



Hazardous Substance Tracking Instructions

City of Eugene
Toxics Right-to-Know Program

FOR BUSINESSES REQUIRED TO REPORT IN ACCORDANCE WITH
EUGENE CITY CHARTER AMENDMENT IV

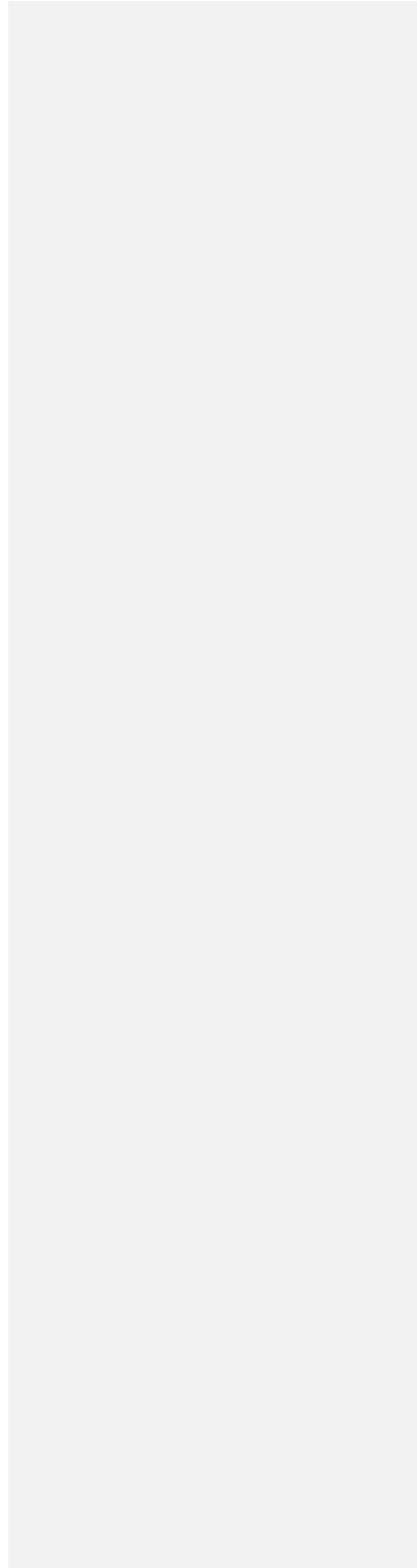


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Introduction

This handbook was approved on ~~November 26, 2012~~ and officially adopted by the Eugene City Council with ~~Ordinance No. 20499~~ for Hazardous Materials Balance Reports due April 1, 201~~3~~4 and subsequent years, unless and until the City Council adopts further revisions. The Toxics Board will review this handbook every five years, or upon reasonable demand by a member of the general public or a participating industrial representative. Reporting companies will be notified in writing of any changes to these instructions, and changes will be applicable only to reporting years subsequent to such notification.

The Eugene Toxics Right-to-Know Program is governed by a seven-member Toxics Board appointed by the City Council. The Toxics Board's role is to: a) supply forms and instructions; b) recommend fees necessary to implement the program; c) direct the Toxics Program staff to investigate reports of non-compliance; and d) publish the names of non-complying entities in a local daily newspaper. The Toxics Board is also responsible for determining whether there has been non-compliance in particular cases, and assessing appropriate penalties, if any, when non-compliance is found. The Toxics Board has other duties as well.

The primary role of Toxics Program staff is to: a) receive and maintain reports; b) investigate reports of non-compliance and report findings to the Toxics Board; and c) audit each reporting entity on a random basis at least once every three years. Toxics Program staff and the City's Fire Marshal have additional duties under the charter amendment (Appendix A).

Compliance Schedule:

1. On January 1 of the reporting year, begin tracking your business's use of any hazardous substances listed by the City at https://ceapps.eugene-or.gov/toxics/chem_reportable_list.aspx, as well as any meeting the definitions in Appendix D of this handbook. Track inputs and outputs of the types specified in these instructions, and keep a record of the methods used in your calculations.
2. At the end of the reporting year, you will receive the instructions necessary to file your report. The instructions in this handbook are intended to assist Eugene businesses in complying with the City's Toxics Right-to-Know law, and for purposes of determining what data to enter on the electronic forms.
3. On December 31, complete your tracking of hazardous substance inputs and outputs for the reporting year.
4. By April 1 of the following year, submit the completed report and certification form for the reporting year.

Toxics Program Staff Contact Information

For more information on the Eugene Toxics Right-to-Know Program, or to obtain additional copies of forms or instructions, call the Toxics Program staff at 541-682-7118, or send an email to Toxics@ci.eugene.or.us. The mailing address for the Toxics Program is: 1705 W. 2nd Avenue, Eugene, OR 97402; and the facsimile number is 541-682-7116.

