

**Department of State Police**  
**OFFICE OF STATE FIRE MARSHAL**  
**Community Right to Know Unit**



**Hazardous Substance Information Survey**  
**Instruction Booklet**

Revised January 2008

**Mailing Address:**

Office of State Fire Marshal  
CR2K Unit  
4760 Portland Rd NE  
Salem OR 97305-1760

**Hazardous Substance Information Hotline:**

Monday thru Friday  
8:00am-12:00pm and 1:00pm-5:00pm PST  
(503) 378-6835  
TDD (503) 390-4661

**Web Site:**

[http://www.oregon.gov/OSP/SFM/CR2K\\_Home.shtml](http://www.oregon.gov/OSP/SFM/CR2K_Home.shtml)

**Before**



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## **Introduction**

### **The Oregon Community Right to Know and Protection Act ORS 453.307-453.414**

In 1985 the Oregon Legislature passed the Community Right to Know and Protection Act. This law requires the Office of State Fire Marshal to conduct an annual Hazardous Substance Information Survey of Oregon facilities. The administration and enforcement of the survey is conducted by the Community Right to Know Unit (CR2K). Facilities in Oregon with reportable quantities of hazardous substances are required to annually report those substances on the survey. In addition, facilities that receive the survey for the first time are also required to complete and submit the survey. Facilities failing to complete and submit the survey as required are subject civil penalties. A hazardous substance possession fee may be assessed based on the information provided.

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### **How The Information Is Used**

The information collected on the survey serves many purposes. It allows the general public to determine what hazards are present in their communities so they can better protect themselves. It also serves as the foundation for preplanning activities conducted by emergency responders as well as a resource during an emergency. In addition, the information is a key component for the State Fire Marshal's Planning and Training Assistance program for local fire departments and communities.

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### **The Instruction Booklet**

Because some reporting requirements may have changed, it is strongly recommended that the instruction booklet be reviewed before completing the survey. The booklet is arranged to reflect the different sections of the survey in chronological order. Additional information and tables have been provided for completing sections of the survey involving the reporting of storage locations, liquefied gases, batteries, Extremely Hazardous Substances, 112r Clean Air Act and Process Safety Management Substances. There is also a section titled "Frequently Asked Questions" (FAQ) that may be of further assistance.

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### **Receiving Assistance**

If after reviewing the instruction booklet, you still have questions or need assistance completing the survey, help is available by calling our **Hazardous Substance Information Hotline at (503) 378-6835 or for TDD (503) 390-4661 Monday through Friday, 8:00am to 12:00pm and 1:00pm to 5:00pm.**

Other resources are available on our web site at [http://www.oregon.gov/OSP/SFM/CR2K\\_Home.shtml](http://www.oregon.gov/OSP/SFM/CR2K_Home.shtml). Some of the resources available are:

- Applicable ORS and OAR's
- Conversion charts for gases and refrigerants
- Survey Request Form for Unreported Sites
- MSDS's
- Searchable Databases
- Hazardous Substance Information Request form
- Sections D and E of the survey

## Important Reporting Requirements

- Oregon Law requires the survey to be completed correctly and returned by the due date indicated on the survey or it will be returned for correction and will not be considered “received” by the OSFM.
- A copy of the survey is required to be kept at the site address listed on the survey for three (3) years. **Exception:** Records for facilities and/or remote sites, where the covered employer, owner or operator is not set up to maintain such records, may be maintained at another of their facilities within the state.
- Facilities are required to maintain complete and accurate records of each hazardous substance they manufacture, generate, use, store, possess, or dispose of.
- A separate survey must be submitted for each site address in Oregon (OAR 837-85-0090) unless otherwise notified by the Office of State Fire Marshal. If you have a site address that is not already receiving a survey, complete and return to OSFM the “Request Form for Unreported Sites” included in this booklet.
- If a “substantive change” occurs at the facility during the current survey period, notification to the OSFM is required within 30 days of its occurrence. Substantive changes are:
  - A change of site address or mailing address.
  - A change of the emergency contact person.
  - A change of any phone numbers.
  - A change of ownership or business name.
  - Introduction of new substances to the site in reportable quantities which were not previously reported.
  - An increase of a substance already reported that increases the Maximum Amount code.
  - An already reported substance that is moved to another building, to another floor level, or 300 feet from its reported location.

To report a substantive change, update the facility’s copy of the survey and write “update” at the top. Make a new copy for the facility’s records and mail the updated survey to the Office of State Fire Marshal.

- If the facility has been sold, return the survey to our office with a letter that includes the date it was sold and as much contact information for the new owner as possible, or call the Hazardous Substance Information Hotline at (503) 378-6835. TDD (503) 390-4661.
- If the facility is no longer doing business in the state of Oregon, write a letter to us identifying when the facility ceased operations. Please include the facility ID number, your name, and a contact phone number.
- Under-reporting substance amounts or failing to report could subject your facility to citation and monetary penalties.

## REQUESTING A SURVEY FOR UNREPORTED SITES

Unless otherwise notified by our office, a separate survey is required to be submitted for each site address in Oregon. A specific facility ID number is assigned to each site. Do not photocopy an existing survey to use for an unreported site. If you have a site address that is not already receiving a survey, complete and return the form below. Complete a separate request form for each unreported site.



### Office of State Fire Marshal Request Form for Unreported Sites

<i>PHOTOCOPY THIS FORM AS NEEDED</i>	OFFICE USE ONLY <b>FACILITY ID #:</b>
<b>BUSINESS NAME:</b>	
<b>DEPT/DIVISION:</b>	
<b>SITE LOCATION:</b> (STREET, CITY, STATE, ZIP CODE)	
<b>LOCATION COUNTY:</b>	
<b>MAILING ADDRESS:</b> (STREET OR PO BOX, CITY, STATE, ZIP CODE)	
<b>MAILING ADDRESS COUNTY:</b>	
<b>E-MAIL ADDRESS:</b>	
<b>NORTH AMERICAN INDUSTRIAL CLASSIFICATION SYSTEM (NAICS) CODE</b>	
<b>BUSINESS ACTIVITY:</b>	
<b>RESPONSIBLE FIRE DEPT:</b>	
<b>OWNER/CEO/ REGISTERED AGENT:</b>	
<b>SEND TO THE ATTN OF:</b>	
<b>BUSINESS PHONE NUMBER:</b>	
<b>SIGNATURE</b>	<b>DATE</b>

## **Quick Steps To Completing The Survey**

- If this is the first time you are completing the survey for this site address and you determine there were no hazardous substances in a *reportable quantity* during the previous twelve months, complete sections A, B, and C.  
**See pages 6 & 7 for instructions on completing sections A, B, and C.**
- If this is the first time you are completing the survey for this site address and you determine that there was a hazardous substance at the site in a *reportable quantity* during the previous twelve months, complete sections A, B, C and D. Complete section E as needed.  
**See pages 9 through 11 for instructions on completing sections D and E.**
- If this is not the first time a survey has been completed for this site address, all sections of the survey must be reviewed, completed, and updated as needed.  
**See pages 6 thru 11 for instructions on completing sections A thru E.**
- Once you have completed the survey, keep a copy at the site address for three years.

## **Information Required To Be Completed On The Survey**

The following fields are required to be completed on the survey or it will be returned for correction and will not be considered “received” by the Office of State Fire Marshal.

**Section A: Question number 1**

**Section B: Question number 1, 3, 4, 6, 8, 9, 10, 11, 13, 14, 15, and 16**

**Section C: Number 1 and 2**

**Section D:**

**Common Name/Trade Name**

**Physical State**

**Unit of Measure**

**Average Amount code**

**Max Amount code**

**Amount In code**

**Amount Out code**

**Number of Days on Site**

**Storage code**

**Storage Location(s) and Loc Max code**



Mail the completed survey to:

**Office of State Fire Marshal**

**CR2K Unit**

**4760 Portland Road NE**

**Salem, Oregon 97305-1760**

## WHAT IS A HAZARDOUS SUBSTANCE?

Any substance that OR-OSHA requires the manufacturer to produce a Material Safety Data Sheet (MSDS) for is considered a hazardous substance by the Office of State Fire Marshal. This includes substances produced at your site, waste substances, solutions, certain food ingredients, and refrigeration system gases.

## WHAT ARE THE REPORTABLE QUANTITIES?

If the maximum amount of a hazardous substance that was on site at any time during the survey period (the previous twelve months) was in an amount that meets or exceeds the reportable quantities listed below, it must be reported.

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<b>LIQUIDS:</b>	<b>50 GALLONS OR MORE</b>	(E.g. gasoline, diesel, oils, acetone, paint, cleaners, solutions etc.)
<b>SOLIDS:</b>	<b>500 POUNDS OR MORE</b>	(E.g. lime, metal ingots, fertilizer, caustic soda, bulk food ingredients, wastes, etc.)
<b>GASES:</b>	<b>200 CUBIC FEET OR MORE</b> (At atmospheric pressure and temperature)	(E.g. acetylene, oxygen, propane, <u>liquid</u> oxygen, sulfur dioxide, Freon, etc.)

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### **☠ POISONS AND EXPLOSIVES ☠\***

**LIQUIDS: 5 GALLONS OR MORE**

**SOLIDS: 10 POUNDS OR MORE**

**GASES: 20 CUBIC FEET OR MORE**

(E.g. cyanide, strychnine, dynamite, black powder, etc.)

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### **✂ RADIOACTIVE SUBSTANCES ✂**

Any quantity of radioactive substance including radioactive wastes.

