comprehensive Environmental Response, Compensation, and Liability Act as amended (CERCLA, or "Superfund"). Releases of listed chemicals are reportable to the National Response Center, and now (because of EPCRA 304) also to the SERC and LEPC. This document also includes chemicals added to the CERCLA list because they are listed as hazardous air pollutants under section 112(b) of the Clean Air Act (CAA).
- Column (G) An "X" denotes that the chemical is a RCRA chemical from the P and U lists (40 CFR 261.33)

### B. Column Explanations. cont'd.

- Column (H) Threshold Planning Quantity (TPQ) for Extremely Hazardous Substances (EHSs) listed under EPCRA 302 (in pounds). For chemicals that are solids, there may be two TPQs given (e.g., 500/10,000). In these cases, the lower quantity applies for solids in powder form with particle size less than 100 microns, or if the substance is in solution or in molten form. Otherwise, the 10,000 pound TPQ applies.
- Column (I) De Minimus concentrations for chemicals that listed under EPCRA 313. Concentrations are 0.1% by weight for carcinogenic chemicals, and 1.0% for non-carcinogenic.
- Column (J) Reportable Quantities (RQ) under CERCLA. An asterisk ("\*") following the RQ indicates that no reporting of releases is required if the diameter of the pieces of the solid metal released is 100 micrometers (0.004 inches) or greater. Substances listed under CAA 112(b) that have been added to the CERCLA list with statutory one-pound RQs are indicated by a plus sign ("+") following the RQ. EHS RQ. Releases of reportable quantities (RQ) of EHSs are subject to state and local reporting under 304. If a chemical listed under 302 does not have a CERCLA RQ, a statutory RQ of one pound applies for 304 reporting.

Column (K) - RCRA P and U Codes.



# June 1994 ALL EPCRA 302/313 and CENCIA Chemicals (Sorted by Chemical Abstract Service CRS Number)

CHEMICAL RAME (A)	ALTERNATE RAME (B)	EPCRA EPCRA CAS NUMBER 302 31.3 CERCLA ROBA (C) (D) (E) (P) (G)	802 TPC (H)	Deffinimus Concent. (1)	10 (J)	RCR CODE (K)
Thiourea	THICUREA	62566 X X X		0.1	10	U219
Dichlorvos Fluczoacetic acid sodium salt	DICHLORVOS FUIDECACETIC ACID SODIUM SAUT	62737 X X X 62748 X X X	10/10 000	1.0	10	0054
dium fluoroacetate	SODIUM FLUOROACETATE	62748 x x x	10/10,000		iŏ	POSE
ethanamine, N-methyl-N-nitroso-	METHANAMINE, N-METHYL-N-NITROSO-	62759 X X X X	1,000	0.1	10	P082
itrosodimetry lamine	NUTROSODIMETHYLAMI	62/59 X X X X 62759 X X X X	1,000	0.1	10	P082
rbaryl	CARBARYL	63252 x x	2.000	ĩô	100	1001
nenol. 3-(1-methylethyl)-, methylcarbanete	PHENCE, 3-(1-METHYLETHYL)-, METHYLCARBAMATE	64006 X	500/10,000			
petic acid	ACETIC ACID	64197 X		1.0 5		0125
iethyl sulfate	DIETHYLSULFATE	64675 X X		0.1	14	
icotine sulfate	NICOTINE SILENTE	64808 X	10/10,000	0000001111220004000112	Contraction of the	
mzoic acid	BENZOICACID	65850 X	100/10,000	5	5.000	
acil mustard	URACIL MUSTARD	66751 X X	100.00.000		10	0237
Clorescialde	METHANOI.	67561 X X X	100/10,00	1.0 5	5.000	1154
sopropyl alcohol (mfg-strong acid process)	ISOPROPYLALCOHOL	67630 X	00.0044989999-0-22200000.00000	<u> </u>		
etone	ACETONE	67641 X X X	10.000	1.0 5	5.000	0002
exachloroethane	HEXACHLOROETHANE	67721 X X X		1.0	100	0131
imethylformamide	DIMETHYLFORMAMIDE	68122 X	ion no choice santa Mariatana ana mari		1+	
widing. N-methyl-N'-nitro-N-nitron-	GENTLINE MARTINE N'ANTRE-NANTRESSA	-68/68 X		0,1	10	11163
exachlorophene	HEVACHLOROPHENE	70304 X X X		1.0	100	0132
ropiophenone. 4'-amino	PROPIOPHENONE, 4-AMINO	70699 x	100/10.000		1	
-BOLYT ALCONOL	BUTTLALOUHULA		. Children and the second	1.0 2	3,000	LUCIS
,1,1-Trichloroethane	TRICHLOROETHANEA	71556 X X X		1.0 1	1,000	U226
thyl chloroform	METHYLCHLOROFORM	71556 X X X		1.0 1	L,000	U226
drin	PIOLICALIA	72208 8 8 8	500/10.000		1	P051
thorychlor	METHORYCHLOR	72435 X X X		1.0	1	U247
	DDD	72548 X X			1	0060
rypen blue	TRYPAN BLUE	72571 X X X		0.1	10	<b>U236</b>
onomethane	BROMCHETHANE	74839 X X X X	1,000	1.0 1	1,000	UC29
thy ene	METHYLEROMIDE FTHYLEROMIDE	74839 X X X X	1.00		1,000	0029
lormethane	CHLOROMETHANE	74873 X X X		1.0	100	U045
athyl chloride	METHYLCHLORIDE	74873 X X X		1.0	100	0045
crosethylamine	MONOMETHYLAMINE	74895 X X X		0,1 0,1	100	0138
ydrocyanic acid	HYDROCYANICACID	74908 X X X X	100	1.0 ~	10	P063
ydrogen cyanide	HYDROGENCYANIDE METHYI METATANI	74908 X X X X	100	1.0	10	P063
himethanol	THIOMETHANOL	74931 X X X	500	1.ŏ	100	0153
athylene bromide	METHYLENEBROMIDE	74953 X X X		1.0 1	1,000	0068
hioroeuxine thvi chloride	CHLOROETHANE	75003 X X 75003 V V		1.0	100	
ínyl chloride	VINYLCHLORIDE	75014 x x x		ô:ĭ	$\tilde{1}$	U043
cnoethylanine	MONCETHYLAMINE	75047 x		11 C 1	100	
cetaldebyde	ACETONITALLE	75038 X X X		1.0 5	000	0003
Ichloromethane	DICHLOROMETHANE	75092 x x x		ŏ.i i	.000	ŬÕÕ
ethylene chloride	METHYLENBCHLORIDE	75092 x x x	10.000	0.1 I	1.000	0000
alcium carbide	CALCIUMCARBIDE	75130 X X X X 75207 X	10,000	1.0	100	P022
thylene oxide	ETHYLENEOKIDE	<u>75218 x x x x </u>	1,000	0.1	10	0115
	DECASE	75218 X X X X	1.000	• • <u>•</u> .1	10	0115
ribromomethane	TRIBROMOMETHANE	75252 X X X		1.0	100	0225
ichlordbronomethene	DICHLOROBROMONETHANE	75274 X X		1.0 5	5,000	
1-Dichloroethelene	DICHLOROETHANE DICHLOROETHANE	75343 X X X 75354 X		1.0 1	1,000	0076
inylidene chloride	VINYLIDENECHLORIDE	75354 X X X		1.0	100	0078
cetyl chloride	ACETYLCHLORIDE	X X			5,000	0006
hlorodifluoromethene(HCFC-22)	HTSCHORE HTSC-22	75455 X X X X 75456 X	10	1.0	10	P095
PC-22	HCFC-22	75456 \$		1.ŏ		
rimethylamine	TRIMETHYLAMINE	75503 X			100	
TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	PLINING, Z-TRINYL	75558 X X X X	10,000	0.3		P067
ropyleneimine	PROPULENEIMINE	75554 8 8 8 8				
Propyleneimine Propylene oxide	PROPYLENEIMINE PROPYLENECKIDE	75558 X X X X 75569 X X X	10,000	0.1	100	

ALL, EPCRA 302/313 and CERCLA Chemicals (Sorted by Chemical Abstract Service CAS Mumber)



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ACTOR CHEMICAL NAME ALTERNATE NAME (B) Control are Control of the second se  $\begin{array}{c} 1.0 & 1.000 \\ 1.0 & 10 \\ 1.0 & 10 \\ 1.0 & 10 \\ 1.0 & 10 \\ 1.00 & 1000 \\ 1.0$ x x x x x x x x 83329 84652 84762 85007 85018 854762 85018 854762 85478 85478 85487 86501 86500 86500 86500 86500 86500 86580 86580 86684 87720 86884 877805 87865 87865 877805 877 U088 U069 U069 × XXXX v190 XXX X X 10/10.000 10/10,000 XXXXX 5,000 100 100 500/10.000 500/10.000 XX XX P072 P072 1.0 x U082 U128 U128 U242 U242 100 1966 1.0 1 1.0 1 1.0 10 1.0 10 x 500 500 X X X X X X X 100/10,000 10 1,000 1,000 1,000 x 0.1 U231 1.0 x -Tornal increte -Nisidine -Phanylphenol -Increte -Diume-2,6-diisocyanate aphthalene -Juoine P020 X X X X X X X X X X X X X X X X 1.0 0.1 1.0 0.1 0.1 1+ x  $\begin{array}{ccccccc} 0.1 \\ 0.1 & 100 \\ 1.0 & 100 \\ 1.0 & 5,000 \\ 5,000 \\ 0.1 & 10 \\ 5,000 \\ 0.1 & 1 \end{array}$ 100 \*\*\*\*\* x **U16**5 thalene noline hloronaphthalene a-Naphthylamine hapyrilene hapyrilene henyl minobiphenyl widine U047 U168 U155 U073 X X X X CILGROWNINGLINE MATTINIANINE MATTINIANINE MATTINIANINE MATTINIANINE MATTINIANINE HERZIDINE ERZIDINE NITRELIPIENYL SULVEX (2.4.5-TP) T ACID I ESTEB DERZOVIPERTIDE DERZOVIPERTIDE DERZOVIPERTIDE DERZOVIPERTIDE DERZOVIPERTIDE DERZOVIPERTIDE DERZOVIPERTIDE DERZOVIPERTIDE x 0.1 1.0 0.1 0.1 0.1 14 1+ х 1021 enidine Nitrokiphenyl Uves (2,4,5-TP) 4,5-T acid 4,5-T esters 4-D Exters The periode Stroke Stroke 1 14 1,000 1,000 1,000 1,000 U233 U232 X X 93798 94111 94360 94586 94597 94757 94757 94757 94757 94757 94757 94757 94791 94804 95476 95476 95476 95487 95501 X X X X X X X X State Construction 1.0 0.1 0.1 1.0 1.0 XXXX 0090 U203 U240 U240 U240 U240 XXXXXX LINTURASIVALE SAPROLE D. ACID D. ACID D. SATUS D. ESTIPS role role -D -D Acid 2.4-D acid 2.4-D acid 2.4-D Esters 2.4-D Esters 2.4-D Esters Berzenz, C-disethyl C-Steol Control - Steol C-Steol Control - Steol C-Steol \*\*\*\* XXX X X X X X X X X X 1.0 1.0 1.0 1.0 1.0 1.0 U239 U239 U052 U070 U070 U328 U048 1,000/10,000 х DIGHLOROBENZENE TOLUIDINE GHLOROFHENOL TRUHETHYLBENZ DIAMINOTOLUENER TETRACHLOROENZENE TRICHLOROFHENOL-D STYRINECKIDE DIBROPOCHLORO DRCP 95534 95534 95578 95636 95807 95943 95954 96093 96128 96128 ic 100 5.000 U23c 10 U23c 1 U066 1 U066 1 U066 1 U066 X X X X 1.0 0.1 XX 1.0 0.1 0.1 1.0 0.1 XX XXXX X DURCHCORO DROP METHYLACRYLATE ETHYLACRYLATE ETHYLACRYLATE ETHYLACRYLATE CISOLWATYELLOWA ETHYLACRYLATE FURURAL BOYCARRACONIC ACLO BOYCARRACONIC ACLO BOYCARRACONIC ACLO BOYCARRACONIC ACLO ENVIOLATION AND ACLO ENVIOLATIONA 1.2-Dibras-3-chiartprope BGP Methyl acrylate Ethylae thourse C.I. Solvent Yellow 3 Ethyl motherrylate Benzone trichloride Benzone trichloride Benzonetrichloride Benzensulfonyl chloride Trichlorophenylallare x x x x x x x x x 96128 96333 96457 97563 97632 0.1 1,000 5,000 0.1 0.1 10 0.1 10 100 1 U118 U125 97634 98011 X 99075 X X 99077 X X 98077 X X 98079 X 98079 X 98135 X 10/10,000 100 100 U023 U023 U020 500