Important Reminders

	REPORTS ARE DUE APRIL 1 EACH YEAR	
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Characteristic substances must be reported. See Section III-E-2 in Appendix A. Also see Appendix D and Section C of Appendix F.
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TRADE SECRET HAZARDOUS SUBSTANCES MUST BE REPORTED PRIOR TO PROCUREMENT OR PRODUCTION. FORMS ARE INCLUDED IN THIS HANDBOOK, APPENDIX E.
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ELECTRONIC REPORTING IS REQUIRED. REPORTING INSTRUCTIONS WILL BE SENT AT THE END OF EACH YEAR.

Acronyms and Definitions

- **Accounting Period:** The accounting period for reporting is the calendar year, January 1 to December 31.
 - **Article:** A solid manufactured item which remains solid throughout the manufacturing process, the unit size of which weighs more than 1 gram (0.0022 pounds), that is used by a facility in whole or in part, without undergoing any chemical changes, in manufacturing of a product or a portion of a product, and that does not release a reportable hazardous substance under normal conditions of the processing of that item at the facility. See page 13 for additional information concerning articles.
- See Appendix F,
Questions 1-17
- **CAA:** Clean Air Act
 - **CAS Number:** Unique identification number assigned to chemicals by the Chemical Abstracts Service (CAS). Chemicals may be known by many names, but they will have just one CAS number.
 - **CFR:** Code of Federal Regulations
 - **CERCLA:** Comprehensive Environmental Response, Compensation, and Liability Act
 - **Charter Amendment:** The Eugene City Charter, Section 54. Amendment IV is referred to throughout this handbook as “Eugene’s Toxics Right-to-Know law”, and sometime as “the law”.
 - **Charter Amendment Definitions:** Other definitions are shown in Article III of the Charter Amendment (see Appendix A).
 - **Chemical Name:** The scientific designation of a substance in accordance with the nomenclature system developed by the Chemical Abstracts Service.
 - **Consumed:** Chemically altered during manufacturing so as to no longer exist in its former chemical composition.
 - **CWA:** Clean Water Act
 - **DEQ:** Oregon Department of Environmental Quality
 - **EHS:** Extremely Hazardous Substance as defined in Section 302 of 42 USC 11002
 - **EPA:** United States Environmental Protection Agency
 - **EPBT:** Extremely Persistent Bioaccumulative Toxin
 - **EPCRA:** Emergency Planning and Community Right-to-Know Act
 - **Facility:** All buildings, equipment, structures and other stationary items that are located and operated on a single site or on contiguous or adjacent sites and that are owned or operated by the same person(s) and relate to a common product. If a corporate entity operates two or more separate (non-contiguous) facilities that are required to report, then a separate report is required for each facility.
 - **LEL:** Lower Explosive Limit
 - **LRAPA:** Lane (County) Regional Air Pollution Authority
 - **Materials Accounting/Full Materials Accounting/Materials Balance Reports:** An accounting of the flow of individual hazardous substances into a facility, through its processes, and into its products and wastes, **so that inputs equal outputs of each hazardous substance to the accuracy of the smallest accounting units** (see pages 15-19 and Appendix A), utilizing the best information available to the reporting entity.
 - **MSDS:** ~~Material~~-Safety Data Sheet ([formerly MSDS: Material Safety Data Sheet](#))
 - **NPDES:** National Pollution Discharge Elimination System

- **PBT:** Persistent Bioaccumulative Toxin
- **POTW:** Publicly Owned (wastewater) Treatment Works
- **Produced:** Chemically created during manufacturing (refers to a chemical not present in a facility prior to the manufacturing process).
- **PSM:** Process Safety Management
- **RCRA:** Resource Conservation and Recovery Act
- **Reportable Hazardous Substances:** Those substances that are listed on the City's Toxics Program's website, and substances meeting the definitions in Appendix D, that are used for or in manufacturing or activities that are related to or required for manufacturing.
- **RMP:** Risk Management Plan
- **SARA 313:** Superfund Amendments and Reauthorization Act, Section 313 of the Emergency Planning and Community Right-to-Know Act (42 USC 11002)
- **SIC:** Standard Industrial Classification. These are 4-digit codes representing business categories. To be required to report, Eugene businesses must have SIC categories that begin with 20-39, inclusively.
- **Synonym** (of a Chemical Name): The common name(s) by which a chemical is known.
- **UEL:** Upper Explosive Limit
- **UFC:** Uniform Fire Code
- **VOC:** Volatile Organic Compound