**EXCEPTION:** Sealed source radioactive materials, as defined by OAR 333-100-0005(118).

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## EXTREMELY HAZARDOUS SUBSTANCES

Extremely Hazardous Substances (EHS) that meet or exceed their Threshold Planning Quantity (TPQ) are required to be reported at the TPQ or the amounts listed on this page, whichever is lower. For more information, see the EHS list and the TPQ's in this booklet or call the Hazardous Substance Information Hotline.

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## REPORTING EXCEPTION FOR GASES

Gases intended for human/animal ingestion and/or inhalation either directly or added to a product are exempt from reporting, if **ALL** of the following apply:

- 1) The gas is present at the site where human/animal ingestion and/or inhalation occur.
  - 2) The gas is not being used in a manufacturing process.
  - 3) The gas is not a cryogenic.
  - 4) The gas is not being stored at the site in excess of 1,000 cubic feet.
- 

## SUBSTANCES THAT ARE CURRENTLY NOT REPORTABLE

ABS Pipe	Metal Sheets	Polyurethane - foam finished products
Acrylic Sheets	Plastic Pipe	PVC Pipe
Alcoholic Beverages	Plastic Tubing	Tires
Metal Pipe	Polyethylene Products (finished form)	Transformers
Metal Rods	Polystyrene - filler material	Vinyl - film and sheeting

## **INSTRUCTIONS AND DEFINITIONS**

- This survey is required to be completed correctly and accurately for the survey period or it will be returned for correction and will not be considered received.
- The survey period is the 12 months prior to the receipt of this survey. If updates need to be made to the survey, cross out the information that is no longer correct and provide the updated information in the gray shaded area.
- If you have other sites in Oregon that are not receiving a survey and you have not already notified our office, complete the request form for Unreported Sites on page 3 of this booklet.
- ALL PORTIONS OF THE SURVEY MUST BE TYPED OR PRINTED IN BLACK OR BLUE INK

### **SECTION A**

#### **HAZARDOUS SUBSTANCE PRESENCE**

1. Check “Yes” or “No” depending upon whether or not your facility had hazardous substances in reportable quantities during the survey period. A hazardous substance is any substance for which OR-OSHA requires the manufacturer to produce a **Material Safety Data Sheet (MSDS)**. If you answer “Yes”, a section D sheet must be completed. **Substances will NOT be deleted from the survey unless the “NO LONGER REPORTABLE” box in Section D is checked.**
2. Check “Yes” or “No” depending upon whether or not an Extremely Hazardous Substance (EHS) was present at this site at or above its Threshold Planning Quantity (TPQ) during the survey period. Refer to the section in this booklet on EHS.
3. Check “Yes” or “No” depending upon whether or not the facility is subject to the reporting requirements of Section 112(r) of the Clean Air Act. Refer to the section in this booklet on the Clean Air Act, Section 112(r).
4. Check “Yes” or “No” depending upon whether or not the facility is subject to the notification requirements of OR-OSHA’s Process Safety Management (PSM) Program for substances. Refer to the section in this booklet on OR-OSHA’s PSM program.

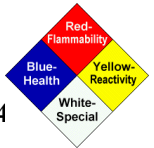
### **SECTION B**

#### **DEMOGRAPHIC DATA**

1. **NAICS Code 1** (North American Industry Classification System Code) - List the six-digit number that corresponds to the business activity at the site. If you are unsure of your code, you can obtain information at <http://www.census.gov/epcd/www/naics.html>.
2. **NAICS Code 2** - List the six-digit number that corresponds to any other type of business activity at your facility, if applicable.
3. **Business Activity** - Describe the type of business occurring at the site address identified in #9. Is it Logging, Landscaping, Silicon Chip Manufacturing, Sawmill, Welding Shop, Automotive Repair Shop, Gas Station, Office, etc. If the site is a home office, indicate the type of business the office is for. E.g., Home office for excavation business.
4. **Business Name** - Name that the business is known by, operates under or doing business as (DBA).
5. **Dept. or Div.** - Department or Division of the facility if applicable.
6. **Owner/CEO/Reg Agent** - Enter the name of the person who is the highest ranking official for the entity. E.g., Owner, Chief Executive Officer, Registered Agent, Director, or President.

## **INSTRUCTIONS AND DEFINITIONS (continued)**

7. **Send to Attention of** - This person will receive all correspondence regarding the HSIS.
8. **E-mail Address** - E-mail address of the person at the site who should receive the survey. If there is no e-mail address, enter NONE. Do not enter web sites. By providing an e-mail for the facility, you will have the option to complete an electronic version of the survey in the future.
9. **Site Address** - A facility's business location in Oregon, including street number and name, city, county, and zip code. A facility may have more than one site. Each site is separate if it has a different address. A separate survey must be completed for each site.
10. **Mailing Address** - The address that all correspondence from OSFM will be sent to regarding the HSIS.
11. **Business Phone** - Telephone number that can be used to contact your facility during business hours.
12. **Dun & Bradstreet #** - Enter this number if your company has a Dun & Bradstreet number.
13. **Number of Employees at this Site** - Number of persons employed by your business at this site only.
14. **Emergency Assistance Contact Person** - Person qualified to give on-site information concerning hazardous substances used at this site. This is required under both state and federal statutes.
15. **Emergency Contact Phones** - Daytime and nighttime phone numbers for the emergency contact person.
16. **Responsible Fire Department** - Name of the fire department that would respond to an emergency at this site.
17. **Written Emergency Plan** - Check "Yes" or "No" depending upon whether or not your facility has a WRITTEN emergency plan. If yes, enter where the plan is kept.
18. **Automatic Fire Suppression** - Check "Yes" or "No" depending upon whether or not your building has an automatic sprinkler system or other automatic fire suppression system.
19. **Are Buildings/Tanks/Areas Placarded According to NFPA 704?** - Check "Yes" or "No" if any storage buildings, tanks or areas at the site are placarded according to NFPA 704. If you have any questions, contact your local fire department or the Office of State Fire Marshal.
20. **Other Placarding** - Check "Yes" or "No" if labeling or placarding is used at the site other than NFPA 704.



NFPA 704

### **SECTION C**

### **PERSON COMPLETING FORM**

1. **Print Name** - Printed name of the person completing the survey.
2. **Signature** - Signature of the person completing the survey.
3. **Date** - Enter the date the survey was completed.

**Phone Number** - Enter the phone number (and extension if applicable) of the person completing the survey.

# TABLES FOR COMPLETING THE SURVEY

**Note:** A hazardous substance possession fee may be assessed based on the information provided. It is important that you take particular care in accurately reporting the "Hazardous Ingredient" and the "Maximum Amount" of each hazardous substance possessed. Over-reporting may result in a higher than required fee while under-reporting or failing to report could subject your facility to citation and monetary penalties.

**TABLE IV - STORAGE CODES**

Code	Type of Storage
A.....	Aboveground tank
B.....	Underground tank
C.....	Tank inside building
D.....	Steel drum
E.....	Plastic or non-metallic drum
F.....	Can
G.....	Carboy
H.....	Silo
I.....	Fiber drum
J.....	Bag
K.....	Box
L.....	Cylinder
M.....	Glass bottles, jugs or buckets
N.....	Plastic bottles, jugs or buckets
O.....	Totebin
P.....	Tank wagon
Q.....	Railcar
R.....	Other
S.....	Dewar

**TABLE I  
PHYSICAL STATE**

- 1...SOLID
- 2...LIQUID
- 3...GAS

**TABLE II  
QUANTITY UNITS**

- 1...POUNDS
- 2...GALLONS
- 3...CUBIC FEET
- 4...MILLICURIES

**TABLE III - REPORTING QUANTITIES  
(AMOUNTS) AND CODES**

CODE	FROM...	TO...
00.....	0.....	4
01.....	5.....	9
02.....	10.....	19
03.....	20.....	49
04.....	50.....	199
10.....	200.....	499
11.....	500.....	999
20.....	1,000.....	4,999
21.....	5,000.....	9,999
30.....	10,000.....	49,999
31.....	50,000.....	99,999
40.....	100,000.....	249,999
41.....	250,000.....	499,999
42.....	500,000.....	749,999
43.....	750,000.....	999,999
50.....	1,000,000.....	2,499,999
51.....	2,500,000.....	4,999,999
52.....	5,000,000.....	7,499,999
53.....	7,500,000.....	9,999,999
60.....	10,000,000.....	24,999,999
61.....	25,000,000.....	49,999,999
70.....	50,000,000.....	74,999,999
71.....	75,000,000.....	99,999,999
80.....	100,000,000.....	249,999,999
81.....	250,000,000.....	499,999,999
90.....	500,000,000.....	749,999,999
91.....	750,000,000.....	999,999,999
99.....	1 BILLION.....	HIGHER THAN 1 BILLION

**TABLE V - TEMPERATURE AND PRESSURE CONDITIONS  
AND STORAGE CODES**

Codes	Storage Conditions
(PRESSURE)	
1.....	Normal pressure
2.....	Greater than normal pressure
3.....	Less than normal pressure
(TEMPERATURE)	
4.....	Normal temperature
5.....	Greater than normal temperature
6.....	Less than normal temperature but not cryogenic
7.....	Cryogenic conditions

EXAMPLE: Marksman Herbicide in the main building is kept in a tank inside the building, at normal pressure and normal temperature.

Table IV shows you that the code for a tank inside a building is C. Table V shows you that the code for normal pressure is 1 and the code for normal temperature is 4.