enzenamine, 3-(trifluoromethyl)- umene								(K)
umene	BENZENAMINE, 3-(TRIFLUORCMETHYL)-	98168	х		500		1	
	CUMENE	98828		X X X		1.0	5,000	0055
enzal chloride	BENZALCHLORIDE	98873	x	x x x	500	1.ŏ	5,000	Ŭ017
enzoyl chloride	BENZOYLCHLORIDE	98884	N N	XXX	10,000	1.0	1,000	111 69
-Nitrotoluene	NITROTOLUENE-M	29081	•	n î î	10,000	·	1,000	0105
.3,5-Trinitrobenzene	TRINITROBENZENE	99354		X X	l d'ar le casa e se s	1 6	10	U234
-Nitro-o-anisidine	NITROANISIDINE	99592		X	Contra de la contr	0.1		
-Dinitrobenzene	DINITROBENZENEM DINETRAL DAENNI ENED TRATNE	29650		ХХ	10/10 000	1.0	100	
-Nitrotoluene	NITROTULUENE-P	99990	្លាំិំំំំំំំំំំំំំំំំំ	<b>X</b> <sup>10</sup>	and the state of the	and a state of the second	1,000	
>Nitroaniline	NITROANILINE	100016		X X X		1.0	5,000	P077
-Nitrophenol	NITROPHENOL-P	100027	e 740 (	x x x	NY, transmont	1:6	100	Ŭ170
enzene, 1-(chloromethyl)-4-nitro-	BENZENBCHLOROMETHYL) -4-NITRO-	100141	5. X -	<b>V</b> V	500/10,000	10	100	1999 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Sthylbenzene	STHYLBENZENE	100414		x x		1.0	1,000	
styrene	STYRENEMONOMER BENZVI CHI OPTIDE	100425	an a	X X Y	500	0.1	1,000	P028
enzyi chioride Jenzonitrile	BENZONITRILE	100470	nur s <b>e</b> n a rus	X		1990-1855. <b>A • W</b> #13	5,000	1020
/-Nitrosopiperidine	NITROSOPIPERIDINE	100754	aster und	X X X	o and or taken of 12 day 17 d	0.1	10	0179
BOCA	MECCA	101144	64-22	ŶŶŶ		0.1	10	<b>U158</b>
-Bromophenyl phenyl ether	BROMOPHENYL PHENYL ETHER	101553		• × ×		0.1	100	0030
BI	MBI	101688	XXXX feeds	х х		ĭ.0		
sthylenebis(phenyliscoyanate)	METHYLENEBISPHENYL	101688	6796-1988	X X		1.0	14	
i,4'-Diaminodiphenyl ether	DIAMINODIPHENYL	101804		â	and a second state of the second state	ŏ.î		
socyanic acid, 3,4-dichlorophenyl ester	ISOCYANIC ACID, 3,4-DICHLOROPHENYL ESTER	102363	<b>.</b> . X	•	500/10,000	1 1 1	1	
henylthiourea	PHENYLTHIOUREA	103855	X	X X	100/10,000	)	100	PO93
-Anlsidine	ANISIDINEB	104949	22 TOP 1.280	x		1.0	5.000	
acrolactan	CAPROLACTAM	105602		Ŷ			1	
2,4-Dimethylphenol	DIMETHYLPHENOL DENVIOUED INTERVIOL	105679		X X X		1.0	1 100	0101
-Xylene	XYLENEC	106423		<del>x</del> x x		î.ŏ	1,000	U239
	CRESCI.C	106445		XXX		1.0	1,000	0052
	CHLOROANILLINE	106478		Â			1,000	PO24
>-Toluidine	TOLUIDINE DURNY ENVIOLANTING	106490	1. N. M	¥ X X		10	100	U353
-Benzoquinone	BENZOQUININE	106514	0.00 (940 * 00/2140	XXX		1.0	10	<b>U197</b>
uincne	QUINONE	106514	86.04633.2C2	<u> </u>		1.8	10	<b>U197</b>
2pichlorohydrin	EPICHLOROHYDRUN	106898	x	х х х	1,000	) <u>0.1</u>	100	UO41
1,2-Dibromoethane	DIBROMOETHANEE	106934		X X X		0.1	1	0067
Propargyl bromide	PROPARGYL BROMIDE	106967	X		10	<b>,</b>	1	
1,3-Butadiene	BUTADIENE	106990	T	X X X	501		1	P003
Allyl chloride	ALLYLCHLORIDE	107051	···· ··· · · · · · ·	x x î	~~	1.0	1,000	
1.2-Dichloroethane	DICHLOROETHANE	107062	(	X X X		0.1	100	0077
Chloroethanol	CHLOROETHANOL.	107073	x		500	)	1	Second Second
-Propylamine	PROPYLAMINE	107108		<u> </u>		<b>.</b>	5.000	<b>U194</b>
Ethyl cyanide	ETHYLCYANIDE	107120	Ŷ	x x	500	1	<u>ō</u> t	P101
ropionitrile	PROPIONITRILE	107120	x	Ŷ Ŷ Ŷ	10 500	, n.	100	P101
2thylenediamine	ETHYLENEDLAMINE	107153	a 🗘 i	î ĝ_^	1ŏ:ळॅळ	je Mila	5,000	~~~
formaldehyde cyanohydrin.	FORMALDEHYDE CYANCHYDRIN	107164	ž		1,000	10	100	P005
Propargyl alcohol	PROPARGYL ALCOHOL	10/188	~	<u>^                                    </u>	1.00	· 1.9	1.000	P102
hloroacetal dehyde	CHLOROACETALDEHYDE	107200	510 (d)	<b>,</b> <u>x</u> x		1 ^	1,000	P023
Chloromethyl methyl ether	CHLOROMETHYL	107302	X	x x x	100	0.1	10	UO46
Sarin	SARIN	107448			,10	2	1	D114
letraethyl pyrophosphete	TETRAETHYLPYROPHEPHATE	107493	Ŷ	x x	100	<b>j</b> ali in te	10	P111
artyric acid	BUTYRIC ACID	107926	v	¥ ¥	1 ~~	1 1 0	5,000	_
A DETACE	VINIAREIATE	108054			1,00		2,000	

ALL EPCRA 302/313 and CERCLA Chemicals (Sorted by Chemical Abstract Service CRS Number)

styl isolutyl ketone spyrzy thie spyrzy thie spyrzy thie spyrzy thie spyrzy thie spyrzy thie spyrzy thie isolation isolation spyrzy the spyrzy the spyrzy thie spyrzy thie sp	METHYLLSCHUTVLACTO LSCFRCFVLCLUSCFCWATE DEVELOSULUSCFCWATE BEVEZINGDURKINGL RESULUSCHUTVLACH XVLIJER CRESCLA DICHLORDISCHOPVLETHYL DICHLORDISCHOPVLETHYL DICHLORDISCHOPVLETHYL CULORDISCHOPVLETHYL CVLLUSCHORDER CVLLUSCFCHATAR CVLLORDISCHOPVLETHYL DICHLORDISCHOPVLETHYL DICHLORDISCHOPVLETHYL DICHLORDISCHOPVLETHYL DICHLORDISCHOPVLETHYL DICHLORDISCHOPVLETHYL DICHLORDISCHOPVLETHYL DICHLORDISCHOPVLETHYL THOPHENSL THOPHENSL	100101 100236 100247 100316 100384 100384 100463 100601 100801 100801 100801 100801 100801 100801 100801 100918 100941 100952	x x x x x x x x x	1,000	1.0 5 1.0 5 1.0 1 1.0 1 1.0 1 1.0 1 1.0 1 1.0 1 1.0 1	
cell i shydride alce shydride seree, s-dimethyl- Sylere sereinol is/c-chioro-i-esthylethyl)ether is/c-chioro-i-esthylethyl)ether is/c-chioro-i-esthylethyl)ether sereinol sereinol sereinol sereinol sereinol lighernol sereino	ACTIC NAMPRIDE MALECONFUNCTION BECONDUCTION TYLEEA CRESCIA CRESCIA DISCONSISTING DISCONSISTING DISCONSISTING CHLOROSERVENE CYLLECONSTRUCT CYL	106247 106316 102338 102339 102463 1026501 1026501 1026501 1026501 1026501 1026501 1026501 1026501 102651 102651 102651 102651 102651 102651 102652		10,000	1.0 5 1.0 1 1.0 1 1.0 1 1.0 1 1.0 1 1.0 1 1.0 1 1.0 1	10000000000000000000000000000000000000
alad: embydride maren:dinetiy]- Xylars Crossindl is(2-dhoro-1-esthylethyl)ether ichloroisoproyl ether ploses ploses plotesylesize proideszone proide	PRALEICENERISTELE BYJEROWENNEL CYCLORENEL CYCLORENEL BYJCSCUCKORCH DISCUCKORCHAPTINE DISCUCKORCHAPTINE CYCLORENEL CYCLORENEL CYCLORENEL PHENGL DISCUCKORCHAPTINE CYCLORENEL HIDOL DISCUCKORCHAPTINE CYCLORENEL HIDOL DISCUCKORCHAPTINE CYCLORENEL HIDOL DISCUCKORCHAPTINE CYCLORENEL HIDOL DISCUCKORCHAPTINE CYCLORENEL HIDOL DISCUCKORCHAPTINE	108116 100383 102394 10463 106601 106601 106603 106907 106913 106941 106952 106955		10,000	1.0 5 1.0 1 1.0 1 1.0 1 1.0 1 1.0 1 1.0 1 1.0 1	
Where "Linesuy2" - Cresc) escription [ci]c-chloro-1-esthylethyl]ether [ci]corlisproy1 ether Jordsenzes proleszone smol - proleszone smol - proleszone smol - ficiline copy1 chlorofonnate - tiplantes Joconite II e	XYUJUEA RESOLUTION BISCHUNGHEMMENTATI DISCHUNGHEMMENTATI CULOROBISCHEMME CULOROBISCHEME CULOROBISCHEME CULOROBISCH CULOROBISCH BISZUMENTION BISZUMEN	10888 109394 109463 109601 109601 109907 109918 109941 109942 109929		10,000	1.0 1 1.0 1 1.0 1 1.0 1 1.0 1 1.0 1 1.0	
-Cresol eservinol (si(2-chloro-l-setty/lettyl)ether (chloroisoproyl ether )ourse rclorex/lesize /consol mresettiol hophenol -Pioline royl chloroformate stylasine idoratifie loconitrile	CRESCLA RESOLCTARI BUSCLORGENTH/LENTR DULORESCONDOL ENTR DULORESCENE CRUCKESPEENE CRUCKESPEENE CRUCKESPEENE CRUCKESPEENE HENGL HIGHENGL HIGHENGL HIGHENGL	108394 109463 109601 108883 109907 109918 109941 109952 109955	X X X X X X	10,000	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	
esocial is (2-chlore-1-esthylethyl)ether chlorolsporeyl ether horobenses yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore secol yclotesatore yclotesator	RESOLUTE BISCLORITHY/EPHY/ DIGLOROUSOPAPY/EPHP COLLECTION COLLECTION COLLECTION COLLECTION PHONE PHONE REFERENCE HEREINETION HEREIN HERE	108463 108601 108601 108933 109907 108918 108941 108952 108955	x x	10,000	1.0 1 1.0 1 1.0 1 1.0 1	
Ichlorotispropyl ether honobergene honobergene yclokessenne seclessance secl honol micerethiol hopienol -Picoline coyl chloroformate stylasme luonut rite	DIGHLORDISCHAPPYLETHER TOLIDE CHLORDERVEINE CYLLIEDGARKE CYLLIEDGARKE HERVIERTHOL THIOPHENSL THIOPHENSL PICOLIDE	108601 108803 108907 108918 108941 108952 108955 108955	XXX XXX XXX XXX XXX	10,000	1.0 1 1.0 1 1.0	,000 i ,000 i 100 i
oluere " lorcherse viciesvienze prolexance erol horderol Horderol -Pioline voyl chioroformate thjamine loronite i	TOUURE CHLORENZENE CYLICHENTAINE CYLICHENACHE PHINOL ENZURETHIOL THIOPHENGL PICOLINE	108883 109907 108918 108941 109952 109955	x x x x x x x x x x	10,000	1.0 1	1000 l
hiordentene richestance prolessance prol ence notification propied richestance richestance hiordenel	CULAREFISION CULAREFISION PEDAL PEDAL BENZANTHIL BENZANTHIL PLOCHERL PLOCLINE	108907 108918 108941 108952 108965	x x x x x x	10,000	1.0	·₩, `
voldezánce peol encentilol hiopienol -Pioline royl chicróomate stylamine luconitrile	CYCLCHEGANCHE PHENOL BERZENETHIOL THIOFIENCL PICOLINE	108941 108952 108985	x x x x			1 1 1 V 1 1 1
Sec) uccession ucces	PFENDL BENZENETHIOL THIOPHENGL PICOLINE	108952 108985	x <u>x</u> <u>x</u> <u>x</u>		. 5	,000 1
nzescutu Inglenol Pioline royl chloroformate nylamine Ingonitri (	THIOPHENCL PICOLINE	100965		500/10,000	1.0 1	.000 1
-Picoline royu chloroformate utylamine alononitrile	PICOLINE		x x x	500		100
ropyl chloroformate utylamine aloponitrile		109068	x x x		1.0 5	,000,1
alonnitrile	PROPYL CHLOROFORMATE	109615	x	500		and
Mathematical and a large state of the second s	MALONONITRILE	109773	x x â x	500/10.000	1.0 1	0000 1
-methoxyethenol	METHORYETHANOL	109864	x		1.0	
iethylanine	DIETHYLAMINE PERAN TETRALADA	109897	<u>Å</u>			·
	FURAN	110009	x îî.	500		100 7
aleic acid	MALEICACID	110167	x		5	.000
amaric acid	FUMARIC ACID	110178	Č.			
so-Butyl Boetave	HEXANE	110543	1		•	1.
rans-1,4-dichlorobutene	DICHLOROBUTENE	110576	x	500		1
-Chloroethyl vinyl ether	CHLOROETHYL VINYL ETHER	110758	w X X		101	
theno] 2-athur-	ETHANOL, 2-STHORY-	110805	x x x		î.ŏ î	.000
vclohexane	CYCLOHEXANE	110827	<u>x x x</u>		1.0 1	.,000 1
ridine	PYRIDINE	110861	<b>, X X</b> X	1.000	1.0 1	.,000 1
iethanolenine	DIETHANOLAMINE	111422	^ <u>x x</u>	1,000	1.0	1.
is(2-chloroethyl) ether	BISCHLOROETHYLETHER	111444	x x x x	10,000	1.0	10
ichloroethyl ether	DICHLOROETHYLETHER	111444	x x <u>ş ş</u>	10,000	1.0	10 1
diponi trile	ADIPONITRILE	111693	x * *	1,000		<u> </u>
is(2-chloroethoxy) methane	BISCHLOROETHORYMETHANE	111911	* * *		1.0 1	
ropoxur	PROPORUR A7ASEPINE	114201	¢			an a
rooviene (Propene)	PROPYLENE	115071	x		1.0	
richloroethylsilane	TRICHLOROETHYLSILANE	115219	x	500		1
inefox odom ul fan	ENDOCULEAN	115297	â x x	10/10.000	0.000 300000.0000	<b>†</b> ,
icofol	DICOPOL	115322	x x *	(Marine States)	1_0	10
nsulfothion	FENSULFOTHION	115902	x v v	100/10 000		1.
dicarp Imiroanthratilirone	AMINOANTHRACUTNINE	110000	^ <u>x</u> ^ ^	100/10.000	0.1	
(ch)one	DICHLONE	117806	<u> </u>	All and a second	ood kurster bed K. ober 1.	1
is(2-ethylhexyl)phthelate	BISETHYLHEXYLPHTHALATE	117817	X X X		0.1	100
(2-ethylberyl) ohthelate	DIETHYLHEXYLPHT	11/81/	<del>x</del> x	New York Street	ŏ.i	100
i-n-octyl phthalate	DIOCTYLPHTHALATE	117840	x x x		1.0 5	,000 1
-Dioctylphthalate	DIOCTYLPHTHALATE	11/840	Ŷ Ŷ Ŷ		1.0 5	10 1
soprovimethylpyrazolyl dimethylcarbanate	LSOPROPYLMETHYLPYRAZOLYL DIMETHYLCARBAMA	TE 119380	x	500		
,3'-Dimethoxybenzidine	DIMETHOXYBENZID	119904	x x x		0.1	100 7
, 3'-Dimethylbenzidine	DIMETHYLBENZIDI	119937	X X X		0.1	10 1
-foliaine nthracene	ANTHRACENE	120127	Ŷ Ŷ	terestation of the	ĭ.ô :	1,000 I
sosafrole	ISOSAFROLE	120581	x x X		1.0	i 100
-Cresidine	CRESIDINE	120718	X X		0.1	1+
2.4-Trichlordenzene	TRICHLOROBENZE	120821	Ŷ Ŷ		î.ŏ	100
4-Dichlorophenol	DICHLOROPHENOL	120832	X X X		1.Q	100
4-Dinitrotoluene	DINITROTOLUENEB	121142	XXX		1.0	10 1
/reurins	PYRETHRINS	121299	******** <b>******</b> **************	a select all sectors	ACI 07 (0768) 22	- î
riethylamine	TRIETHYLAMINE	121448	X			5,000
.N-Dimethylaniline	DIMETHYLANILINE	121697	x ž		1.0	100
enzeneethanamine, alpha, alpha-dimethyl-	BENZENKETHANAMINE, ALPAH, ALPHA-DIMETHYL-	+ 122098	x x			5.000