You enter: C 1 4

**TABLE VI - HAZARD CLASSIFICATION CODES**

Code	Class	Code	Class
(1.1)	Class A Explosives	(4.3)	Dangerous When Wet
(1.2)	Class B Explosives	(4.4)	Reactive Materials
(1.3)	Class C Explosives	(4.5)	Combustible Materials
(1.4)	Blasting Agents	(5.1)	Oxidizers
(1.5)	Insensitive Explosives	(5.2)	Organic Peroxides
(2.1)	Flammable Gases	(6.1)	Poisonous Materials
(2.2)	Nonflammable Gases	(6.2)	Etiologic Materials
(2.3)	Poison Gases	(6.3)	Acute Health Hazard
(3.1)	Flammable Liq. (FP less than 0°F)	(6.4)	Chronic Health Hazard
(3.2)	Flammable Liq. (FP between 0°F & 73°F)	(6.5)	Pesticide
(3.3)	Flammable Liq. (FP between 73°F & 141°F)	(7.3)	Radioactive Materials
(4.1)	Flammable Solids	(8.0)	Corrosives
(4.2)	Spontaneously Combustible Materials	(9.0)	Misc. Hazardous Materials

## SECTION D      EXAMPLE

Common Name or Trade Name: Marksman Herbicide

Hazardous Ingredient: Atrazine

- No Longer Reportable
- 112 (r)
- EHS
- PSM
- 1-Pure
- 2-Mixture [2]

Physical State	Unit of Measure	Avg Amt Code	Max Amt Code	Amt In Code	Amt Out Code	No. Days on Site	Storage Code	Hazard Classes	UN/NA if known	EPA Pesticide Registration No
Use Table I	Use Table II	Use Table III	Use Table III	Use Table III	Use Table III	3 digits	Use Table IV & V <b>C 14</b> <b>A 14</b>	Use Table VI <b>6.3 6.5</b>	<b>3082</b>	<b>55947-39</b>
<b>2</b>	<b>2</b>	<b>10</b>	<b>11</b>	<b>20</b>	<b>20</b>	<b>365</b>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/>	CAS No if known <b>1912-24-9</b> <input type="text"/>

Location

- Delete
- Delete
- Delete

In/Out	Building	Floor	Area	Room	Quadrant	Loc Max Use Table III
[ I ]	[ Main ]	[ 1 ]	[ NA ]	[ Storage ]	[ NE ]	[ 10 ]
[ O ]	[ Warehouse ]	[ ]	[ Parking Lot ]	[ NA ]	[ SW ]	[ 04 ]
[ I ]	[ Various ]	[ 1 ]	[ NA ]	[ NA ]	[ V ]	[ 04 ]

## **INSTRUCTIONS AND DEFINITIONS** (continued)

### **SECTION D SUBSTANCE INFORMATION – This section is completed only if you have reportable quantities.**

**Common/Trade Name** - Enter the name of the hazardous substance in the space provided. The name of the hazardous substance is on the Material Safety Data Sheet (MSDS), container, package, or tank that the substance came in. **A substance name is to be reported only once on the survey even if it is stored in several different locations at the facility.** The HSIS will be returned if duplicate entries of substance names are entered.

**Hazardous Ingredient** - Enter the name of the chemical, other than water, present in the substance in highest concentration. See the Material Safety Data Sheet or contact your supplier.

**No Longer Reportable** - Check this box if the substance is no longer reportable. A substance can not be removed from the survey unless it has been present in an amount less than a reportable quantity for 12 complete months.

**Extremely Hazardous Substance (EHS)** - If this product is or contains an EHS, place an X in this box. A list of EHS substances is provided in this instruction booklet.

**112(r)** - If this product is or contains a 112(r) substance, place an X in this box. A list of 112(r) substances is provided in this instruction booklet.

**Process Safety Management (PSM)** - If this product is or contains a PSM substance, place an X in this box. A list of PSM substances is provided in this instruction booklet.

**Pure or Mixture** - Enter a 1 or 2 in the brackets. Pure substances have only one component; e.g., oxygen or acetone. Mixtures contain two or more different components mixed together; e.g., paint or gasoline. See the Material Safety Data Sheet or contact your supplier for assistance.

**Physical State** - Enter the code number that represents the physical state of the substance as it would be if released into the atmosphere. (Use Table I for code values.)

**Unit of Measure** - Enter the code number that represents the applicable unit of measure for this substance. (Use Table II for code values). Report solids in pounds, liquids in gallons, gases in cubic feet, radioactives in millicuries, and liquefied and cryogenic gases in gallons.

**Average Amount** - Enter the two-digit code for the average amount possessed during the previous 12 months. (Use Table III. Also see FAQ section on how to calculate). This amount cannot be greater than the maximum amount code.

**Maximum Amount** - Enter the two-digit code for the maximum amount possessed at one time during the previous 12 months. (Use Table III). The Max Amt code must be equal to, or larger than, the Avg Amt code, and the Loc Max code. The maximum amount code must be reviewed and provided for each reportable substance.

**Amount In** - Enter the two-digit code for the amount of the substance transported to the facility during the previous 12 months (Use Table III). **NOTE:** If no amounts were transported to the facility, place 00 in the box.

## **INSTRUCTIONS AND DEFINITIONS (continued)**

**Amount Out** - Enter the two-digit code for the amount of the substance transported off the site in its original form during the previous 12 months (Use Table III). **NOTE:** If no amounts were transported from the facility, place 00 in the box. (This does not include accidental and/or intentional releases of the fuel, gas, oil, etc., used in the facility vehicles or other substances consumed at the site).

**Number of Days on Site** - Enter the number of days the substance was on site during the previous 12 months.

**Storage Codes** - Enter the code(s) that describe the type(s) of storage containers and conditions of storage for this substance; e.g., C 1 4. (Use Tables IV & V) Review the example located on the tables page for assistance.

**NOTE:** More than one storage code may apply.

**Hazard Classes** - Enter all applicable hazard classes that apply to this substance (use Table VI). Department of Transportation guides or Material Safety Data Sheets can be used for reference. More than one hazard class may apply.

**CAS NUMBER** - Enter the Chemical Abstract Service number (if known) for the ingredient listed in highest concentration. Material Safety Data Sheets can be used for reference.

**UN/NA NUMBER** - Enter the United Nations/North America 4 digit classification number (if known). Material Safety Data Sheets can be used for reference.

**EPA Pesticide Registration Number** - If the substance reported is a pesticide, enter the EPA Pesticide Registration Number that is located on the pesticide label.

**Storage Locations** - Report or update the locations using the format indicated below. All locations containing a minimum reportable quantity of a substance must be reported in the “location” field of Section D, along with the Loc Max code for that location. Do not list the same location more than once. Loc Max codes cannot be greater than the Max Amt Code. If there are more locations with reportable quantities than space allows, enter the additional locations on the Section E form provided. If the facility does not have a reportable quantity in a single location, but the accumulative amount throughout the facility reaches the OSFM minimum reportable quantity, enter “various” on the first location line in the “Building” column, a “V” in the “quadrant” column, and enter the Loc Max code for the amount of substance located throughout the facility. At least one location must be entered for each substance name reported. See **Storage Locations** page for more detailed instructions.

If a storage location is no longer applicable, check the “delete” box next to the location to be removed. If the substance has been gone longer than twelve months, check the “No Longer Reportable” box immediately to the left of the Physical State Box.

	In/Out	Building	Floor	Area	Room	Quadrant	Loc Max UseTable III
<input type="checkbox"/> Delete	[ I ]	[ Main ]	[ 1 ]	[ NA ]	[ Repair ]	[ NE ]	[ 10 ]
<input type="checkbox"/> Delete	[ O ]	[ Warehouse ]	[ ]	[ Parking Lot ]	[ NA ]	[ SW ]	[ 04 ]
<input type="checkbox"/> Delete	[ I ]	[ Various ]	[ 1 ]	[ NA ]	[ NA ]	[ V ]	[ 04 ]

*Enter all fields that apply*

### **SECTION E** ADDITIONAL LOCATION SHEET – Complete this section for additional substance locations.

**Location** - If additional space is needed to report substance locations than is available under Section D, complete Section E, including all required information as instructed under Section D “Storage Locations”.

## STORAGE LOCATIONS

All location fields MUST be completed unless otherwise noted in these instructions, or the survey will be returned. If the individual field does not apply to the substance being reported, enter "NA" in that field.

### **INSIDE** REPORTING SUBSTANCES INSIDE OF A BUILDING

- In/Out** Enter an **I** to indicate the substance is located inside a building.
- Building** **NA is not acceptable.** Enter the building name, number, or any other identifier used to describe the building that the substance is located in (**not a site address**). If there is only one building at the site, enter "Main". EXAMPLES: Building 1, Building A, Warehouse, Fuel Shed, Equipment Shed, or Main
- Floor** Enter the floor number on which the substance is located. If the building is a single story, enter "1". If the substance is located in a basement, enter "BSMT".
- Area** Enter the area of the building where the substance is located. If no designation has been made, enter NA.
- Room** EXAMPLES: Shipping Dock, Welding Area, Framing Area, Receiving Area, or NA  
Enter the room the substance is located in. If the building has only one room, enter NA.  
EXAMPLES: Room 3, Parts Room, Storage Room, Tool Room, or NA
- Quadrant** **NA is not acceptable.** Enter the quadrant for the last field specified i.e., building, area, or room.  
**OPTIONS:** N, S, E, W, NE, NW, SE, SW, C (center), V (various)
- Loc Max** Enter this location's maximum amount for the substance being reported. Refer to Table III in the Instruction Booklet. This will be the maximum amount at **this** storage location. The Loc Max code **cannot** be greater than the Max Amt code.