NLL EPGR 302/313 and GENELA Chemicals (Sorted by Chemical Abstract Service CRS Number)

Perturbation 1101000000000000000000000000000000000	RC COD (J) (K
1.4-1-018000100000000000000000000000000000	1
Production and sequences         Production of the sequences         P	10 010
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billed instruction         UNIDERSTRATE         Image: State of the	10 010
Productions	5,000 U148
Park Laboration         PROLEDUCE	11
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Crotendiderge, [2]- Crotendiderge, [2]- (2)-	L,000 0104
Divide cases         Provide Divide Divi	100 0053
in-series         Methods         12222         X         X         0.1           Addiption         12222         X         X         0.1         5           Doubling and the set of land         12222         X         X         0.1         5           Doubling and the set of land         12222         X         X         0.1         5           Doubling and the set of land         12222         X         X         0.1         5           Doubling and the set of land         12222         X         X         100/10.000         10           Doubling and the set of land         12222         X         X         X         100/10.000         10           Doubling and the set of land         12222         X         X         X         X         X         100/10.000         10           Doubling and the set of land         12222         X         X         X         X         X         500/10.000         10         10           Doubling and the set of land         12222         X         X         X         X         500/10.000         10         10         10         10         10         10         10         10         10         10         10<	5,000
Aligit and the set of	100 0108
Distry and/or         DURCHING (CONTINUE)         12403         S         X         1           Column Barry and Constructions (Main Control Large (Control Large Control Control Large Control Control Large Control Control Large Co	5.000
Colling intry late         Colling	1,000 0092
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Halon 2022 Mathematical Material (Construction of the second of the seco	-
Pertonal near and perton and pere	
A Discretization         Discr	1
Chlorepress         Chlorepress         Carlor and the second seco	10 023
Perchlorestrylene         PERCHLORETHYLIPBE         127164         X         X         X         X         0.1           Titrachlorethylene         TITRACHLORETHYLENE         129065         X         X         0.1         5           C.1. Vak Stallace 4         CUNNYRLICAL         129065         X         X         1.000/10.000         5           Staffartin softum         12006         X         X         1.000/10.000         5           Staffartin softum         12006         X         X         1.000/10.000         5           Staffartin softum         13114         X         X         X         1.00         5           Staffartin softum         0015571111111         X         X         X         1.00         5           Staffartin softum         0015571111111111         X         X         X         1.00         5           Staffartin softum         001557111111111111         X         X         X         1.00         5           Staffartin softum         001557111111111111         X         X         X         1.00         1.00           Contaster         0011011111111111111111111111111111111	1,000
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MARTARIN SOCIUM         12006         X         X         100/10.000           Simetyr prichalas         Differityr prichalas         Differityr prichalas         111111         X         X         1.00           Simetyr prichalas         Differityr prichalas         Differityr prichalas         111111         X         X         X         1.00           Simetyr prichalas         Differityr prichalas         Citerrotyr prichalas         111111         X         X         X         1.00           Simetyr prichalas         Differityr prichalas         Citerrotyr prichalas         11111         X         X         X         1.0           Simetyr prichalas         Citerrotyr prichalas         11111         X         X         X         1.0           Silerasofura         Citerrotyr prichalas         133002         X         X         0.1           Differityr prichalas         Citerrotyr prichas	5 000
1.4-Markitopulante         130154         X	1
Description     Description     1111     X     X     1.0       Discription     Operation     Discription     12449     X     X       Discription     Operation     12549     X     X     1.0       Choresetter     Operation     0100000000000000000000000000000000000	5,000 U16
2	5,000 000
Diberodruina Diesecondurina Diesecon	100 1003
Carbon         CAPTM         13962         X         X         1.0           Constraint         CREWN         13302         X         X         1.0           Constraint         CREWN         13302         X         X         1.0           Carbon         NUMENTICALINE         13302         X         X         0.1           Carbon         NUMENTICALINE         13506         X         X         0.1           Carbon         NUMENTICALINE         13506         X         X         0.1           Carbon         NUMENTICALINE         13506         X         X         0.1           Carbon         NUMENTICALINE         139139         X         X         0.1           Carbon         NUMENTICALINE         139051         X         X         X         0.1           Carbon         PRICONSTRUMENT         140761         140761         10.1	
oranis deline hydrochloride indication in the interval of the	10
alpha-meshthylamizer         14227         X         X         0.1           Deferrur         CUPFEREN         13526         X         X         0.1           Thires         NURRM         137266         X         X         0.1           Mires         NURRM         137266         X         X         1.0           Benyl cyssics         NURRM         137267         X         X         1.0           Benyl cyssics         PROVIGNING         140761         X         500         0.1           Benyl cyssics         PROVIGNING         140761         X         500         0.1           Stryl scrylate         PROVIGNING         140761         X         500         0.1           Dicrotoprose         DICROTOPRES         1000         1.0         1.0         1.0         1.0           Dicrotoproper         DICROTOPRES         14267         X         X         1.0         1.0           Dicrotoproper         DICROTOPRES         0.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0 </td <td>1+</td>	1+
Chyfertran         CUPTRIAN         135/264         X         0.1           Nirse         11000         137/264         X         X         0.1           Alf - Thirdstaniling         137/264         X         X         0.1           Alf - Thirdstaniling         137/264         X         X         0.1           Bruyl - certific         137/264         X         X         0.1           Bruyl - certific         140054         X         X         0.1           Bruyl - certific         140055         X         X         0.1           Bruyl - certific         140055         X         X         0.1           Bruyl - certific         140055         X         X         0.1           Bruyl - certific         11/0         11/0         11/0         11/0           Bruyl - certific         14/265         X         X         0.1         1.1           Bruyl - certific         14/265         X         X         100         5           Bruyl - certific         14/265         X         X         100         5           Bruyl - certific         14/265         X         X         100         5           Bruyl - ce	100 11.67
Thiles         THILPS         137,265         X         X         X         1.0           Hilles         THILPS         THILPS         100000         100000         100000         100000         100000         1000000         10000000         100000000         1000000000000000000000000000000000000	
Add - Thicklenilling         192022         Add - Other Structure         0.1           Friddlamilling         140026/1108         140026         500           Fyridland         Prinking         140026         X         500           Fyridland         Prinking         140026         X         500           Fyridland         Prinking         140026         X         500           Fyridland         Prinking         14026         X         0.1           Fyridland         Prinkerstein         14026         X         0.1           Fyridland         Prinkerstein         14026         X         0.1           Fyridland         Prinkerstein         14126         X         0.1           Fyridland         CUPRTPHEN         14126         X         0.1           Fyridland         CUPRTPHEN         14262         X         X         0.0           Fyridland         CUPRTPHEN         142712         X         X         1.0           Fyridland         CUPRTPHEN         142712         X         1.0         1.0           Fyridland         CUPRTPHEN         14490         X         10/10.000         1.0           Filoronan         Fi	10 U244
Berry Logenide         BERTYLIANTING         LGGGG X         500         State           String Arrylate         PTRUINSETMUNINTA-         140761         X         500         State           String Arrylate         STRING ARRYLATE         140761         X         State         500         State           String Arrylate         STRING ARRYLATE         140761         X         State         500         State         State         500         State </td <td></td>	
Yridine, 2-methyl-s-yrinyl-         Yridine, 2-methyl-s-yrinyl-         14065         X         Sol           Unityl, arrylate         EDWIARTIATE         14085         X         X         0.1         1.0           Dicrotropiana         EDWIARTIATE         14085         X         X         0.1         1.0           Dicrotropiana         EDWIARTIATE         14085         X         X         0.1         1.0           Dicrotropiana         EDWIARTIA         14166         X         X         0.0         1.0           Dicrotropiana         EDWIARTIA         14166         X         X         0.0         1.0           Dicrotropiana         EDWIARTIA         142712         X         X         0.0         1.0           Dicrotropica         EDWIARTIA         142712         X         X         1.00         0.0	1
CUTY ACTIVAC         PENCLASTICATE         10085         X         X         0.1           String and the set of th	ī
Dictortion         Dictortion <thdictortion< th="">         Dictortion         Dictorti</thdictortion<>	1,000 0113
Etyl actate         FINLACTINT         14765         X <td>•</td>	•
1.3-Diction correparts         DIGIDATION PERFORMANCE         142289         X         S         S           Deprice exists         OPERATIONS         142712         X         S	5.000 <b>ຫ</b> 12
CUPRICE ACTIVITY         142/12         X           Dispoprimitive         DISPOPrimitive         142/41         X           Dispoprimitive         DISPOPrimitive         142/41         X         X           Dispoprimitive         DISPOPrimitive         142/41         X	5,000
Solitief symilds (Na(CR))         SOLITIE (Na(CR))         14 330 x         x         1000000000000000000000000000000000000	100
Nervore         Identity	10 0110
Flucture acid         FLUCENCETIC RCID         144490 X         10/10.000           matchial         PROFINAL         PROFINAL         14733 X         X         1           matchial         PROFINAL         14733 X         X         1         1000           matchial         PROFINAL         PROFINAL         14733 X         X         1         1000           matchial         PROFINAL         14733 X         X         X         1         1000           matchial         PROFINAL         PROFINAL         14733 X         X         X         1           matchial         PROFINAL         PROFINAL         13180 X         X         X         500/10.000           retraces retrained         PROFINAL PROFINITURE CRETARINE         15164 X         X         X         500         0.1           striding         STRUDRE         STRUDRE         15164 X         X         X         500         0.1           striding         STRUDRE         STRUDRE         15666 X         X         X         0.0         1           1.2-Diction creation         CHENCHTTURE PROFINE         15666 X         X         X         0.0         1           1.2-Diction creatine         DISPR	1 1142
Shournall         PROTINIL         145733         X         1           Dichorous Wijhergialise         HERVIN HENTISLINE         148623         X         X         1           Dichorous Wijhergialise         DICERSTRUMENTISLINE         148623         X         X         1           Dichorous Wijhergialise         DICERSTRUMENTISLINE         131505         X         X         1           Presselite Construct         PIPSSILMETARUMENTISLINE         131505         X         X         1           Presselite Construct         PIPSSILMETARUMENTISLINE         131505         X         X         500/10         00           Particular Structure         131505         X         X         500/00         0.1           Diphospharenide         DIPHOSPHARWITE, OTABETMUL         15266         X         X         500/00           Diphospharenide         DIPHOSPHARWITE, OTABETMUL         15266         X         X         100           Diphospharenide         DIPHOSPHARWITE, OTABETMUL         156105         X         0.1         1           1, 2-DICLORENTIPHE         156105         X         1.0         1         0.1           1, 2-DICLORENTIPHE         15605         X         X         1.0 <t< td=""><td>1</td></t<>	1
Dictionant by pheny paint and the set of the	L,000 PO66
Hettorycetyllenicul 2 esetate         FEITOXYCENIC AZTARE         151507         500/10.000           Pictassius cynaide         ROTANIE         151507         x x x x         100           Aziridine         RZIRIDNE         151564         x x x x         500         0.1           Rziridine         RZIRIDNE         151564         x x x x         500         0.1           Difformation         DIFFORMENTALE         15164         x x x x         500         0.1           Difformation         DIFFORMENTALE         15164         x x x x         500         0.1           Difformation         DIFFORMENTALE         15164         x x x x         500         0.1           Difformation         DIFFORMENTALE         15164         x x x x         500         0.1           Difformation         DIFFORMENTALE         15164         x x x         100         0.1           Licelower         DIFFORMENTALE         156105         x x x         10.0         0.1           Difformation         DIFFORMENTALE         15605         x x x         1.0         0.1           Difformation         DIFFORMENTALE         15655         X x         1.0         0.1           Difformation         DIFFORMENTALE	1 0150
Potassiin cyslide         POTASSIINCYMILLE         151560         X         X         X         X         X         X00         100           Striding         AZIRIDINE         AZIRIDINE         15164         X         X         X         500         0.1           Striding         STRVIDE         STRVIDE         15164         X         X         X         500         0.1           Striding         STRVIDE         STRVIDE         15164         X         X         X         500         0.1           J.2-Dichlorostrylene         NITESSDIFENTIAL         15605         X         X         100         0.1           L.2-Dichlorostrylene         DIGGIOROSTRYLENE         15605         X         X         0.1           Licium crymenide         CICHURYANERDE         15605         X         X         0.1           Diberting in provide         DISPUZYRUSHE         15605         X         X         1.0           Diberting in provide         DISPUZYRUSHE         100505         X         X         1.0           Diberting in provide         DISPUZYRUSHE         100505         X         X         5           Structure         DISPUZYRUSHE         1003355 <t< td=""><td>ana <b>i</b></td></t<>	ana <b>i</b>
Margania         AZIRIDINE         151564         X         X         X         SOO         0.1           University         ETMULIEEEEEE         15164         X         X         X         500         0.1           University         ETMULIEEEEEE         15164         X         X         X         500         0.1           University         ETMULIEEEEEEE         15164         X         X         X         500         0.1           University         ETMULIEEEEEEE         156105         X         X         X         100           Alciencymanula         ETMULIEEEEEEE         15607         X         X         1.0         1.0           Salciencymanula         ETMULIEEEEEEEE         15657         X         X         1.0         1.0           Salciencymanula         ETMULIEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE	10 P098
billenging	1 P054
p-Nitheodiplerg/lamine " 1600 x X X 100 0.1 1,2-bichtoretriviere 15665 x X X 1.00 1.1 1,2-bichtoretriviere 15665 x X X 1.0 1.1 1,2-bichtoretriviere 15655 x X X 1.0 1.1 1,2-bichtoretriviere 156555 x X X 1.0 1.1 1,2-bichtoretriviere 1565555 x X X 1.0 1.1 1,2-bichtoretriviere 15655555555555555555555555555555555555	1 P054
1,2-Dichlorosthylene         Dicklorosthylene         15650         X         X         1.0           Calcium crysmanide         CALCHWYAWARDE         15657         X         X         1.0           Dilent [a, 1)prysma         DISPUZYADE         196569         X         X         1.0           Dilent [a, 1)prysma         DISPUZYADE         196569         X         X         1.0           Dilent [a, 1)prysma         DISPUZYADE         196569         X         X         1.0           Dispuzyation         DISPUZYADE         196569         X         X         1.0           Dispuzyation         DISPUZYLICHANTER         196569         X         X         1.0           Dispuzyation         DISPUZYLICHANTER         19657         X         X         5.           Senzo(L) / JUGANTERE         DISPUZYLICHANTERE         205952         X         X         5.           Fluoring Upper M         TUCHANTERE         205952         X         X         5.	100 105
CALCUM CYMANIDE 156527 X X 1.0 Dibra (a. 1) System 156527 X X 1.0 Benzo (a. 1) System 156527 X X 1.0 Benzo (a. 1) System 19242 X 1.0 Benzo (b. 1) System 19242 X 1.0 Benzo (b. 1) System 19242 X 1.0 Benzo (b. 1) System 193395 X X Benzo (b. 1) System 200592 X 1.0 Constituent 200592 X 1.0 Constituen	L,000 0079
Benorich (Mrs. 2007) X X 1000 (1000)	1±
Indero (1, 2', 3-cd) pyreme INDERO (1, 2, 3-cd) pyreme INDERO (1, 2, 3-cd) pyreme Sector X X Benzo (b) fluorenthere Proceedings of the Sector Viewer Sector	10 0064
Benzo(b)fluoranthène BENZOFUURANTHÈNE 200592 X Fluoranthène 206440 X	100 102
PLUCRANDIERE 2006440 X X	1 1
	100 0120
Demato/k/iluoreilane	5,000
avGargentarjanase ALEVENTINIEZANE ZU9908 X 5. Durvšene CHIVSENE 218018 v v	100 1050
Benz (c) ecridine 2255 ( 🗘	100 0014