### **OUTSIDE** REPORTING SUBSTANCES OUTSIDE OF A BUILDING

- In/Out** Enter an **O** to indicate the substance is located outside.
- Building** Enter the building name, number, or any other identifier used to describe the building that the substance is located closest to (**not a site address**). If there are no buildings at the site, enter NA.  
EXAMPLES: Building 1, Building A, Fuel Shed, or NA
- Floor** Leave Blank.
- Area** Enter the area where the substance is located. If no designation has been made, enter NA.  
EXAMPLES: Fueling, Drum Storage, Fenced Yard, Parking Lot, or NA
- Room** Enter NA
- Quadrant** **NA is not acceptable.** Enter the quadrant for the last field specified; i.e., building or area.  
**OPTIONS:** N, S, E, W, NE, NW, SE, SW, C (center), V (various)
- Loc Max** Enter this location's maximum amount for the substance being reported. Refer to Table III in the Instruction Booklet. This will be the maximum amount at **this** storage location. The Loc Max code **cannot** be greater than the Max Amt code.

## REPORTING GASES

### REPORTABLE QUANTITIES

The reportable quantity for gases both liquefied and vapor is 200 cubic feet or more at atmospheric pressure and temperature.

### EXCEPTION

Gases intended for human/animal ingestion and/or inhalation either directly or added to a product are exempt from reporting if **ALL** of the following apply:

- The gas is present at the site where human/animal ingestion and/or inhalation occurs.
- The gas is not being used in a manufacturing process.
- The gas is not a cryogenic.
- The gas is not being stored at the site in excess of 1,000 cubic feet.

**Examples:** Carbon Dioxide used at a restaurant to carbonate soft drinks. Nitrous Oxide used at a dentist office.

### LIQUEFIED AND CRYOGENIC GASES

Liquefied and cryogenic gases are defined as those gases that are received and maintained as liquids through the use of pressure and/or cryogenic conditions.

1. Liquefied gases and cryogenic gases are to be reported in gallons. If unsure of the conversion, call your gas supplier for assistance.
2. Some examples of liquefied gases and cryogenic gases include:

Ammonia, Anhydrous	Fluorine	Neon, cryogenic
Argon, cryogenic	Freon	Nitrous Oxide
Apache (Propylene Mixture)	Helium, cryogenic	Nitrogen, cryogenic
Butane	Hydrogen, cryogenic	Oxygen, cryogenic
Carbon Dioxide	Methane, cryogenic	Propane
Chlorine	Methyl Bromide	Sulfur Dioxide

3. Mark the physical state box on the survey as a “3” for gas.
4. Mark the unit of measure box on the survey as a “2” for gallons.
5. If you are not sure how to complete the survey, please call the hotline at 503-378-6835.

### OXYGEN

Oxygen should be reported as Oxygen, Oxygen Liquid or Oxygen Medical.

Oxygen	Oxygen stored in a compressed state, used mostly for welding purposes, etc.
Oxygen Liquid	Oxygen stored in a liquefied state due to cryogenic conditions.
Oxygen Medical	Oxygen used by hospitals, ambulances, etc., for medical purposes. (This does not include liquid oxygen.)

**NOTE:** If reporting a Self Contained Breathing Apparatus (SCBA) report the substance name as **Breathing Air**.

### ANHYDROUS AMMONIA

When reporting Anhydrous Ammonia, the contents of the entire distribution system, as well as any tanks on site, must be included. (e.g. Piping System, Holding Tanks, Storage Tanks, etc.)

## **REPORTING LEAD ACID BATTERIES**

1. The “**Common Name/Trade Name**” for lead acid batteries will be reported in one of the following categories:

- **Lead Acid Batteries – Dry**

Dry lead acid batteries are to be reported as “**Lead Acid Batteries–Dry**” (for batteries without liquid electrolyte added). Dry batteries are those that are newly made and have not been filled with electrolyte (usually a sulfuric acid solution). *If the batteries are shipped off site dry, report them as Lead Acid Batteries – dry.*

- **Lead Acid Batteries – Wet**

Wet lead acid batteries are to be reported as “**Lead Acid Batteries-Wet**” (for batteries filled with electrolyte). Wet lead acid batteries are those that have been filled with electrolyte and are ready for use. *If batteries are shipped off site wet, report them as Lead Acid Batteries – Wet.*

- **Lead Acid Batteries – Gel**

Gel lead acid batteries are to be reported as “**Lead Acid Batteries-Gel**”. Gel batteries are a type of sealed lead acid battery.

- **Used Lead Acid Batteries**

Used lead acid batteries are to be reported as “**Used Lead Acid Batteries-Wet**”.

Used lead acid batteries are those that are dead, but can be recharged and/or sold as used batteries.

- **Waste Lead Acid Batteries**

Waste lead acid batteries are to be reported as “**Waste Lead Acid Batteries**”.

Waste lead acid gel batteries are to be reported as “**Waste Lead Acid Batteries-Gel**”.

Waste Lead Acid Batteries are those that are dead and will no longer hold a charge.

2. The “**Hazardous Ingredient in Highest Concentration**” (HIHC) will be reported as follows:

- For Lead Acid Batteries **Dry** – HIHC will be **Lead**
- For Lead Acid Batteries **Wet** – HIHC will be **Sulfuric Acid**
- For Lead Acid Batteries **Gel** – HIHC will be **Sulfuric Acid**
- For Lead Acid Batteries **Used** and **Waste** – HIHC will be **Sulfuric Acid**

3. The “**Physical State**” of lead acid batteries will be reported as a **solid**.

4. The “**Unit of Measure**” of lead acid batteries will be reported in **pounds**.

## **DETERMINING REPORTABLE QUANTITIES OF BATTERIES**

The reportable quantity for each category of lead acid batteries (Dry, Wet, Gel, Used & Waste) will be determined by using the **total weight** of the batteries, **including the electrolyte** if applicable, and will be subject to the minimal reporting quantity of **500 pounds**.

**NOTE: Batteries in electric powered fork lift trucks must also be reported. Batteries in use on over the road motor vehicles are not reportable. Dry cell batteries, like those used in flashlights, portable radios, cell phones and pagers are not reportable.**

## **FREQUENTLY ASKED QUESTIONS (FAQ)**

1. **How do I make corrections to the pre-printed information on the survey?**

When making a change or correction to the pre-printed information on the survey, **cross out the incorrect information and enter the correct information in the gray shaded area.** IF YOU HAVE A PRE-PRINTED SURVEY WITH INFORMATION FROM THE PREVIOUS YEAR - REVIEW CAREFULLY. FACILITIES ARE RESPONSIBLE TO UPDATE OR CORRECT DISCREPANCIES.

2. **Must I report a hazardous substance that is on site for less than 24 hours?**

The reporting of a hazardous substance on site for any length of time is recommended. However, you are only required to report substances present at the site in a reportable quantity for 24 hours or more. **Note:** If a substance is regularly arriving and leaving in a reportable quantity, it must be reported even if on site less than 24 hours.

3. **Do I have to complete the survey if I am operating from a residence?**

Yes, you will still need to complete the survey. If the residential site is only an office, indicate this in section B #3 by stating that it is an office for the “type of business”. E.g. Home office for trucking business.

4. **How do I report if I have more than one site location?**

You must fill out a separate survey for each site address. Complete the Request Form for Unreported Sites, found in this booklet.

5. **What do I do if my facility goes out of business?**

If the facility is out of business and does not have any other sites in Oregon, write a letter that includes the Facility I.D. number, a contact name and phone number, a narrative explaining that the facility is out of business, the effective date, and does not have any other reportable sites. Or call the hazardous substance information hotline. If there is another site in Oregon that is not reporting, update the survey for that site. If additional surveys are needed for other unreported sites, use the “survey request form” provided in this book.

6. **How do I report my retail operation?**

Retail operations are not required to report those substances that are located on the **retail sales floor**. **HOWEVER**, substances stored or maintained in a back room or warehouse area **MUST** be reported if they meet the reportable quantities.

**DEFINITION – Retail Sales Floor:** The area within the facility where monetary transactions are handled.

7. **How do I report a substance that is located throughout the facility in different quantities?**

**A substance name is to be reported only once on the survey** even if it is stored in several different locations at the facility. Duplicate entries of substance names will be returned to the facility to be corrected. All locations containing a reportable quantity of a substance must be included in the “location” fields of Section D. If there are more locations with reportable quantities than space allows, enter the additional locations on the Section E form provided. If the facility does not have a reportable quantity in a single location but the accumulative amount throughout the facility reaches the reportable quantity, enter “various” on the first location line in the “Building” column; enter a “V” in the “quadrant” column, and enter the Loc. Max code for the amount of substance throughout the facility. At least one location must be entered for each substance name reported. **For more information, see Instructions and Definitions for Section D and Storage Locations.**

## **FREQUENTLY ASKED QUESTIONS (FAQ) (continued)**

### **8. How do I calculate the “average amount”?**

The average amount of each reportable hazardous substance may be measured daily, weekly or monthly as appropriate to your type of operation. Total these numbers and divide by the number of days, weeks or months the substance is on-site. Enter the appropriate two-digit code from Table III for the "average amount" in the block provided in Section D of the survey for each reportable hazardous substance. **Amount divided by Time = Average Amount.**

### **9. How do I determine the “maximum amount”?**

You must consider the amount of each reportable hazardous substance possessed at your facility at one time. The amount may vary as shipments increase your inventory and regular use depletes it. The "maximum amount" is the highest quantity of a substance that was at the facility at any time during the survey period. Enter the appropriate two-digit code from Table III in the block provided in Section D of the survey for each reportable hazardous substance.

### **10. How is the total “amount in” and “amount out” calculated?**

“Amount In” is the total amount of the substance transported to the facility during the previous 12 months. “Amount Out” is the total amount of the substance in its original form transported off the site during the previous 12 months in shipments, sales, etc. (This does not include amounts transported from the facility due to accidental or intentional releases, the fuel, gas, oil, etc., used in the facility’s vehicles or other substances consumed at the site.)

### **11. What do the storage codes “normal pressure, normal temperature” and “cryogenic conditions” mean?**

“Normal Pressure” means normal atmospheric pressure. Any gases stored in high-pressure containers are reported as being greater than normal pressure. “Normal Temperature” means the substance is stored in the same temperature range as that of the surrounding area. “Cryogenic Conditions” means substances are stored at a very low temperature (-130 degrees Fahrenheit or lower). For assistance in determining a substance’s storage conditions, contact your supplier or your local trade association.

### **12. What if I no longer have a substance at the facility that I reported previously?**

The survey period is the 12 months prior to the receipt of this survey. Your responses should reflect the substances that were present in reportable quantities during the survey period as follows:

- If the substance was present at the site in reportable quantities during any part of the survey period, it must be reported.
- If a previously reported (pre-printed) substance was NOT present at the site in reportable quantities during any part of the survey period, check the box next to the substance titled “No Longer Reportable”.

**NOTE:** A previously reported (pre-printed) substance must be absent from the facility or below reportable quantities for the entire survey period, before it may be identified as “No Longer Reportable” in Section D of the survey.

### **13. Do I have to report all the different colors of paint separately?**

No. Paint should be reported in two broad categories. The two categories are paints-water based and paints-oil based. **Note:** This does not apply to two component or highly toxic paints, which must be reported separately.

## **FREQUENTLY ASKED QUESTIONS (FAQ) (continued)**

### **14. Do I have to report all types of motor oil separately?**

No. Motor oils should be combined if the only major difference is viscosity (weight). “Waste Motor Oil” and “Used Motor Oil” are different substances and should be reported separately.

### **15. What is considered a “waste” product and how are they to be reported?**

Waste products are those that are considered spent material, sludge, scrap, or otherwise designated as such by the Department of Environmental Quality. To report these products, begin the name with the word waste, and then the common name of the substance; e.g., Waste Acetone, Waste Motor Oil, Waste Solvent 350B, Waste 1,1,1-trichloroethane.

### **16. How do I report ammunition and fireworks?**

The powder content of the ammunition and the accelerant portion of the fireworks are **REPORTABLE**. (Ten pounds of powder or accelerant is a reportable quantity.) The lead projectile, brass casing, paper, cardboard, wood, plastic and metal portions are **NOT REPORTABLE**.

**DEFINITION - Explosives:** A hazardous substance that has been classified as an explosive (class A, B or C) by the U.S. Department of Transportation.

### **17. Do I have to report the fuel and batteries that are in my vehicles?**

No. Fuel, engine lubricant, engine coolants and batteries contained within motorized vehicles are not reportable.

### **18. How do I request Trade Secret protection?**

A request for trade secret protection must be made at the time the survey is submitted to the Office of State Fire Marshal. Only the name of the hazardous substance may be protected. If you request Trade Secret protection, instead of entering the name of the hazardous substance, enter its hazardous classification code.

**For example:** for ACETONE enter 3.1, which is the code for flammable liquids. You will also need to separately request in writing Trade Secret protection for the substance. If you do not, Trade Secret protection will not be granted.

### **19. How do I report substations?**

If you operate substations that are of the same type (e.g. Electrical Relay, Sewage/Storm Pump Station, Telephone Relay, etc.), you may report all of them on a single combined survey instead of reporting each location separately.

**If you choose to report your substations on a single combined survey, specific requirements must be met. For more information, call the Hazardous Substance Information Hotline at 503-378-6835 and request the information packet for reporting substations on a single combined survey.**

**NOTE: Source generation sites must be reported separately.** A source generation site is a facility that generates what is relayed, pumped or stored by substations. (Examples: A facility that generates electricity or a wastewater treatment plant).

### **20. May I create and use my own survey form if it looks like the Office of State Fire Marshal’s form?**

No. You must use the forms issued by the Office of State Fire Marshal. Using forms created by the facility creates data entry problems and will result in the survey being sent back to the facility.

## **EHS, 112R, and PSM HAZARDOUS SUBSTANCE QUESTIONS**

The following are three lists of hazardous substances that are intended to help you complete the Oregon Hazardous Substance Information Survey (HSIS). Under Sections A & D of the HSIS are boxes that refer to these lists. Please read each description below and check all applicable boxes on the HSIS. These lists are not intended to be complete lists of substances subject to reporting on the HSIS. To determine if a substance is reportable, refer to the “Reportable Quantities” section in this booklet.

**EXTREMELY HAZARDOUS SUBSTANCES (EHS)** are regulated by the Environmental Protection Agency (EPA). EHS substances are calculated based on the accumulative amount at the facility at any one time.

**Survey Section A, Question # 2:** If your facility has a substance on the EHS list in an amount that meets or exceeds the Threshold Planning Quantity (TPQ) indicated on the list, your facility is subject to EPA’s Emergency Planning Requirements and the “Yes” Box on the survey must be marked.

**Example:** If the EHS was present in a mixture, calculate only the EHS portion of the substance. For example, if a mixture of gases contains 50% phosgene and that 50% is equal to or greater than 10 pounds (the TPQ for phosgene), the facility is subject to SARA Title III planning requirements, and must identify itself as an EHS facility under Section A. The substance must also be reported in section D of the survey.

**Survey Section D:** If the substance you are reporting is an EHS or contains an EHS, you will need to mark the EHS box.

**References:** If you have questions about EHS reporting requirements: contact EPA’s RCRA, Superfund and EPCRA Hotline (800) 424-9346, Monday through Friday 10 AM to 3 PM, Eastern Time or visit the CEPPPO home page at <http://www.epa.gov/swercepp/>.

The EHS list is at [http://yosemite.epa.gov/oswer/ceppoehs.nsf/Alphabetical\\_Results?openview](http://yosemite.epa.gov/oswer/ceppoehs.nsf/Alphabetical_Results?openview).

**CLEAN AIR ACT (CAA), SECTION 112(r)** is regulated by the EPA.

**Survey Section A, Question # 3:** If your facility has a substance on the 112(r) list in an amount that meets or exceeds the TQ (Threshold Quantity), your facility is subject to the EPA’s Risk Management Plan (RMP) rule of the CAA 112(r) and the “Yes” box on the survey will need to be marked. *Special Note: There are certain exemptions given to this requirement, please review the specific CAA 112(r) requirements for further information.*

**Examples:** Facility “A” has acetylene at their site at one time in a maximum amount of 150,000 cu ft. When checking the TQ Cubic Feet column they determine their maximum amount is greater than that listed (147,000 cu ft.). They are subject to the requirements and the “Yes” box must be marked.

Facility “B” has a mixture containing Hydrazine. They determine the maximum amount of the entire mixture is 10,000 gallons. The mixture contains 15% Hydrazine. To find the total amount of Hydrazine contained in the mixture, they multiply 10,000 by .15, which equals 1,500 gallons. When checking the TQ Gallons column, they determine their maximum quantity of Hydrazine is less than the TQ of 1,800 gallons. They are not subject to the 112(r) requirements.

**Survey Section D:** If the substance you are reporting is a 112(r) substance or contains a 112(r) substance, you will need to mark the 112(r) box.

**References:** If you have questions about specific 112(r) reporting requirements: contact EPA’s RCRA, Superfund and EPCRA Hotline (800) 424-9346, Monday through Friday 9 AM to 6 PM, Eastern Time, or Lisa McArthur, EPA, (206) 553-0383 or visit the CEPPPO home page in the World Wide Web at <http://www.epa.gov/swercepp/>. The 112(r) list is at <http://yosemite.epa.gov/oswer/ceppoweb.nsf/content/chemicals.htm>.

**PROCESS SAFETY MANAGEMENT (PSM)** Regulated by the Oregon Department of Consumer and Business Services, Occupational Safety and Health Division.

**Survey Section A, Question # 4:** If your facility has a substance on the Process Safety Management (PSM) list in an amount that meets or exceeds the Threshold Quantity (TQ) or your facility uses a flammable liquid or gas in a quantity of 10,000 pounds, or more, you are subject to the PSM requirements and should mark this box accordingly. *Special Note: There are certain exemptions given to this requirement. Please review the specific PSM requirements for further information.*

**Example:** The facility has allyl chloride, which they use in a process in the amount of 1,050 pounds. This facility would be subject to the PSM requirements.

**Survey Section D:** If the substance you are reporting is a PSM substance or contains a PSM substance, you will need to mark the PSM box.

**References:** If you have questions about PSM reporting requirements: contact Penny Wolf-McCormick, Health Enforcement Manager at 503-229-5910 or find information on the Oregon OSHA web page at <http://www.cbs.state.or.us/external/osha/>.