ALL EPCRA 302/313 and CERCIA Chemicals (Sorted by Chemical Abstract Service CRS Ruber)



ALL EPCRA 302/313 and CENCLA Chemicals (Sorted by Chemical Abstract Service CKS Number)



ALL EPCRA 302/313 and CERCIA Chemicals (Sorted by Chemical Abstract Service CRS Number)



#### ALL EPCRA 302/313 and CERCIA Chemicals (Sorted by Chemical Abstract Service CAS Number



ML EPCRA 302/313 and CERCIA Chemicals (Sorted by Chemical Abstract Service CRS Ruber)



ALL EPCRA 302/313 and CERCLA Chemicals (Sorted by Chemical Abstract Service CAS Number)



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ALL EPCRA 302/313 and CERCIA Chemicals (Sorted by Chemical Nistract Service CRS Raber)

GENICAL NAME	ALTERNATE NAME	EPCHA, EPC CHS NUMBER 302 313	RA EPCRA SCENCIA NCHA 302 19	A DeMiniaus R Q Concent, RQ C	CRA
(A)	(B)	(C) (D) (E	) (F) (G) (H)	(1) (J)	(K)
Chlorosulfonic acid	CHLOROSULFONIC ACID	7790945	X	1,000	
Thallow chloride	THALLIONCHICKIDE TICI	7701120 X	X X 100/10.0	100 100 10	210
Selenium axychloride	SELENUMOXYCHIORIDE	7791233 🛠	v v 100/10/2	ŵ îi î	210
Phosphine	PHOSPHINE	7803512 X	X X 5	60 100 P	096
Ammonium vanadate	AMONIUMVANADATE	7803556	хх	1,000 P	119
Camphechlor	CAMPHECHLOR	9001352 X X	X X 500/10.0	00 0.1 1 P	123
Toxanhana	TURAPERAP	B001352 X X	<b>X</b> X 500/10,0		153
Creosote	CREOSOTE	8001589 X	Χ	0.1 1 0	061
Dichloropropane - Dichloropropene (mixture)	DICHLOROPROPANE - DICHLOROPROPENE (MIRTURE)	8003198	X	100	
Pyrethrins	PYRETHRINS	6003347	<u>×</u>		
Suituric acto (rusing)	DEMETCH	8014957 8045483 ¥	- X -	1,000	
Sodium hypochlorite	SODIUM HYPOCHLORITE	10022705	x	100	
Chronic chloride	CHROMIC CHLORIDE	10025737 X	1/10.0	100	
Phosphorus oxychloride	PHOSPHORUS OXYCHLORIDE	10025873 X	<u>r</u> ecent the second s	.00 1,000	
Zimonium tetrachloride	7 IBCONTINETERICAL OF THE	10025919	ž	1,000	
Phosphorus pentachloride	PHOSPHORUS PENTACHLORIDE	10026138 *	And the second	·····	
Ozona	OZONE	10028156 X	1	00 <u>1</u>	
Ferric sulfate	FERRICSULFATE	10028225	x	1,000	
Inallium sulfate	THALLIUMSULFATE	10031591 X	<b>X</b> 100/10.0	100	
Sodium phospheta, diberic	STDUM PROSPHETY DIRESTC	1003932	•	5.00	
Aluminum sulfate	ALIMINUMSULFATE	10043013	X	5,000	
Ferrous annonium sulfate	FERROUSAMONIUM SULFATE	10045893	X	1,000	
Mercuric nitrate	MERCURICNITRATE	10045940	X	10	
Chrome us de l'orde	CHICKINEDICKIDE	10049044		1.00	
Lead nitrate	LEADNITEATE	10099748	÷.	1.100	
Chromic sulfate	CHROMIC SULFATE	10101538	Ŷ	1.000	
Lead iodide	LEADICOIDE	10101630	x	100	
Sodium phosphate, tribasic	SODIUM PHOSPHATE, TRIBASIC	10101890	x	5,000	
Solium selenite	SODUM SELENTE	10102069		100	
Sodium tellurite	SODIUM TELLURITE	10102202 *	500/10.0	δά <b>*</b> Ϊ	
Nitric oxide	NITRICORIDE	10102439 X	X X 1	00 10 P	076
Nitrogen dioxide	NITROGEN DICKIDE	10102440 X	<u> </u>	100 10 P	078
Institute(1) micrate	TODARCENTA	10102451	X X	100 0.	дг
Cadmium chloride	CADMIUM CHLORIDE	10108642	X	10	00010102
Potassium arsenite	POTASSIUMARSENITE	10124502 X	x 500/10.0	xoo ī	
iodium phosphate, tribasic	SODIUM PHOSPHATE, TRIBASIC	10124568	x	5,000	
Sodium phosphate, dibesic	SODIUM PROSPHATE, DIBASIC	10140655	L	5,000	
Amonium hisulfite	AMONTIMETSIN FITE	10192200	• 1,0	~~ 5 ~~ 1	
Amonius sulfite	ATTONUMEULFITE	10196040	<b>•</b>	5'000	
Cobalt carbonyl	COBALT CARBONYL	10210681 X	10/10.0	100	
Methamidophos	METHAMIDOPHOS	10265926 X	100/10.0	200 1	
boron trichioride	BORON TRICHLORIDE	10294345 X	100.00	x00 1	
Sodium phosphete, tribesic	SODIUM PHOSPHATE, TRIBASIC	10361894	¥ 100/10/0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Cupric sulfate, amoniated	CUPRIC SULFATE, AMONIATED	10380297	X	100	
Mercurous nitrate	MERCURCUSNITRATE	10415755	X	10	
Perric nitrate	PERRICNITRATE	10421484	x .	1,000	
Nethecrolein diacetage	MURCHARLEIN DIALEIAIE	104/6956 X	1,0	10	
Sodium bichromate	SODIUM BICHROMATE	10588019	÷.	ĩŏ	
Aroclor 1260	AROCLOR 1260	11096825	х .	ĩ	
Aroclor 1254	AROLOR 1254	11097691	x	1	
AFOCIOF 1221	AROCLOR 1221	11104282	x	.1	
Aroclor 1232	ARTICE 1232	11141165	<b>4</b>		
Cupric acetoarsenite	CUPRIC ACETOARSENITE	12002038 *	\$ 500/10.0	xxx 1	
Paris green	PARIS GREEN	12002038 X	x 500/10,0	00 1	
Selenious acid. dithallium(1+) salt	SELENIOUS ACID, DITHALLIUM(1+) SALT	12039520	X X	1,000 P	114
Management tricertory methylogram and the	MICKELHYDRUKUDE MANGAMERE TRICADECINUT METRIKI CVCT ODERTATI DAM	12109122	х ,	20 IQ	
Zineb	ZINFR	12122677		1.0	
Amanium fluoride	AMONIUMFLUORIDE	12125018	x	100	
	and the Colored an	1 01 05 000			
Munchium chloride	AMONIUMCHLORIDE	12120029	A	3,000	
Amacnium chloride Amacnium sulfide	AMONIUMCHLORIDE	12125029 12135761	Ŷ	-100	
Ammonium chloride Ammonium sulfide Maneb Ammolor 1248	AMONUMCHLORIDE AMONUMCHLORIDE MANEB BROTICE 124A	12125029 12135761 12427382 X	ý.	1.0	



ALL EPCR 302/313 and CERCIA Chemicals (Sorted by Chemical Abstract Service ORS Number)

ALL EPCRA 302/313 and CERCLA Chemicals (Sorted by Chemical Abstract 5 rice CAS Nu -



Appendix 2

## SARA TITLE III CONSOLIDATED CHEMICAL LIST Sorted by Chemical Name

## A. General.

1. The consolidated chemical listing includes all chemicals subject to *EPCRA* planning and reporting requirements in EPCRA 302, 304, and 313. The chemical listing contains additional information as well, e.g. CAS registry number, *TPQ*, *RQ*, and deminimus concentrations where applicable.