## EXTREMELY HAZARDOUS SUBSTANCES (EHS)

TPQ (Threshold Planning Quantity) - This amount triggers notification that the facility is subject to SARA Title III planning requirements. For substances with two TPQ's listed in pounds; e.g., 500/1,000, the lower quantity would apply for solids in powder form with a particle size less than 100 microns and substances in solution or molten form. The higher number is for all other forms. CAS numbers for EHS substances are listed on the EPA web-site at:

<http://www.epa.gov/swercepp/ehs/ehsalph.html>

Chemical Name	TPQ Pounds	TPQ Cubic Ft	TPQ Gallons	Chemical Name	TPQ Pounds	TPQ Cubic Ft	TPQ Gallons
Acetone cyanohydrin	1,000		129	Carbon disulfide	10,000		949
Acetone thiosemicarbazide	1,000/10,000			Carbophenothion	500		47
Acrolein	500		71	Chlordane	1,000		77
Acrylamide	1,000/10,000			Chlorfenvinfos	500		44
Acrylonitrile	10,000		1,497	Chlorine	100	3,323	8.4
Acrylyl chloride	100		11	Chlormephos	500		48
Adiponitrile	1,000		124	Chlormequat chloride	100/10,000		
Aldicarb	100/10,000			Chloroacetic acid	100/10,000		
Aldrin	500/10,000			Chloroethanol	500		50
Allyl alcohol	1,000		140	Chloroethyl chloroformate	1,000		86
Allylamine	500		79	Chloroform	10,000		808
Aluminum phosphide	500			Chloromethyl methyl ether	100		11
Aminopterin	500/10,000			Chloromethyl ether	100		9.1
Amiton oxalate	100/10,000			Chlorophacinone	100/10,000		
Amiton	500			Chloroxuron	500/10,000		
Ammonia	500	4,004	88	Chlorthiophos	500		44
Amphetamine	1,000		131	Chromic chloride	1/10,000		
Aniline	1,000		117	Cobalt carbonyl	10/10,000		
Aniline, 2,4,6-trimethyl-	500		62	Cobalt, ((2,2'-(1,2-ethanediybis(nitrilomethylidyne))bis(6-fluorophenylato))(2-)-N,N',O,O')-	100/10,000		
Antimony pentafluoride	500		19	Colchicine	10/10,000		
Antimycin A	1,000/10,000			Coumaphos	100/10,000		
Antu	500/10,000			Coumatetralyl	500/10,000		
Arsenic pentoxide	100/10,000			Crimidine	100/10,000		
Arsenous oxide	100/10,000			Crotonaldehyde	1,000		140
Arsenous trichloride	500		28	Crotonaldehyde, (E)-	1,000		140
Arsine	100	3,550		Cyanogen bromide	500/10,000		
Azinphos-ethyl	100/10,000			Cyanogen iodide	1,000/10,000		
Azinphos-methyl	10/10,000			Cyanophos	1,000		95
Benzal chloride	500		48	Cyanuric fluoride	100		
Benzenamine, 3-(trifluoromethyl)-	500		46	Cycloheximide	100/10,000		
Benzene, 1-(chloromethyl)-4-nitro-	500/10,000			Cyclohexylamine	10,000		1,386
Benzeneearsonic acid	10/10,000			Decaborane(14)	500/10,000		
Benzimidazole, 4,5-dichloro-2-(trifluoromethyl)-	500/10,000			Demeton	500		51
Benzotrithloride	100		8.7	Demeton-S-methyl	500		50
Benzyl chloride	500		54	Dialifor	100/10,000		
Benzyl cyanide	500		59	Diborane	100	1,335	57
beta-Propiolactone	500		52	Dichloroethyl ether	10,000		982
Bicyclo[2.2.1]heptane-2-carbonitrile, 5-chloro-6-(((methylamino) carbonyl)oxy)imino)-, (1-alpha,2-beta,4-alpha,5-alpha,6E)-	500/10,000			Dichloromethylphenylsilane	1,000		101
Bis(chloromethyl) ketone	10/10,000			Dichlorvos	1,000		85
Bitoscanate	500/10,000			Dicrotophos	100		9.9
Boron trifluoride compound with methyl ether (1:1)	1,000		97	Diepoxybutane	500		54
Boron trichloride	500		44	Diethyl chlorophosphate	500		50
Boron trifluoride	500	16,015		Digitoxin	100/10,000		
Bromadiolone	100/10,000			Diglycidyl ether	1,000		95
Bromine	500		19	Digoxin	10/10,000		
Cadmium stearate	1,000/10,000			Dimefox	500		54
Cadmium oxide	100/10,000			Dimethoate	500/10,000		
Calcium arsenate	500/10,000			Dimethyl phosphoro- chloridothioate	500		45
Camphechlor	500/10,000			Dimethyl sulfate	500		45
Cantharidin	100/10,000			Dimethyl-p-phenylenediamine	10/10,000		
Carbachol chloride	500/10,000			Dimethyldichlorosilane	500		54
Carbamic acid, methyl-, O-(((2,4-dimethyl-1,3-dithiolan-2-yl)methylene)amino)-	100/10,000			Dimethylhydrazine	1,000		151
Carbofuran	10/10,000			Dimetilan	500/10,000		
				Dinitroresol	10/10,000		
				Dinoseb	100/10,000		
				Dinoterb	500/10,000		
				Dioxathion	500		48
				Diphacinone	10/10,000		

Chemical Name	TPQ Pounds	TPQ Cubic Ft	TPQ Gallons
Diphosphoramidate, octamethyl-	100		11
Disulfoton	500		52
Dithiazanine iodide	500/10,000		
Dithiobiuret	100/10,000		
Emetine, dihydrochloride	100/10,000		
Endosulfan	10/10,000		
Endothion	500/10,000		
Endrin	500/10,000		
Epichlorohydrin	1,000		66
EPN	100/10,000		
Ergocalciferol	1,000/10,000		
Ergotamine tartrate	500/10,000		
Ethanesulfonyl chloride, 2-chloro-	500		39
Ethanol, 1,2-dichloro-, acetate	1,000		92
Ethion	1,000		99
Ethoprophos	1,000		109
Ethylbis(2-chloroethyl) amine	500		55
Ethylene fluorohydrin	10		1.1
Ethylene oxide	1,000	19,885	146
Ethylenediamine	10,000		1,334
Ethyleneimine	500		72
Ethylthiocyanate	10,000		1,190
Fenamiphos	10/10,000		
Fensulfothion	500		50
Fluometil	100/10,000		
Fluorine	500	5,120	40
Fluoroacetamide	100/10,000		
Fluoroacetic acid	10/10,000		
Fluoroacetyl chloride	10		
Fluorouracil	500/10,000		
Fonofos	500		52
Formaldehyde cyanohydrin	1,000		108
Formaldehyde	500	7,120	56
Formetanate hydrochloride	500/10,000		
Formothion	100		8.8
Formparanate	100/10,000		
Fosthietan	500		46
Fuberidazole	100/10,000		
Furan	500		64
Gallium trichloride	500/10,000		
Hexachlorocyclopentadiene	100		7
Hexamethylenediamine, N,N'-dibutyl-	500		
Hydrazine	1,000		118
Hydrocyanic acid	100	1,202	17
Hydrogen chloride (gas only)	500	8,461	
Hydrogen selenide	10	267	
Hydrogen fluoride	100	934	12
Hydrogen peroxide (Conc.> 52%)	1,000		93
Hydrogen sulfide	500	7,941	
Hydroquinone	500/10,000		
Iron, pentacarbonyl-	100		8.2
Isobenzan	100/10,000		
Isobutyronitrile	1,000		157
Isocyanic acid, 3,4-dichlorophenyl ester	500/10,000		
Isodrin	100/10,000		
Isofluorphate	100		11
Isophorone diisocyanate	500		
Isopropyl chloroformate	1,000		111
Isopropylmethylpyrazolyl dimethylcarbamate	500		56
Lactonitrile	1,000		121
Leptophos	500/10,000		

Chemical Name	TPQ Pounds	TPQ Cubic Ft	TPQ Gallons
Lewisite	10		0.63
Lindane	1,000/10,000		
Lithium hydride	100		
Malononitrile	500/10,000		
Manganese, tricarbonyl methylcyclopentadienyl	100		8.6
Mechlorethamine	10		1.1
Mephosfolan	500		
Mercuric acetate	500/10,000		
Mercuric oxide	500/10,000		
Mercuric chloride	500/10,000		
Methacrolein diacetate	1,000		
Methacrylic anhydride	500		
Methacrylonitrile	500		75
Methacryloyl chloride	100		11
Methacryloyloxyethyl isocyanate	100		
Methamidophos	100/10,000		
Methanesulfonyl fluoride	1,000		
Methidathion	500/10,000		
Methiocarb	500/10,000		
Methomyl	500/10,000		
Methoxyethylmercuric acetate	500/10,000		
Methyl vinyl ketone	10		1.4
Methyl hydrazine	500		69
Methyl thiocyanate	10,000		1,122
Methyl isothiocyanate	500		
Methyl chloroformate	500		49
Methyl phenkapton	500		
Methyl mercaptan	500		69
Methyl 2-chloroacrylate	500		50
Methyl phosphonic dichloride	100		
Methyl bromide	1,000	43,641	69
Methyl isocyanate	500		62
Methylmercuric dicyanamide	500/10,000		
Methyltrichlorosilane	500		47
Metolcarb	100/10,000		
Mevinphos	500		48
Mexacarbate	500/10,000		
Mitomycin C	500/10,000		
Monocrotophos	10/10,000		
Muscimol	500/10,000		
Mustard gas	500	36,034	47
Nickel carbonyl	1		0.09
Nicotine sulfate	100/10,000		
Nicotine	100		12
Nitric acid	1,000		80
Nitric oxide	100	1,388	
Nitrobenzene	10,000		996
Nitrocyclohexane	500		56
Nitrogen dioxide	100	2,109	8.3
Nitrosodimethylamine	1,000		119
Norbormide	100/10,000		
o-Cresol	1,000/10,000		
Organorhodium Complex (PMN-82-147)	10/10,000		
Oubain	100/10,000		
Oxamyl	100/10,000		
Oxetane, 3,3-bis(chloromethyl)-	500		43
Oxydisulfoton	500		
Ozone	100	2,269	5.6
Paraquat methosulfate	10/10,000		
Paraquat dichloride	10/10,000		
Parathion	100		9.5
Parathion-methyl	100/10,000		

Chemical Name	TPQ Pounds	TPQ Cubic Ft	TPQ Gallons	Chemical Name	TPQ Pounds	TPQ Cubic Ft	TPQ Gallons
Paris green	500/10,000			Sodium fluoroacetate	10/10,000		
Pentaborane	500		98	Sodium cacodylate	100/10,000		
Pentadecylamine	100/10,000			Sodium cyanide (Na(CN))	100		
Peracetic acid	500		49	Sodium arsenate	1,000/10,000		
Perchloromethyl mercaptan	500		35	Sodium selenite	100/10,000		
Phenol	500/10,000			Sodium azide (Na(N3))	500		
Phenol, 3-(1-methylethyl)-, methylcarbamate	500/10,000			Sodium tellurite	500/10,000		
Phenol, 2,2'-thiobis[4-chloro-6-methyl-	100/10,000			Stannane, acetoxytriphenyl-	500/10,000		
Phenoxarsine, 10,10'-oxydi-	500/10,000			Strychnine	100/10,000		
Phenyl dichloroarsine	500		36	Strychnine, sulfate	100/10,000		
Phenylhydrazine hydrochloride	1,000/10,000			Sulfotep	500		50
Phenylmercury acetate	500/10,000			Sulfoxide, 3-chloropropyl octyl	500		
Phenylsilatrane	100/10,000			Sulfur trioxide	100		
Phenylthiourea	100/10,000			Sulfur dioxide	500	15,080	42
Phorate	10		1.04	Sulfur tetrafluoride	100	4,711	6
Phosacetim	100/10,000			Sulfuric acid	1,000		65
Phosfolan	100/10,000			Tabun	10		1.1
Phosgene	10	454	0.84	Tellurium hexafluoride	100		4.8
Phosphamidon	100		9.9	Tepp	100		10
Phosphine	500	7,807	80	Terbufos	100		11
Phosphonothioic acid, methyl-, O-ethyl O-(4-(methylthio)phenyl) ester	500			Tetraethyl lead	100		7.2
Phosphonothioic acid, methyl-, S-(2-(bis(1-methylethyl)amino)ethyl) O-ethyl ester	100		12	Tetraethyltin	100		10
Phosphonothioic acid, methyl-, O-(4-nitrophenyl) O-phenyl ester	500			Tetramethyllead	100		6
Phosphoric acid, dimethyl 4-(methylthio) phenyl ester	500		47	Tetranitromethane	500		36
Phosphorothioic acid, O,O-dimethyl-5-(2-(methylthio)ethyl)ester	500		49	Thallium sulfate	100/10,000		
Phosphorus oxychloride	500		36	Thallos malonate	100/10,000		
Phosphorus pentachloride	500			Thallos carbonate	100/10,000		
Phosphorus trichloride	1,000		76	Thallos chloride	100/10,000		
Phosphorus	100			Thallos sulfate	100/10,000		
Physostigmine	100/10,000			Thiocarbazide	1,000/10,000		
Physostigmine, salicylate (1:1)	100/10,000			Thiofanox	100/10,000		
Picrotoxin	500/10,000			Thionazin	500		
Piperidine	1,000		139	Thiophenol	500		56
Pirimifos-ethyl	1,000		105	Thiosemicarbazide	100/10,000		
Potassium cyanide	100			Thiourea, (2-chlorophenyl)-	100/10,000		
Potassium arsenite	500/10,000			Thiourea, (2-methylphenyl)-	500/10,000		
Potassium silver cyanide	500			Titanium tetrachloride	100		6.9
Promecarb	500/10,000			Toluene-2,6-diisocyanate	100		9.8
Propargyl bromide	10		0.77	Toluene-2,4-diisocyanate	500		49
Propionitrile	500		75	trans-1,4-Dichlorobutene	500		51
Propionitrile, 3-chloro-	1,000		104	Triamphos	500/10,000		
Propiophenone, 4'-amino	100/10,000			Triazofos	500		48
Propyl chloroformate	500		55	Trichloro(chloromethyl) silane	100		
Propylene oxide	10,000		1,395	Trichloro(dichlorophenyl)silane	500		38
Propyleneimine	10,000		1,490	Trichloroacetyl chloride	500		36
Prothoate	100/10,000			Trichloroethylsilane	500		48
Pyrene	1,000/10,000			Trichloronate	500		44
Pyridine, 4-amino-	500/10,000			Trichlorophenylsilane	500		45
Pyridine, 2-methyl-5-vinyl-	500		61	Triethoxysilane	500		69
Pyridine, 4-nitro-, 1-oxide	500/10,000			Trimethylchlorosilane	1,000		140
Pyriminil	100/10,000			Trimethylolpropane phosphite	100/10,000		
Salcomine	500/10,000			Trimethyltin chloride	500/10,000		
Sarin	10		1.1	Triphenyltin chloride	500/10,000		
Selenious acid	1,000/10,000			Tris(2-chloroethyl)amine	100		9.7
Selenium oxychloride	500		25	Valinomycin	1,000/10,000		
Semicarbazide hydrochloride	1,000/10,000			Vanadium pentoxide	100/10,000		
Silane, (4-aminobutyl) diethoxymethyl-	1,000			Vinyl acetate monomer	1,000		129
Sodium selenate	100/10,000			Warfarin sodium	100/10,000		
Sodium arsenite	500/10,000			Warfarin	500/10,000		
				Xylylene dichloride	100/10,000		
				Zinc phosphide	500		
				Zinc, dichloro(4,4-dimethyl-5(((methylamino)carbonyl)oxy)imino)pentanenitrile)-, (T-4)-	100/10,000		

# CLEAN AIR ACT (CAA) SECTION 112(r) SUBSTANCES

Chemical Name	TQ Pounds	TQ Cubic Ft	TQ Gallons
1,1 Dichloroethylene	10,000		985
2-Butenal	20,000		6,849
Acetaldehyde	10,000		1,545
Acetylene	10,000	147,000	1,950
Acrolein	5,000		717
Acrylonitrile	20,000		3,012
Acrylylchloride	5,000		
Allyl alcohol	15,000		2,126
Allylamine	10,000		1,798
Ammonia (anhydrous)	10,000	207,800	1,943
Ammonia (aqueous) Conc. >=20%	20,000		3,912
Arsenous trichloride	15,000		841
Arsine	1,000	5,000	45
Bis(chloromethyl)ether	1,000		100
Boron Trichloride	5,000	16,500	816
Boron Trifluoride	5,000	28,000	384
Boron Trifluoride w/methyl ether(1:1)	15,000		1,238
Bromine	10,000		386
Bromotrifluoroethylene	10,000		
Butadiene (1,3-)	10,000	69,000	1,854
Butane	10,000	63,356	2,008
Butene	10,000		
Butene (1-)	10,000	65,510	272
Butene (2-)	10,000		
Butene-cis (2-)	10,000	65,230	259
Butene-trans (2-)	10,000	65,245	267
Carbon Disulfide	20,000		1,854
Carbon Oxysulfide (Carbonylsulfide)	10,000	280,266	574
Chlorine	2,500	13,470	213
Chlorine Dioxide	1,000	4,990	80
Chlorine Monoxide	10,000		
Chloroform	20,000		1,618
Chloromethyl ether	5,000		564
Chloropropylene (1-)	10,000		1,279
Chloropropylene (2-)	10,000		1,279
Crotonaldehyde	20,000		2,935
Crotonaldehyde, (E)-	20,000		2,802
Cyanogen	10,000	241,082	
Cyanogen chloride	10,000	280,266	1,004
Cyclohexylamine	15,000		2,077
Cyclopropane	10,000	100,762	1,673
Diborane	2,500	35,125	
Dichlorosilane	10,000	464,441	
Difluoroethane	10,000	57,400	502
Dimethylamine	10,000	86,000	1,772
Dimethyldichlorosilane	5,000		560
Dimethylhydrazine (1,1-)	15,000		2,285
Dimethylpropane (2,2-)	10,000	78,875	
Epichlorohydrin	20,000		2,037
Ethane	10,000	125,151	2,677
Ethyl acetylene	10,000	72,000	1,792
Ethylamine	10,000		1,754
Ethyl chloride	10,000	44,042	1,310
Ethyl ether	10,000		1,697
Ethyl mercaptan	10,000		1,431
Ethyl nitrate	10,000		1,268
Ethyl nitrite	10,000		1,333
Ethylene	10,000	127,000	2,114
Ethylenediamine	20,000		2,677
Ethyleneimine	10,000		1,448
Ethylene oxide	10,000	87,800	1,385
Explosives ( DOT 49 CFR 172.101)	5,000		
Fluorine	1,000	10,204	80
Formaldehyde (solution)	15,000		2,217
Furan	5,000		644
Hydrazine	15,000		1,800
Hydrochloric acid (soln. Conc. >=37%)	15,000		1,689
Hydrocyanic acid (Hydrogen cyanide)	2,500		437
Hydrogen	10,000	1,920,000	16,886
Hydrogen chloride	5,000	53,000	599
Hydrogen fluoride/Hydrofluoric acid (conc.>=50%)	1,000	19,300	126
Hydrogen selenide	500		28