2. The EPA adds and delists chemicals. COMDT (G-ECV-1) will issue updates as the list changes. The list has been sorted two ways:

Appendix 1 - Sorted by Chemical Abstract Service (CAS) registry number.

Appendix 2 - Sorted by Alphabetical Name of the chemical.

#### B. Column Explanations.

- Column (A) Chemical name; note that a given chemical may be listed several times because it has synonyms that are commonly used.
- Column (B) Commonly known alternate name.
- Column (C) CAS Registry number. The Chemical Absract Service registers chemicals by assigning discrete identifying numbers. More than one chemical name may be listed for one CAS number because the same chemical may appear on different lists under different names.
- Column (D) An "X" denotes that the chemical is an Extremely Hazardous Substances (EHS) and listed under EPCRA 302. The Threshold Planning Quantitiy (TPQ) is listed under column (H).
- Column (E) An "X" denotes that the chemical is listed under EPCRA 313.
- Column (F) An "X" denotes that the chemical is listed under the Comprehensive Environmental Response, Compensation, and Liability Act as amended (*CERCLA*, or "Superfund"). Releases of listed chemicals are reportable to the National Response Center, and now (because of EPCRA 304) also to the *SERC* and *LEPC*. This document also includes chemicals added to the *CERCLA* list because they are listed as hazardous air pollutants under section 112(b) of the Clean Air Act (CAA).
- Column (G) An "X" denotes that the chemical is a RCRA chemical from the P and U lists (40 CFR 261.33)

### B. Column Explanations. cont'd.

- Column (H) Threshold Planning Quantity (TPQ) for Extremely Hazardous Substances (EHSs) listed under EPCRA 302 (in pounds). For chemicals that are solids, there may be two TPQs given (e.g., 500/10,000). In these cases, the lower quantity applies for solids in powder form with particle size less than 100 microns, or if the substance is in solution or in molten form. Otherwise, the 10,000 pound TPQ applies.
- Column (I) De Minimus concentrations for chemicals that listed under EPCRA 313. Concentrations are 0.1% by weight for carcinogenic chemicals, and 1.0% for non-carcinogenic.
- Column (J) Reportable Quantities (RQ) under CERCLA. An asterisk ("\*") following the RQ indicates that no reporting of releases is required if the diameter of the pieces of the solid metal released is 100 micrometers (0.004 inches) or greater. Substances listed under CAA 112(b) that have been added to the CERCLA list with statutory one-pound RQs are indicated by a plus sign ("+") following the RQ. EHS RQ. Releases of RQs of EHSs are subject to state and local reporting under 304. If a chemical listed under 302 does not have a CERCLA RQ, a statutory RQ of one pound applies for 04 reporting.

Column (K) - RCRA P and U Codes.



#### Page 1



ALL EPORA 302/313 and CERCLA Chemicals (Sorted Alphabetically by Chemical New



Page 3



ALL EPCRA 302/313 and CERCLA Chemicals (Sorted Alghebetically by Chemical Name)

ALL EPCRA 302/313 and CERCIA Chemicals (Sorted Alphabetically by Chemical Name)





CHEMICAL NME (A)	ALTERRATE RINE (B)	EPCRA CHS NUMBER 302 (C) (D)	EPCRA 31.3 CERCLA RORA (E) (F) (G)	870788 302 TFQ (81)	DeMinisus Concent. (I)	RO (J)	RCRA CODE (K)
Diethylstilbestrol	DIETHYLSTILBESTROL	56531	x x			1	U089
Diethyl sulfate	DIETHYLSULFATE	64675	xx		0.1	1+	
Digitoxin	DIGITOKIN DICI VETOVI FILIPO	71036 X		100/10.000			
Digoxin	DIGORIN	20630755 X		10/10,000			
Dihydrosafrole	DIHYDROSAFROLE	94586	x x x		0.1	10	U090
Disopropyliluorophosphate	DILSOPHOPYLPIACHCEPHATE	20914 X	A A	100		100	P043
Dimethoate	DIMETHOATE	60515 x	x x	500/10.000	-	10	P044
3,3 -Dimethoxybenzidine	DIMETHONYBENZID	119904	x x x		0.1	100	U091
Dimethylamine	DIMETHYLAMINE	124403	X X			1,000	0092
Dimethyl ani poscobenzene	DIMETHYLAMINOAZOBENZENE	60117	$\hat{\mathbf{x}}$		0.3	10	1093
N,N-Dimethylaniline	DIMETHYLANILLINE	121697	x x		1.0	1+	
7,12-Dimethylbenz[a]anthracene	DIMETHYLBENZAANTHRACENE	57976	<u>x x</u>	2011-20 <b>0</b> .2010-00.001	Constant Designation	<b>1</b>	U094
3.3 +Dimethylbentidine	DIPETHYLBERZIDI DIPETHYLBERZIDI	119937	x x x		0.1	- 10	0095
Dimethyldichlorosilane	DIMETHYLDICHLOROSILANE	75785 X		500		1	
Dimethylformamide	DIMETHYLFORMAMIDE	68122				1+	
1.1-Dimethyl hydrazine	DIMETHYLHYDRAZI	57147 X	X X X	1,000	0,1	10	U098
Dimetry involves ine	DIMETHYLHYDRAZINE	5/147 X	X	1,000	0.1	100	0098
Dimethyl-p-phenylenediamine	DIMETHYLPHENYLENEDIAMINE	99989 X	~ ^ ^	10/10.000	1.0	100	0101
Dimethyl phosphorochloridothioata	DIMETHYLPHOSPHOROCHLORIDOTHICATE	Z524030 X		500	New 201	1	
Dimethyl phthalata	DIMETHYLPHTALATE	131113	X X X		1.0	5,000	U102
Dimetryi suirate	DIMETHYLSOLFATE	77781 X	X X X	500/10 000	0.1	100	0103
Dinitrobenzene (mixed isovers)	DINITHCHENZENE (MIXED)	25154545	×	300/10,000		001	
n-Dinitrobenzene	DINITRONENZENEM	99650	x X		1.0	100	
o-Dinitrobenzene	DINITROBENZENEO	528290	x x		1.0	100	
p-pinitropenzene	DINITIONENZENEP	100254	<b>X X</b>	10/10/000	1.8	100	P047
Dinitrocresol	DINITROCKESCE	534521 x	$\hat{\mathbf{x}}$ $\hat{\mathbf{x}}$ $\hat{\mathbf{x}}$	10/10,000	1.0	10	P047
4.6-Dinitro-o-cresol and salts	DINITROCCRESCIL AND SALTS	534521	X X			10	P047
Dinitrophenol	DINITROPHENCLA	25550587	<u>x</u>			10	-
2,4+Dinitrophenol	DINTROPHENDE	329715	X X X		1.0	10	- 1088
2.6-Dinitrophenol	DINITROPHENCLD	573568	X	nerme e m2290227.02727.00000	1940.00 PAR 2006 PAR	10	warminikinititete
Dinitrotoluene (mized isomers)	DINITROTOLUENEA	25321146	x x	1010/1800au	1.0	10	~~~~~
2,4-Dinitrotoluene	DINITRUICIUMENED	121142	X X X		1.0	10	0105
3.4-Dinitrotoluene	DINITROTOLUENED	610399	A A A			10	
Dinoseb	DINOSEB	88857 X	x x	100/10,000		1,000	P020
Dinoterb	DINOTERB	1420071 X		500/10,000			
Di-n-octy: phthalate	DICUTILIMINALATE	117840			1.0	5,000	0107
1.4-Dickane	DICKANE	123911	x x x		0.1	100	U108
Dioxethion	DICKATHION	78342 X	- • •	500		1	0100
Diphecinone	DIPHACINCNE	82666 X		10/10,000		1	
1,2=Diphenyinyurazine Dinhenyihydrazine	DIPHENYLHYDRAZI DIPHENYLHYDRAZINE	122667	XXX		0.1	10	0109
Diphosphoranide, octanethyl+	DIPHOSPHORAMIDE, OCTAMETHYL-	152169	X	100	0.000	100	P085
Dipropylemine	DIPROPYLAMINE	142847	X X			5,000	U110
Diquat	DIQUAT	85007	x			1.000	
Disulfoton	DISULFOTON	2/04/29	÷	<b>ട</b> ന		1.uuy	P039
Dithiazanine iodide	DITHIAZANINE LODIDE	514738 🗙		500/10.000		1	
Dithicbluret	DITHIOBIURET	541537 X	XX	100/10,000		100	P049
0,0-Diethyl S-methyl dithiophosphate	DITHIOPHOSPHATE	3288582	<u>x</u> x		piet C. Margania and	5,000	U087
Dodecylbenzenesulfonic acid	DODECYLBENZENESULFONIC ACID	27176870	\$			1 000	
Emetine, dihydrochloride	EMETINE, DIHYDROCHLORIDE	316427 X		1/10,000	1	1	
Endosulfan	ENDOSULFAN	115297 X	<u>X X</u>	10/10,000		1	P050
alpha - Endosulfan	SNOOSULFAN SNOOSULFAN	959988					
Endosulfan and Metabolites	ENDOSULTAN AND METABOLITES	99999999	X			**	
Endosulfan sulfate	ENDOSULFAN SULFATE	1031078	Ŷ			1	
Endothal1	ENDOTHALL	145733	X X			1,000	POBS
Endothion	ENDOTHICH	2778043 X		500/10.000			DOET
Endrin aldehvde	ENDRIN ALDERVICE	7421934 X	X X X	200/10,000		1	1001
Endrin and Metabolites	ENDRIN AND METABOLITES	99999999	Ŷ		an a	. <b>.</b> .	
End and another for	EPICHLORCHYDRIN	106898 X	xxx	1,000	0.1	100	<b>U041</b>
phi nor any arm							
Ppinephrine	EPINEPHRINE	51434	X X	100 /00		1,000	P042
Epinepine ine EPN EPN	EPINEPHRINE EPN DECOMPCTIVE	51434 2104645 X	X X	100/10.000		1.000	P042

ALL EPCRA 302/313 and CERCLA Chemicals (Sorted Alphabetically by Chemical Name)

CHEMICAL RAME (A)	ALTERATE NAME (B)	CAS NUMBER 302 (C) (D)	313 CERCIA NORA (E) (F) (G)	302 TPO (H)	Concent. R (1). (3	) CODE 1) (K)
Ergotamine tartrate	EXOTAMINE TARTRATE	379793 X		500/10,000		1
thenesulfonyl chloride, 2-chloro-	ETHANESULFUNYL CHLORLDE, Z-CHLORO-	1622328 X	* * *	500	10 10	ກີ່ ຫວດຄ
hanimidothioic acid, N-[[methylamino)carbony1]	ETHANIMIDOTHIOIC ACID, N-[(METHYLAMINO)CARBONYL]	16752775 X	ŶŶ	500/10.000	1.V 10	X P066
thanol, 1,2-dichloro-, acetate	ETHANOL, 1,2-DICHLORO-, ACETATE	10140871 🛪		1,000		
thanol, Z-ethoxy-	ETHANOL, 2-ETHORY-	110805	xžx	1	1.0 1.00	0 0359
nion homethoe	ENCROPIOS	13194484 X	A	1.000		
Ethoxyethenol	ETHOXYETHANOL	110805	X X X		1.0 1.00	0 0359
thyl acetate	ETHYLACETATE	141786	_ X X		5,00	x 1112
thyi acrylate	ETHYLACRYLATE	140685	<u> </u>		0.1 1.00	0 013
thylbis(2-chlorosthyl)anine	ETHYLBIS(2-CHICNORTHYL) MINE	538078 X	~ ~	500	1.0 1.0	Ξ.
thyl carbamate	ETHYLCARBAMATE	51796	X X X		0.1 10	xΩ U238
thyl chloride	ETHYLCHLORIDE	75003	X X		1.0 10	00
thy chloroformate	EINTICHLOROFORMIE FINT CANADA	107120	* * *	500	1.0	0 10101
thylene	ETHYLENE	74851	X		1.0	
thylenebisdithiocarbanic acid, salts & esters	ETHYLENEBISDITHIOCARBAMIC ACID, SALTS & ESTERS	111546	<u>x x</u>		5.00	10 U114
thylenediamine	ETHYLENED LAMINE	107153 <b>x</b>	x	10,000	5,α	00
thylenediamine-tetracetic acid (EDIA)	EINYLENEDLAYING-TETRANCETIC ACID (EDTA)	106934		Contine advances a constant of projection		1 1067
thylene dichloride	ETHYLENEDICHLORIDE	107062	x x x		ŏ.1 10	ນວິ ບິບິກີກ
thylene fluorohydrin	ETHYLENEPLUOROHYDRIN	371620 🗶		10		
thylene glycol	ETHYLENEGLYCOL	107211	X X		1.0 1	
thylenelmine	ETHYLENELMINE FTHYLENEYN IDF	151564 X 75218 ¥	Ă Ă Ă	1 500	0.1	1 1054
thylene thiourea	ETHYLFNETHIOUREA	96457	x x x	1.000	ŏ.i i	ið uns
thyl ether	ETHYLETHER	60297	Î Î Î		10	0 0117
thyl methacrylate	ETHYLMETHACRYLATE	97632	X X		1,00	x v118
thy inchanesul ionate	EINYLMETHANESULFONATE	62000 \$42005	<b>X X</b>	30.000	A State of the second	1 0113
anyluncyance	FAMPHUR	52857	x x	70,000	10	10 PO97
enamiphos	FENAMIPHOS	22224926 X		10/10,000		1
enitrothion	FENITROTHICN	122145 X		500		1
ansulfothion	FIDELCAMONTIMOTIVE T	119575			1 ~	*
erric amonium oxelate	FERRICAMMENIUMEXALATE	2944674	X		1.00	õ
erric annonium oxalate	FERRICAMONIUMOKALATE	55488874			1,0	20
erric chloride	FERRICCHLORIDE	7705060	<u>×</u>		1,00	20
arric nitrate	FERICALIZATE	10421484	T T		1 0	<b>1</b>
erric sulfate	FERRICSULFATE	10028225	x		1.00	õ
errous ammonium sulfate	FERROUSAMICNIUM SULFATE	10045893	x		1,00	20
errous chloride	FERROUSCHLORIDE	7758943	<u>z</u>		. 10	<u>xo</u>
arrous suitate	FERRISSULFATE	7782630	X		1.00	56
luenet11	FIJENETIL	4301502 X	and the second	100/10.000		
luaneturus	FLICMETURIN	2164172	2		1.0	1070 1960
luoranthene	FLUCRANTHENE	206440	X X		_ <u>10</u>	00 1120
luorene	FLACKENE FUEDTRE	7782414		500	5,04	
luoroacetanide	FLUCROACETAMLOE	640197 x	$\hat{\mathbf{x}} = \hat{\mathbf{x}}$	100/10.000	10	0 PO57
luoroacetic acid	FLUOROACETIC ACID	144490 X		10/10,000		1
luoroacetic acid, sodium salt	FLUOROACETIC ACID, SODIUM SALT	62748 X	x X	10/10,000	1	10 P058
Loroacetyl chioride	FLUCKURLETYL CHLORIDE	559068 X		500/10 000		-
	FONOPOS	944229 X		500		1
ormaldehyde	FORMALDEHYDE	50000 X	<u>x x x</u>	500	0.1 10	DŌ U122
omaldehyde cyanohydrin	FORMALDEHYDE CYANCHYDRIN	107164 X	Sector Contractor Contractor	1,000		2
ometenate hydrochloride	FORMETANATE HYDROCHLORIDE	Z3422539 X		500/10,000	10 F ~	2 11 22
omothion	FORMOTHTON	2540821 ¥	<b>, , , ,</b>	100	1.0 5.0	1 0123
omparanate	FORMFARANATE	17702577		100/10,000		2
osthietan	FOSTHLIETAN	21548323 🕱		. 500		1
reon 113	FRECN113	76131	x	100/10 000	1.0	
	FUDERLUNIOLS	3678191 X		100/10.000	5 17	*
uran .	FURAN	110009 x	x x	500	9,00 10	ີ 0124
uran, tetrahydro-	FURAN, TETRAHYDRO-	109999	X X		1,00	00 U213
urfural	FURFURAL	98011			5.00	00 0125
allium trichioride	GALLIUM TRICHEORIDE	13450903 X		500/10,000		1 1706
lycidylaldehyde	GLYCIDYLALDERYDE	765344	X X			10 1126
lycol Ethers	GLYCOL ETHERS	999999999	x x		**	1+

ALL EPGRA 302/313 and CERCIA Chemicals (Sorted Alphabetically by Chemical Name)





ALL EPCRA 302/313 and CERCIA Chemicals (Sorted Alphabetically by Chemical Name

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ALL EPCRA 302/313 and CERCLA Chemicals (Sorted Alphabetically by Chemical Name) ALTERNATE RME

(3)

METHYLORICARAGYNATE
MACHICARAGYNATE
M EPCRA EPCRA CRS NUMBER 302 313 CERCLA RCRA (C) (D) (E) (F) (G) EPCRA Definitus 302 Trg Concent. RQ (H) (I) (J) RCRA CODE (K) CASHICAL NAME (A) Charles Nethyl Chloroder Nethyl S-chloroexrylate Nethyl S-chloroexrylate Nethyl S-chloroexrylate Nethyl sector (N, N-charctryl)bersensmine Nethylese broade Nethylese broade Nethyl exist (pherylisecyrasts) Nethyl exist (pherylisecyrasts) Nethyl exist (Pherylisecon Nethyl isotropyl secon Nethyl isotropyl Nethyl isotropyl secon Nethyl isotropyl N CHEMICAL NAME ALTE (B) 74873 80637 71556 1.0 100 x x x 0045 x 500 1.0 1.000 U226 1.0 1.000 U156 10 U157 0.1 10 U158 X X X X X X X X 500 79221 x 20752 10161 101668 74953 75092 101779 78933 78935 789555 78955 78955 789555 789555 789555 78955555 789 XXXXXX XXXXXX U068 U060 X XXXXXX X 0159 0159 \*\*\*\* 0159 0160 P068 0138 0161 P064 XXXXX 1.0 0.1 1.0 1.0 500 500 500 500/10,000 1.0 100 x x x 1053 1.0 1,000 X U162 P071 100/10,000 500 100 1.0 x x x 10,000 x 500 x 100/10,000 x x 500/10,000 x x 500/10,000 10 1064 1,000 1.0 1.0 1.0 x x x x X -500/10,000 
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 10/10.000 100 100 1,000 ana at-anga Salaharikan X X 500/10,000 P007 X x x x 0.1 × × 1.0 **V165** U166 U167 U168 X X X X 0.1 0.1 0.1 NARTINIZALINEA WARTINIZALINEA WARTINIZALINEA DE COLLANDARIA MICOLLANDALINE SULEXTE MICOLLANDALINE SULEXTE MICOLLANDALINE SULEXTE MICOLLANDALINE SULEXTE MICOLLANDALINE MICOLLANDALINA chel (chel capounds (chel amoutur sulfate (chel catory) chel chloride chel c x **x** -1 P073 X X P074 x 100 100 100 viced militie Nicotine end salts Nicotine end salts Nicotic end Nitric oride Nitric oride Nitricotics Phirosyniine Nitrico-ornisitine Nitrico-ornisitine Nitrico-ornisitine Nitrico-ornisitine Nitrico-ornisitine Nitrico-ornisitine Nitrico-ornisitine Nitrico-ornisitine Nitrico-ornisitine P075 P075 x x 100/10,000 x x x 1,000 x x x 1,000 x x x 100 1.0 1.000 10 P076 0.1 5,000 X X P077 x x x x x x 10,000 0.1 1.0 1.000 U169 500 Nitrojen Nitrojen Nitrogen dioxide Nitrogen austard Nitrogien austard Nitrogienen (elsent issuers) 0.1 x x x 100 10 P078 10 × × × 10 P081 10 0.1 1.0 X X 



ALL EXCRA 302/313 and CERCLA Chemicals (Sorted Alphabetically by Chemical M

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πospicordidic acid. (0.5 dimetry[-1.5-(2.4]metry[idit[s]=ty]]=#################################	5,000
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Number         Numer         Numer         Numer <td></td>	
thall carydride         HTALLOWRODELE         55449         X         X         1.           Productions         PRODUCTION         PRODUCTION         100056         X         X         100/10.000           Productions         PRODUCTION         PRODUCTION         100056         X         X         X         100/10.000         1.           Production         PRODUCTION         100056         X         X         X         500/10.000         1.           Production         PRODUCTION         100056         X         X         500/10.000         1.           Production         PRODUCTION         100056         X         X         1.000         1.           Production         PRODUCTION         100056         X         X         1.000         1.           Production         PRODUCTION         100056         X         X         0.000         1.           Production         PRODUCTION         100057         X         X         0.000         0.000           Production         PRODUCTION         PRODUCTION         1000500         X         X         0.000           Production         PRODUCTION         PRODUCTION         1000500         X         X </td <td>1.000</td>	1.000
Typeschilder         Participation         Production         Pr	5,000 019
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ALL EPCRA 302/313 and CERCIA Chemicals (Sorted Alphabetically by Chemical Hame)



ALL BYOR 302/313 and CENCHA CHEMICALS



ALL EPCHA 302/313 and CERCIA Chemicals (Sorted Alphabetically by Chemical, Name



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#### Appendix 3 State-by-State Listing of EPCRA Contacts

This Appendix provides a point-of-contact (POC) in each state, for units to begin acquiring specific information needed to comply with EPCRA; e.g. POC, address, phone# for the SERC and LEPC. States do vary in their EPCRA reporting requirements, primarily with respect to EPCRA 311/312 reporting. These requirements have been coded in the following tables, and are noted for each state.

#### EPCRA 311 Requirements Code EPCRA 312 Requirements Code

- 1 Prefer Inventory ListA Prefer Tier II2 Require Inventory ListB Require Tier II3 State List PreferredC Prefer State form4 State List RequiredD Require State form5 Prefer MSDSE Require State Hazardous

- 6 Require MSDS

#### Alabama - 1,A

Mr. John Williford (RTK) Alabama Emergency Response Commission Alabama Department of Environmental Arizona Emergency Response Commission Management Dave White (Emergency Plan & Response) 5636 East McDowell Road 1751 Congressman W.L. Dickinson Drive Phoenix, AZ 85008 Montgomery, AL 36109 (205) 834-1370

#### Alaska - 1,A

Ms. Camille Stephens Alaska State Emergency Response Commission Department of Environmental Conservation 410 Willoughby, Suite 105 Juneau, AK 99801-1795 (907) 465-5220

#### American Samoa

Goipa Tausaga American Samoa EPA Office of the Governor Pago Pago, AS 96799 International Number (684) 633-2304

- Chemical Inventory

#### Arizona - 2,B

Mr. Daniel Roe, Acting Executive Director Division of Emergency Services (602)231-6346

#### Arkansas - 1,A

Mr. John Ward Arkansas Department of Pollution Control and Ecology P.O. Box 8913 8001 National Drive Little Rock, AR 72219-8913 (501)562-7444

### California- 1,D

Mr. Stephen Hanna Hazmat Unit office of Emergency Services California Environmental Protection Agency 555 Capitol Mall, Suite 235 Sacramento, CA 95814 (916)262-1750

#### Colorado - 1,D

Winifred Bromley Colorado Emergency Planning Commission Georgia Emergency Response Commission Colorado Department of Health 4300 Cherry Creek Drive South Denver, CO 80222-1530 (303) 692-3434

#### Commonwealth of Northern Mariana Islands

Mr. Frank Russell Meecham, III Divsion of Environmental Quality P.O. Box 1304 Saipan, MP 96950 (670)234-6984

#### Connecticut - 1,D

Suzanne Vaughn SARA Titlc III Coordinator Department of Environmental Protection Hawaii State Department of Health C/O Waste Management 79 Elm St. Hartford, CT 06106-5127 (203) 566-4856

# Delaware - 1,D

Mr. Robert Pritchard Division of Air and Waste Management Idaho Emergency Response Commission Department of Natural Resourcs and Environmental Control 89 King's Highway P.O. Box 1401 Dover, DE 19903 (302)834-4531

# District of Columbia - 1,A

Ms. Pamela Thuber, Environmental Planning Specialist Office of Emergency Preparedness 2001 14th Street, NW, 8th Floor Washington, DC 20009 (202)727 - 2985

#### Florida - 3,C

Ms. Eve Rainey State Emergeney Response Commission Florida Department of Community Affairs Office of Pollution Prevention 2740 Centerview Drive Tallahassee, FL 32399-2100 (904)488-1472In Florida: 800-635-7179

# Georgia - 4,B

Mr. Burt Langley 7 Martin Luther King Dr. Room 139 7 Martin Luther Ki Atlanta, GA 30334 (404)656-6905

#### Guam

Mr. Fred Castro Guam EPA D-107 Harmon Plaza 130 Rojas Street Harmon, GU 96911 (671)646-8864