Chemical Name	TQ Pounds	TQ Cubic Ft	TQ Gallons
Hydrogen sulfide	10,000	266,920	1,017
Iron, Pentacarbonyl-	2,500		202
Isobutane	10,000	63,355	2,077
Isobutyronitrile	20,000		3,171
Isopentane	10,000		1,943
Isoprene	10,000		1,769
Isopropylamine	10,000		1,746
Isopropyl chloride	10,000		1,398
Isopropyl chloroformate	15,000		
Methacrylonitrile	10,000		1,506
Methane	10,000	236,113	2,175
Methylamine	10,000	121,000	1,336
Methyl-1-butene (2-)	10,000		
Methyl-1-butene (3-)	10,000	83,706	879
Methyl chloride	10,000	75,000	1,310
Methyl chloroformate	5,000		493
Methyl ether	10,000	88,217	1,823
Methyl formate	10,000		1,229
Methyl hydrazine	15,000		2,068
Methyl isocyanate	10,000		1,255
Methyl mercaptan	10,000	116,110	1,385
Methyl propene (2-)	10,000	80,076	2,000
Methyl thiocyanate	20,000		
Methyl trichlorosilane	5,000		473
Nickel carbonyl	1,000		91
Nitric acid (Conc. EPA >=80%, OSHA >=94.5%)	15,000		1,202
Nitric oxide	10,000	130,000	949
Oleum (OSHA Conc.5 – 80%)	10,000		
Pentadiene (1,3-)	10,000		1,828
Pentane	10,000		1,923
Pentene (1-)	10,000		1,883
Pentene (2-) (E)-	10,000		1,883
Pentene (2-) (Z)-	10,000		1,883
Peracetic acid/ Peroxyacetic acid (OSHA Conc. >60% Acetic acid)	10,000		1,048
Perchloromethyl-mercaptan	10,000		700
Phosgene	500	1,950	43
Phosphine	5,000	79,008	508
Phosphorus oxychloride (phosphoryl chloride)	5,000		359
Phosphorous trichloride	15,000		1,143
Piperidine	15,000		2,097
Propadiene	10,000		
Propane	10,000	84,515	2,358
Propionitrile	10,000		1,545
Propyl chloroformate	15,000		
Propylene	10,000	88,750	2,362
Propylene oxide	10,000		1,403
Propyleneimine (2-methyl aziridine)	10,000		1,506
Propyne	10,000	97,000	
Silane	10,000	120,000	1,772
Sulfur dioxide (anhydrous)	5,000	29,950	413
Sulfur tetrafluoride	2,500		
Sulfur trioxide (sulfuric anhydride)	10,000		628
Tetrafluoroethylene	10,000		
Tetramethyllead	10,000		604
Tetramethylsilane	10,000		1,859
Tetranitromethane	10,000		735
Titanium tetrachloride	2,500		175
Toluene 2,4-diisocyanate	10,000		984
Toluene-2,6-diisocyanate	10,000		980
Toluene diisocyanate	10,000		984
Trichlorosilane	10,000		1,012
Trifluorochloroethylene	10,000	174,165	898
Trimethylamine	10,000	64,000	1,812
Trimethylchlorosilane	10,000		1,401
Vinyl acetate monomer	15,000		1,407
Vinyl acetylene	10,000	91,647	1,939
Vinyl chloride	10,000	62,500	1,316
Vinyl ethyl ether	10,000		1,321
Vinyl fluoride	10,000		1,557
Vinyl methyl ether	10,000	100,095	1,600
Vinylidene fluoride	10,000	82,345	1,946

## PROCESS SAFETY MANAGEMENT (PSM) SUBSTANCES

Chemical Name	TQ Pounds	TQ Cu. Ft.	TQ Gallons	Chemical Name	TQ Pounds	TQ Cu. Ft.	TQ Gallons
acetaldehyde	2500	50048	379	hydrogen peroxide, >52% by weight	7500	100095	629
acrolein (2-propenal)	150	3884	21	hydrogen selenide	150	5605	8.6
acrylyl chloride	250			hydrogen sulfide	1500	23823	117
allyl chloride	1000	34700	127	hydroxylamine	2500	36702	250
allylamine	1000	26692	157	iron, pentacarbonyl	250	22688	20
alkylaluminums	5000			isopropylamine	5000	133460	868
ammonia, anhydrous	10000	207800	1943	ketene	100	1935	
ammonia solutions (>44%)	15000			methacrylamide	1000	32297	141
ammonium perchlorate	7500		461	methacryloyl chloride	150		
ammonium permanganate	7500			methacryloyloxyethyl isocyanate	100		
arsine (arsenic hydride)	100	3550		methyl acrylonitrile	250	7707	37
bis(chloromethyl) ether	100	5338	9.1	methylamine, anhydrous	1000	14280	171
boron trichloride	2500	134461	406	methyl bromide	2500	55920	89
boron trifluoride	250	14013		methyl chloride	15000	356338	1962
bromine	1500		58	methyl chloroformate	500	22021	49
bromine chloride	1500			methyl ethyl ketone peroxide, >60%	5000		535
bromine pentafluoride	2500	203527	121	methyl fluoroacetate	100		
bromine trifluoride	15000			methyl fluorosulfate	100		
3-bromopropyne (propargyl bromide)	100	5472	9	methyl hydrazine	100	2135	14
butyl hydroperoxide	5000	138131	608	methyl iodide	7500	490466	394
butyl perbenzoate, tertiary	7500		881	methyl isocyanate	250	6573	31
carbonyl chloride (phosgene)	100	4644	8.4	methyl mercaptan	5000	110772	666
carbonyl fluoride	2500	76406	216	methyl vinyl ketone	100	3216	14
cellulose nitrate (<12.6% nitrogen)	2500			methyltrichlorosilane	500		47
chlorine	1500	8082	128	nickel carbonyl (nickel tetracarbonyl)	150	11791	14
chlorine dioxide	1000	4990	80	nitric acid, 94.5%	500	14681	43
chlorine pentafluoride	1000			nitric oxide	250	3470	
chlorine trifluoride	1000	42440	68	nitroaniline (para-nitroaniline)	5000		422
chlorodiethylaluminum (diethylaluminum)	5000			nitromethane	2500		265
1-chloro-2,4-dinitrobenzene	5000	467110	352	nitrogen dioxide	250	7040	21
chloromethyl methyl ether	500	18684	57	nitrogen dioxides (NO, NO2, N2O4, N2O3)	250	5272	21
chloropicrin	500	37836	36	nitrogen tetroxide (nitrogen peroxide)	250	5272	11
chloropicrin & methyl bromide mixture	1500			nitrogen trifluoride	5000	164156	
chloropicrin & methyl chloride mixture	1500			nitrogen trioxide	250		
cumene hydroperoxide	5000	360342	571	oleum, 65% to 80% by weight (fuming)	1000	81944	63
cyanogen	2500	60724	315	osmium tetroxide	100	11744	2.4
cyanogen chloride	500	14414	50	oxygen difluoride (fluorine monoxide)	100	2402	
cyanuric fluoride	100			ozone	100	2202	7.4
diacetyl peroxide (>70%)	5000			pentaborane	100	2936	19
diazomethane	500	9342	41	peracetic acid, >60% acetic acid	1000		97
dibenzoyl peroxide	7500	840798	676	perchloric acid, >60% by weight	5000	233555	360
diborane	100	1295		perchloromethyl mercaptan	150	12812	11
dibutyl peroxide, tertiary	5000	335652	753	perchloryl fluoride	5000	242897	428
dichloro acetylene	250		24	peroxyacetic acid, >60% acetic acid	1000		
dichlorosilane	2500	117445		phosgene (carbonyl chloride)	100		8.4
diethylzinc	10000		994	phosphine (hydrogen phosphide)	100	1575	15
diisopropyl peroxydicarbonate	7500			phosphorus oxychloride (phosphoryl)	1000	70734	73
dilauroyl peroxide	7500	1371302		phosphorus trichloride	1000	63394	76
dimethyldichlorosilane	1000	59390	112	propargyl bromide	100		
1,1-dimethylhydrazine	1000	28027	151	propyl nitrate	2500		280
dimethylamine, anhydrous	2500	52049	447	sarin	100		11
2,4-dinitroaniline	5000	420399	371	selenium hexafluoride	1000	88884	37
ethyl methyl ketone peroxide (>60%)	5000		599	stibine (antimony hydride)	500	29361	17
ethyl nitrite	5000		512	sulfur dioxide (liquid)	1000	30162	86
ethylamine	7500	161153	1302	sulfur pentafluoride	250	29261	14
ethylene fluorohydrin	100			sulfur tetrafluoride	250	12612	
ethylene oxide	5000	99428	731	sulfur trioxide (sulfuric anhydride)	1000	37369	62
ethyleneimine	1000	20019	144	sulfuric anhydride (sulfur trioxide)	1000		
fluorine	1000	10204	80	tellurium hexafluoride	250	27826	
formaldehyde (formalin)	1000	13880	111	tetrafluoroethylene	5000		
furan	500	15682	64	tetrafluorohydrazine	5000		
hexafluoroacetone	5000	384365	461	tetramethyl lead	1000	86749	60
hydrochloric acid, anhydrous	5000	84747	659	thionyl chloride	250	15348	18
hydrofluoric acid, anhydrous	1000	29495	100	trichloro (chloromethyl) silane	100	8408	8.1
hydrogen bromide	5000	187511	315	trichloro (dichlorophenyl) silane	2500		
hydrogen chloride	5000	53000	599	trichlorosilane	5000	313631	446
hydrogen cyanide, anhydrous	1000		174	trifluorochloroethylene	10000	551190	
hydrogen fluoride	1000	53000	126	trimethoxysilane	1500		187