## Hawaii - 1,A

Ms. Laura Young Hawaii State Emergency Response Commission 5 Waterfront Plaza, Suite 250C 500 Alamona Blvd. Honolulu, HI 96813 (808) 586-4353

### Idaho - 1,B

Ms. Margaret Ballard 1109 Main St. State House Boise, ID 83720-7000 (208) 334-3263

# Illinois - 1,A

Mr. Oran Robinson Emergency Planning Unit Office of Chemical Safety Illinois EPA P.O. Box 19276 2200 Churchill Road Springfield, IL 62794-9276 (217)782-4694 Indiana - 1,A

Mr. John Rose Indiana Department of Environmental Management Technical Assistance 100 North Senate (N-1355) Box 6015 Indianapolis, IN 46206-6015 (317)243-5176

#### Iowa - 1,B

Mr. Pete Hamlin (313)/Don Peddy (311 & 312) (515)281-6175 Department of Natural Resources Wallace Building 900 East Grand Avenue Des Moines, IA 50319 (515)281-8852 Kansas - 2,B Mr. Jon Flint Right-to-Know Program Kansas Emergency Response Commission Environmental Protection J Street and 2 North Building 283, Forbes Field Topeka, KS 66620 (913)296-1690 Kentucky - 1,B Ms. Lucille Orlando Kentucky Department for Environmental Protection 14 Reilly Road Frankfort, KY 40601

Louisiana - 1,C Ms. Bob Hayes Department of Environmental Quality P.O. Box 82263 7890 Bluebonnet Baton Rouge, LA 70810-2263 (504)925-6113

#### Maine - 1 (SERC, LEPC),

(502) 564-5223

S(Fire Dept),D Ms Rayna Leibowitz State Emergency Response Commission75 Constitution Ave.State House Station Number 72St. Paul, MN 55155 Augusta, ME 04333 (207)287-4080 In Maine: (800)452-8735

Missouri- 1,C Mr. Dean Martin (313) Bob Kraus (311/312) Commission Missouri Department of Natural Resources Mississippi Emergency Management P.O. Box 176 Jefferson City, MO 65102 certified mail only: Missouri Department of Natural Resources 1410 Riverside Drive 2710 West Main Jefferson City, MO 65109 (314) 526-3371 (314) 526-3901

#### Maryland - 1,B

Ms. Emily Troyer State Emergency Response Commission Maryland Department of the Environment Toxics Information Center 2500 Broeing Highway Baltimore, MD 21224 (410)631-3343 Massachusetts - 1 (W/CAS#),B Mr. Mike Feeney Massachusetts Department of Bureau of Waste Prevention 1 Winter Street Boston, MA 02108 (617)727-7035 Michigan - 1,A Mr. Kent Kanagey Title IIl Coordinator Michigan Department of Natural Resources Environmental Response Division Title III Unit P.O. Box 30426 Lansing, MI 48909 certified mail only: 300 South Washington Square Title III, 5th Floor Lansing, MI 48909

#### Minnesota - 3,C

(517)373-8481

Mr. Paul Aasen Minnesota Emergency Response Commission B5 State Capitol Bldg. (612)643-3000

#### Mississippi - 1,B

Mr. John David Burns Mississippi Emergency Response Agency P.O. Box 4501 Jackson, MS 39296-4501 certified mail only: Jackson, MS 39202 (601)960-9000

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#### Montana - 1,A

Mr. Tom Ellerhoff, Co-Chairman Montana Emergency Responce Commission New York Emergency Response Environmental Sciences Division Department of Health & Environmental Sciences Capitol Station Cogswell Building A-107 P.O. Box 200901 Helena, MT 59620-0901 (406) 444-3948

#### Nebraska - 1,B

Mr. John Steinauer, Coordinator State of Nebraska Department of Environmental Quality P.O. Box 98922 Lincoln, NE 68509-8922 certified mail only:

1200 N Street, Suite 400 Lincoln, NE 68508 (402) 471-4251

#### New Jersey - 1,C

Ms. Shirlee Schiffman Department of Environmental Protection Management Agency, Title III Program and Energy Division of Environmental Quality, Safety, Health, and Analytical Programs Concord, NH 03301 SARA Title III Section 313 Bureau of Hazardous Substances Information 401 E. State St. (CN-405) Trenton, NJ 08625 (609) 984-3219

#### New Mexico - Z(w/characteristics), B (w/site diagram)

Mr. Max Johnson, Title III Coordinator Raleigh, NC 27603-1335 New Mexico Emergency Response Commission Chemical Safety Office, Emergency Management Bureau P.O. Box 1628 Santa Fe, NM 87504-1628 certified mail only: 4491 Cerillos Roads Santa Fe, NM 87504 (505) 827-9223

# New York - 1,A

Mr. William Miner Commission New York State Department of Environmental Conservation Bureau of Spill Prevention and Responce 50 Wolf Road/Room 340 Albany, NY 12233-3510 (518)457 - 4107

# Neveda - 1,B

(702)687-5872 Ms. Joiaine Johnson (313) Bureau Chief, Chemical Hazard Management, Kathy Esparza (311) (702)687-7374 Ginny Capucci (312) (702)687-4290 333 W. Nye Lane Carson City, NV 89710

### New Hampshire - 1,B

Lee Kimball New Hampshire State Emergency State Office Park South 107 Pleasant Street (601)271-2231

### North Carolina - 1,B

Ms. Emily Kilpatrick North Carolina Emergency Response Commission North Carolina Division of Emergency Management 116 West Jones Street (919)733-3865

#### North Dakota - 1,B

Mr. Douglas Friez Noah Dakota Emergency Response Commission Division of Emergency Management P.O. Box 5511 Bismarck, ND 58502-5511 (701)224 - 2100

#### Ohio - 2(> 10 chemicals) or 1(10 chemicals) B or D (w site map) Mr. John Aucott

Mr. Mark Bessel Ohio EPA Division of Air Pollution Control 1800 Watermark Drive Columbus, OH 43215 (614)644-2267

#### Oklahoma - 1,A

Mr. Monty Elder Department of Environmental Quality Support Scrviccs 1000 N.E. 10th Street Oklahoma City, OK 73117-1212 (405)271-8056

#### Oregon - 4,D

Ms. Virginia Honeywell Oregon Emergency Response Commission c/o State Fire Marshall 4760 Portland Road, N.E. Salem, OR 97305-1760 (503) 378-3473

# Pennsylvania - 1, B(w/site plan)

Mr. James Tinney Pennsylvania Emergency Management Council 523 East Capitol Bureau of Worker and Community Right-to-Know Room 1503 Labor and Industry Building 7th & Forster Streetss Harrisburg, PA 17120 (717)783-1826

#### Puerto Rico 1.B(w/tier I)

(809)766-2823

Mr. Denaro Toress Puerto Rico Emergency Responces Commissioner Title III-SARA Section 313 Puerto Rico Environmental Quality Board 1-800-258-3300 (out of state) Fernadez Junco Station P.O. Box 11488 Santuree, PR 00910 certified mail only: Environmental Quality, Board Emergency Response and Remedial Office Conservation Commission National Plaza #431 Ponee de Leon Avenue Hato Rey, PR 00917

#### Rhode Island - 1,B

Rhode Island Department of Enviromental Management Division of Air Resources 291 Promenade Street Providence, RI 02908-5767 Attn: Toxic Release Inventory (401) 421-7333

#### South Carolina - 2,B

Mr. Michael Juras (313) Pete Saussy (311/312) (803)935-6444 South Carolina Department of Health and Environmental Control 2600 Bull Street Columbia, SC 29201 Attn: EPCRA Reporting (803)935-6336

#### South Dakota - 1,B

Ms. Lee Ann Smith, Title IIl Coordinator South Dakota Emergency Responce Commission South Dakota Department of Enviroment and Natural Resources Joe Foss Building Pierre, SD 57501-3181 (605)773-3296 (800) 433-2288

#### Tennessee - 1,A

Ms. Betty Eaves Tennessee Emergency Response Commission Director, Tennessee Emergency Management Agency 3041 Sidco Drive Nashville, TN 37204 (615)741-2986 1-800-262-3300(in Tennessee)

#### Texas - 4,D

Ms. Beck), Kurka, (313) Supervisor Office of Pollution Prevention and Recycling Texas Natural Resouces Paula McKimley (311/312) (512)834-6600P.O. Box 13087 Austin, TX 78711-3087 (512)463 - 7869

#### Utah - 1,A

Mr. Darrell Chisholm Utah Hazardous Chemical Emergency Response Commission Utah Department of Environmental Quality P.O. Box 47659 Division of Environmental Response and Olympia, WA 98504-7659 Remediation 168 North 1950 West Salt Lake City, UT 84116-4840 (801) 536-4100 Vermont - 1,B Ms. Patty Jacobson Department of Health 108 Cherry Street

Burlington, VT 05402 (802)865-7742

#### Virginia

Ms. Cathy Harris Virginia Emergeney Response Council Wisconsin - 1,B(w/site plan) P.O. Box 10009 Richmond, VA 23240-00009 certified mail only: Virginia Department of Environmental Madison, WI 53707 Quality SARA Title III Program 9th Floor 629 E. Main St. Richmond, VA 23219 (804)225-2513

#### Virgin Islands

Mr. Roy E. Aetams, Commissioner Department of Planning and Natural Resources U.S. Virgin Islands Emergency Response Cheyenne, WY 82002 Commission Title III Nisky Center, Suite 231 Charlotte Amalie St. Thomas, VI 00802 (809)774-3320/Ext. 101 or 102

### Washington - 1(5 fire dept), B

Ms Idell Hallsen, Supervisor Community Right-To-Know Unit Department of Ecology certified mail only: 300 Desmond Road Lacey, WA 98503 (206) 438-7252

# West Virginia - 1,B

Mr. Carl L. Bradford, Director West Viginia Emergency Response Commission West Virginia Office of Emergency Services Main Capital Building 1, Room EB-80 Charleston, WV 25305-0360 (304)348-5380

Department of Natural Rcsourccs 101 South Webster P.O. Box 7921 Attn: Chris Bacon (608)266-3232

#### Wyoming - 1 (6 fire local dept), B

Joe Daly Wyoming Emergency Response Commission Wyoming Emergency Management Agency Department of Environmental Quality Herehler Building 4 West 122 West 25th St. P.O. Box 1708 (307)777-7566

Appendix 4 Tier II Form and Instructions

TIER TWO INSTRUCTIONS

GENERAL INFORMATION

Submission of this Tier Two form is required when requested under Title III of the Superfund Amendments and Reauthorization Act of 1986, Section 312, Public Law 99-499, codified at 42 U.S.C. 11022. The purpose of this Tier Two form is to provide state and local officials and the public with specific information on hazardous chemicals present at your facility during the past year.

#### Certification

The owner or operator or the officially designated representative of the owner or operator must certify that all information included in the Tier Two submission is true, accurate, and complete. On the first page of the Tier Two report, enter your full name and official title. Sign your name and enter the current date. Also, enter the total number of pages included in the Confidential and Non-Confidential Information Sheets as well as all attachments. An original signature is required on at least the first page of the submission. Submissions to the SERC, LEPC, and fire department must each contain an original signature on at least the first page. Subsequent pages must contain either an original signature, a photocopy of the original signature, or a signature stamp. Each page must contain the date on which the original signature was affixed to the first page of the submission and the total number of pages in the submission.

You must provide all information requested on this form to fulfill Tier Two reporting requirements. This form may also be used as a worksheet for completing the Tier One for or may be submitted in place of the Tier One form.

#### Who Must Submit This Form

Section 312 of Title III requires that the owner or operator of a facitity submit this Tier Two form if so requested by a state emergency planning commission, a local emergency planning committee, or a fire department with jurisdiction over the facility.

This request may apply to the owner or operator of any facility that is required, under regulations implementing the Occupational Safety and Health Act of 1970, to prepare or have available a material safety data sheet (MSDS) for a hazardous chemical present at the facility. MSDS requirements are specified in the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, found in Title 29 of the Code of Federal Regulations at 1910.1200. This form does not have to be submitted if all of the chemicals located at your facility are excluded under Section 311(e) of Title III.

#### What Chemicals Are Included

If you are submitting Tier Two forms in lieu of Tier One, you must report the required information on the Tier Two form for each hazardous chemical present at your facility in quantities equal to or greater than established threshold amounts (discussed below), unless the chemicals are excluded under Section 311(e) of Title III. Hazardous chemicals are any substance for which your facility must maintain an MSDS under OSHA's Hazard Communication Standard.

If you elect to submit Tier One rather than Tier Two, you may still be required to submit Tier Two information upon request.

#### What Chemicals Are Excluded

Section 311(e) of Title III excludes the following substances:

(i) Any food, food additive, color additive, drug, or cosmetic regulated by the Food and Drug Administration;

(ii) Any substance present as a solid in any manufactured item to the extent exposure to the substance does not occur under any normal conditions of use;

(iii) Any substance to the extent it is used for personal, family or household purposes, or is present in the same form and concentration as a product packaged for distribution and use by the general public;

(iv) Any substance to the extent it is used in a research laboratory or a hospital or other medical facility under the direct supervision of a technically qualified individual;

(v) Any substance to the extent it is used in routine agricultural operations or is a fertilizer held for sale by a retailer to the ultimate customer.

OSHA regulations, Section 1910.1200(b), stipulate exemptions from the requirement to prepare or have available an MSDS.

#### Reporting Thresholds

Minimum thresholds have been established for Tier One/Tier Two reporting under Title III, Section 12. These thresholds are as follows:

For extremely hazardous substances (EHSs) designated under section 302 of Title III, the reporting threshold is 500 pounds (or 227 kg.) or the threshold planning quantity (TPQ), whichever is lower:

For all other hazardous chemicals for which facilities are required to have or prepare an MSDS, the minimum reporting threshold is 10,000 pounds (or 4,540 kg.). You need to report hazardous chemicals that were present at your facility at any time during the previous calendar year at levels that equal or exceed these thresholds. For instructions on threshold determinations for components of mixtures, see "What About Mixtures?" on page 2 of these instructions.

A requesting offcial may limit the responses required under Tier Two by specifying particular chemicals or groups of chemicals. Such requests apply to hazardous chemicals regardless of established thresholds. NOTIFICATION, REPORTING, AND RECORDKEEPING

#### INSTRUCTIONS

#### Please read these instructions carefully. Print or type all responses.

#### When To Submit This Form

Owners or operators of facilities that have hazardous chemicals on hand in quantities equal to or greater than set threshold levels must submit either Tier One or Tier Two forms by March 1.

If you choose to submit Tier One, rather than Tier Two, be aware that you may have to submit Tier Two information later, upon request of an authorized official. You must submit the Tier Two form within 30 days of receipt of a written request.

#### Where To Submit This Form

Send either a completed Tier One form or Tier Two form(s) to each of the following organizations:

- 1. Your State Emergency Response Commission.
- 2. Your Local Emergency Planning Committee.
- 3. The fire department with jurisdiction over your facility.

If a Tier Two form is submitted in response to a request, send the completed form to the requesting agency.

#### Penalties

Any owner or operator who violates any Tier Two reporting requirements shall be liable to the United States for a civil penalty of up to \$25,000 for each such violation. Each day a violation continues shall constitute a separate violation.

If your Tier Two responses require more than one page use additional forms and fill in the page number at the top of the form.

#### Reporting Period

Enter the appropriate calendar year, beginning January 1 and ending December 31.

#### Facility Identification

Enter the full name of your facility (and company identifier where appropriate).

Enter the full street address or state road. If a street address is not available, enter other appropriate identifiers that describe the physical location of your facility (e.g., longitude and latitude). Include city, state, and zip code. Enter the primary Standard Industrial Classification (SIC) code and the Dun & Bradstreet number for your facility. The financial officer of your facility should be able to provide the Dun & Bradstreet number. If your firm does not have this information, contact the state or regional office of Dun & Bradstreet to obtain your facility number or have one assigned.

#### Owner/Operator

Enter the owner's or operator's full name, mailing address, and phone number.

#### Emergency Contact

Enter the name, title, and work phone number of at least one local person or office who can act as a referral if emergency responders need assistance in responding to a chemical accident at the facility.

Provide an emergency phone number where such emergency chemical information will be available 24 hours a day, every day.

The requirement is mandatory. The facility must make some arrangement to ensure a 24 hour contact is available.

#### Identical Information

Check the box indicating identical information, located below the emergency contacts on the Tier Two form, if the current chemical information being reported is identical to that submitted last year. Chemical descriptions, hazards, amounts, and locations must be provided in this year's form, even if the information is identical to that submitted last year.

#### Chemical Information: Description, Hazards, Amounts, and Locations

The main section of the Tier Two form requires specific information on amounts and locations of hazardous chemicals, as defined in the OSHA Hazard Communication Standard.

If you choose to indicate that all of the information on a specific hazardous chemical is identical to that submitted last year, check the appropriate optional box provided at the right side of the storage codes and locations on the Tier Two form. Chemical descriptions, hazards, amounts, and locations must be provided even if the information is identical to that submitted last year.

What units should I use?

Calculate all amounts as weight in pounds. To convert gas or liquid volume to weight in pounds, multiply by an appropriate density factor.

What about mixtures?

If a chemical is part of a mixture, you have the option of reporting either the weight of the entire mixture or only the portion of the mixture that is a particular hazardous chemical (e.g., if a hazardous solution weighs 100 lbs. but is composed of only 5% of a particular hazardous chemical, you can indicate either 100 lbs. of the mixture of 5 lbs. of the chemical).

The option used for each mixture should be consistent with your Section 311 reporting.

Because EHSs are important to Section 303 planning, EHSs have lower thresholds. The amount of an EHS at a facility (both pure EHS substances and EHSs in mixtures) must be aggregated for purposes of threshold determination. It is suggested that the aggregation calculation be done as a first step in making the threshold determination. Once you determine whether a threshold for an EHS has been reached, you should report either the total weight of the EHS at your facility, or the weight of each mixture containing the EHS.

#### Chemical Description

Enter the Chemical Abstract Service registry number (CAS#). For mixtures, enter the CAS number of the mixture as a whole if it has been assigned a number distinct from its components. For a mixture that has no CAS number, leave this item blank or report the CAS numbers of as many constituent chemicals as possible.

#### TIER TWO INSTRUCTIONS

If you are withholding the name of a chemical in accordance with criteria specified in Title III, Section 322, enter the generic chemical class or category that is structurally descriptive of the chemical (e.g., list toluene disocynate as organic isocynate) and check the box marked Trade Secret. Trade secret information should be submitted to EPA and must include a substantiation. Please refer to EPA's final regulation on trade secrecy (53 FR 28772, July 29, 1988) for detailed information on how to submit trade secrecy claims.

- Enter the chemical name or common name of each hazardous chemical.
- Check box for ALL applicable descriptors: pure or mixture, and solid, liquid, or gas; and whether the chemical is or contains an EHS.
- 4. If the chemical is a mixture containing an EHS, enter the chemical name of each EHS in the mixture.

#### Example:

You have pure chlorine gas on hand, as well as two mixtures that contain liquid chlorine. You write "chlorine" and enter the CAS#. Then you circle "pure" and "mix" -- as well as "liquid" and "gas".

#### Physical And Health Hazards

For each chemical you have listed, check all the physical and health hazard boxes that apply. These hazard categories are defined m 40 CFR 370.2. The two health hazard categories and three physical hazard categories are a consolidation of the 23 hazard categories defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

# HAZARD CATEGORY COMPENSATION FOR REPORTING UNDER SECTIONS 311 AND 312

EPA's hazard categories	OSHA's hazard categories
Fire Hazard	Flammable Combustion Liquid Pyrophoric Oxidizer
Sudden Release of Pressure Reactive	Explosive Compressed Gas Unstable Reactive Organic Peroxide
Immediate (Acute) Health Hazards	Water Reactive Highly Toxic Toxic Irritant Sensitizer Corrosive
Delayed (Chronic) Health Hazard	Other hazardous chemicals with an adverse effect with short term exposure Carcinogens Other hazardous chemicals with an adverse effect with long term exposure

#### Maximum Amount

- For each hazardous chemical, estimate the greatest amount present at your facility on any single day during the reporting period.
- 2. Find the appropriate range value code in Table I.
- 3. Enter this range value as the Maximum Amount.

#### Table I REPORTING RANGES

Range Value	Weight Range in From	Pounds To
01	0	99
02	100	999
03	1,000	9,999
04	10,000	99,999
05	100,000	999,999
06	1,000,000	9,999,999
07	10,000,000	49,999,999
08	50,000,000	99,999,999
09	100,000,000	499,999,999
10	500,000,000	999,999,999
11	1 billion	higher than 1 billion

If you are using this form as a worksheet for completing Tier One, enter the actual weight in pounds in the shaded space below the response blocks. Do this for both Maximum Amount and Average Daily Amount. Example: You received one large shipment of a solvent mixture last year. The shipment filled five 5,000-gallon storage tank. You know that the solvent contains 10% benzene, which is a hazardous chemical.

You figure that 10% of 25,000 gallons is 2,500 gallons. You also know that the density of benzene is 7.29 pounds per gallon, so you multiply 2,500 by 7.29 to get a weight of 18,225 pounds.

Then you look at Table I and find that the range value 04 corresponds to 18,225. You enter 04 as the Maximum Amount.

(If you are using the form as a worksheet for completing a Tier One form, you should write 18,225 in the shaded area.)

#### Average Daily Amount

 For each hazardous chemical, estimate the average weight in pounds that was present at your facility during the year. To do this, total all daily weights and divide by the

- number of days the chemical was present on the site. 2. Find the appropriate range value in Table I.
- 3. Enter this range value as the Average Daily Amount.

Example:

The 25,000-gallon shipment of solvent you received last year was gradually used up and completely gone in 315 days. The sum of the daily volume levels in the tank is 4,526,000 gallons. By dividing 4,536,000 gallons by 315 days on-site, you calculate an average daily amount of 14,400 gallons.

You already know that the solvent contains 10% benzene, which is a hazardous chemical. Since 10% of 14,400 is 1,440, you figure that you had an average of 1,440 gallons of benzene. You also know that the density of benzene is 7.29 pounds per gallon, so you multiply 1,440 by 7.29 to get a weight of 10,500 pounds.

Then you look at Table I and find that the range value 04 corresponds to 10,500. You enter 04 as the Average Daily Amount.

(If you are using the form as a worksheet for completing a Tier One form, you should write 10,500 in the shaded area.)

#### Number Of Days On-Site

Enter the number of days that the hazardous chemical was found on-site.

Example: The solvent composed of 10% benzene was present for 315 days at your facility. Enter 315 in the space provided.

#### Storage Codes End Storage Locations

List all non-confidential chemical locations in this column, along with storage types/conditions associated with each location. Please note that a particular chemical may be located in several places around the facility. Each row of boxes followed by a line represents a unique location for the same chemical.

Storage Codes: Indicate the types and conditions of storage present.

- a. Look at Table II. For each location, find the appropriate storage type and enter the corresponding code in the first box
- b. Look at Table III\*. For each storage type, find the appropriate storage types for pressure and temperature conditions. Enter the applicable pressure code in the second box. Enter the applicable temperature code in the third box.

#### Table II -- STORAGE TYPES

CODES Types of Storage

A B C	Above ground tank Below ground tank Tank inside building
D	Steel drum
Е	Plastic or non-metallic drum
F	Can
G	Carboy
Н	Silo
I	Fiber drum
J	Bag
K	Box
L	Cylinder
М	Glass bottles or jugs
Ν	Plastic bottles or jugs
0	Tote bin
Ρ	Tank wagon
Q	Rail car
R	Other

#### Table III -- TEMPERATURE AND PRESSURE CONDITIONS

CODES	Storage Conditions
	(PRESSURE)
1	Ambient pressure
2	Greater than ambient pressure
3	Less than ambient pressure (TEMPERATURE)
4	Ambient temperature
5	Greater than ambient temperature
CODES	Storage Conditions
6	Less than ambient temperature but not cryogenic
7	Cryogenic conditions

Example:

The benzene in the main building is kept in a tank inside the building, at ambient pressure and less than ambient temperature. Table II shows you that the code for a tank inside a building is C. Table III shows you that code for ambient pressure is 1, and the code for less than ambient temperature is 6. You enter:  $C \ 1 \ 6$ 

**Storage Locations:** Provide a brief description of the precise location of the chemical, so that emergency responders can locate the area easily. You may find it advantageous to provide the optional site p]an or site coordinates as explained below.

For each chemical, indicate at a minimum the building or lot. Additionally, where practical, the room or area may be indicated. You may respond in narrative form with appropriate site coordinates or abbreviations. If the chemical is present in more than one building, lot, or area location, continue your responses down the page as needed. If the chemical exists everywhere at the plant site simultaneously, you may report that the chemical is ubiquitous at the site.

**Optional Attachments:** If you choose to attach one of the following, check the appropriate Attachments box at the bottom of the Tier Two form.

- A site plan with site coordinates indicated for buildings, lots, areas, etc., throughout your facility.
- b. A list of site coordinate abbreviations treat correspond to buildings, lots, areas, etc., throughout your facility.
- c. A description of dikes and other safeguard measures for storage locations throughout your facility.

Example:

You have benzene in the main room of the main building, and in tank 2 in tank field 10. You attach a site plan with coordinates as follows: main building = G-2, tank field 10= B-6. Fill in the Storage Location as follows: B-6 (Tank 2) G-2 (Main Room)

#### Confidential Information

Under Title III, Section 324, you may elect to withhold location information on a specific chemical from disclosure to the public. If you choose to do so: Enter the word "confidential" in the Non-Confidential Location section of the Tier Two form on the first line of the storage location. On a separate Tier Two Confidential Location information Sheet, enter the name and CAS# of each chemical for which you are keeping the location confidential. Enter the appropriate location and storage information, as desribed above for non-confidential locations. Attach the Tier Two Confidential Location information Sheet to the Tier Two form. This separates confidential locations from ether information that will be disclosed to the public.

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# TIER TWO INSTRUCTIONS

NOTIFICATION, REPORTING, AND RECORDKEEPING

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TIER TWO INSTRUCTIONS

NOTIFICATION, REPORTING, AND RECORDREEPING