Recommendations to Simplify Tracking and Reporting

Based on information and advice obtained from individuals who prepare reports for participating businesses, the Toxics Board makes the following recommendations:

1. Persons preparing the reports should carefully review and take advantage of existing policies that are intended to make reporting easier. These include:
 - a. Exemptions for articles. See page 14. Most metals purchased in bulk are articles. Portions not converted into fumes, dust, filings, or grindings are not reportable.
 - b. Threshold amounts for reporting. See page 15. If total inputs in a calendar year are below 2.2 pounds for a hazardous substance or 0.022 pounds for an extremely hazardous substance or extremely persistent bioaccumulative toxin, then that substance need not be reported.
 - c. Threshold amounts for full materials balance accounting. See page 15. If total inputs in a calendar year are between 2.2 pounds and 50 pounds for a hazardous substance, or between 0.022 pounds and 5 pounds for an extremely hazardous substance or extremely persistent bioaccumulative toxin, only the total input quantity is required to be reported.

(Estimate total quantities first, to see whether they will meet reporting thresholds, before proceeding with full calculations.)
 - d. Degree of precision. See page 19. For hazardous substances, reporting in whole pounds is preferred unless the amount is less than 10 pounds, in which case it should be reported to the nearest tenth of a pound. No greater precision is required, except in the case of extremely hazardous substances or extremely persistent bioaccumulative toxins.
 - e. Use of Ranges. See page 22. In estimating the amounts of hazardous substances to report, a business may consider the range of compositions that it receives as articles during the year, and choose an average value within the range. This also applies when a range is reported on a Material Safety Data Sheet.
 - f. Priority System for Determining Amounts. See page 22. Actual measurements or calculations are required when available. When these are not possible or not available, estimates based on best engineering judgment of the manufacturer are allowed.

EXAMPLES:

1. A company uses a reportable substance to wash machinery. Some of the substance goes down the drain, and the rest is wiped off with rags, which are placed in a bin and later hauled away. The percentage of the substance that is on the rags may be determined based on the company's best engineering judgment, since it is unlikely that actual measurements of either output are being made.
 2. In the same scenario, if the company does have information allowing it to calculate the amount of the reportable substance that is being released down the drain to the publicly owned treatment works, then the difference between that amount and the total amount used can be assumed to have been hauled away as waste, with the rags.
 3. In manufacturing its product, a company applies an adhesive containing a reportable substance. The company later trims the product, generating some percentage of waste. Again, that percentage may be determined based on the company's best engineering judgment, unless it is possible to make a more accurate determination based on information that is readily available. This could include the weight of unfinished product minus the weight of finished product, if those quantities are measured. Again, no additional measurements not otherwise being taken are necessary.
- g. Best information readily available. See Question 49 in Appendix F. It is not the policy of the Toxics Right-to-Know Program to require businesses to purchase new equipment or take additional measurements. Businesses are of course free to do so at their discretion in order to improve the quality of the information reported. As a general rule, however, information that is not available is not reportable.
2. Review Appendix F to this handbook, "Questions from Businesses/Answers from Toxics Board," to see if there is additional guidance that might be helpful in your particular circumstances.
 3. Technical assistance is available free of charge from the Toxics Program staff, 541-682-7118. Technical assistance is also available for a fee, from a private consultant. Environmental & Ecological Services are listed in the Yellow Pages.
 4. Begin preparing your report soon after the end of the calendar year, while there is still ample time to gather and organize your information. Do not postpone it.
 5. Remember that the intent in enforcement is to be helpful and not punitive. The Toxics Board and City staff are more interested in providing complete and accurate information to the public than in assessing fines. Fines are only assessed in the event of egregious violations, and never for a first offense.

- 6. Use standard spreadsheet software to track and organize information. Most companies that have little problem with the report use Microsoft Excel spreadsheet software or a similar product.**
- 7. Contact vendors and waste haulers at the end of a year for full-year figures. This will save you the trouble of tracking some substances throughout the year.**
- 8. Consider implementing chemical inventory control measures, possibly including a chemical approval form, and linking these to tracking and reporting.**

Process for Exemptions

In compliance with ORS 453.370 the City has established the following procedure for exemption from all or part of the Toxics Right-to-Know Program:

- A. If a facility believes that it has evidence that its operations pose little or no risk to the public health or the environment, the facility may request an exemption from all or part of the material balance report requirement by submitting an Exemption Request form provided by the Toxics Board.
- B. A facility requesting an exemption must specify from what reporting requirements it is seeking an exemption. A facility may not seek an exemption from a requirement to pay a fee.
- C. An Exemption Request form must be accompanied by a report prepared by an independent public health or environmental consultant that demonstrates that the facility's operations pose little or no risk to the public health or the environment.
- D. The facility must submit a non-refundable filing fee of \$150. The facility shall be assessed an additional fee to cover the City's cost of hiring a nationally certified toxicologist to review the report submitted by the facility. Prior to the toxicologist commencing review of the submitted report, the facility will be provided a fee estimate. Within thirty (30) days of receiving the estimate, the facility shall notify the City whether it wants to proceed with the report review or withdraw from the exemption process.
- E. Within sixty (60) days of receiving a facility's notification that it wants the toxicologist to commence review of its submitted report, the Toxics Board will meet to consider the facility's exemption request. At that meeting a representative of the facility will have an opportunity to speak to the Toxics Board regarding the requested exemption. Those wishing to speak in opposition or in favor of the request may also speak at this meeting.
- F. An exemption request may be denied, granted in whole, or granted in part.
- G. An exemption shall not be granted (in whole or part) unless the facility establishes by clear and convincing evidence that its operations and use of hazardous substance(s) do not pose a risk to the public health or the environment.
- H. Six out of the seven Toxics Board members must vote in favor of exempting the facility in order for the facility to be exempted from all or part of the reporting requirements.
- I. The Toxics Board shall render a decision on the facility's requested exemption within twenty (20) days of the meeting at which the request was considered.
- J. The decision of the Toxics Board is final.

Who Must Report

Reports must be filed by businesses that meet all of the following criteria:

- The facility is within the Standard Industrial Classification (SIC) categories of #20-#39 (first two digits of the four-digit SIC category), or is a solid waste incinerator that accepts infectious waste, or is a hazardous waste disposal incinerator. If you need assistance in determining your SIC category, call Toxics Program staff at 541-682-7118.
- The facility has 10 or more full-time equivalent employees (20,800 hours paid to employees employed locally by the facility in the reporting year).
- The facility has aggregate inputs of 2,640 pounds of reportable hazardous substances during the reporting year. If the total is less than 2,640 pounds, the facility is not required to report.
- The facility is stationary within the city limits of Eugene, and is not exempted. Exempted facilities are public educational institutions, state and federal facilities and facilities of their political subdivisions.

Deadline for Submitting Reports

Reports shall be filed by April 1 of the year following the reporting year (e.g., 2011 reports were due April 1, 2012).

It is the policy of the Toxics Board that entities required to report may request an extension of the April 1 reporting deadline by contacting Toxics Program staff at 541-682-7118.

What Constitutes a Complete Report

Electronic Materials Accounting Data

The law requires that materials accounting reports shall be filed electronically. Reporting instructions will be sent to businesses around the end of the reporting year.

The reporting program contains electronic forms such as those shown on pages in Appendix B. The forms provide for the name and CAS or other identifying number of each hazardous chemical used by the facility during the reporting year, and for reporting amounts of inputs and outputs of each type specified in the Right-to-Know Charter Amendment. Detailed instructions for calculating these amounts are given starting on page 15 of this handbook, and instructions for entering the data will be sent to reporting businesses each year.

The reporting program downloads data from the previous reporting year, and then automatically enters January 1 inventories of reportable substances and waste based on the quantities reported for December 31 of the previous reporting year. (The assumption here is that whatever was at the facility on December 31 of the previous reporting year was still there the next day.)

Certification Form

With each electronic materials accounting report, an electronic certification form (with an electronic signature checkbox) executed by a responsible officer of the company is required. This form (see Appendix B) attests that the information filed electronically is correct and complete to the best of the company's knowledge, based on readily available information. The certification form will also provide the name, telephone number and email address of the person completing the report for the company. That person's name, telephone number and email address will not be made public, but are for the City's use in the event that clarification or additional information is needed. A faxed copy of the certification form is acceptable.

Trade Secret Forms

Provisions are made in the law for the reporting of trade secret chemicals when such status is approved by the City's Fire Marshal. (See Appendix E, Trade Secret Reporting Forms and Instructions.)

If you are claiming trade secrecy for one or more hazardous substances, you must submit:

1. A notarized report to the City's Fire Marshal submitted through Toxics Program staff documenting that the substance is a trade secret as defined in the charter amendment. **This report must be on file prior to the procurement or production of a trade secret hazardous substance.**
2. A report to the Toxics Board submitted through Toxics Program staff documenting that the above report has been filed with the City's Fire Marshal. If a manufacturer is granted trade secret status for **one substance only**, materials balance accounting is not required for that substance. However, the notarized report to the City's Fire Marshal and the corresponding notification to the Toxics Board are still required.
3. An aggregate materials accounting report if you claim **two or more** reportable trade secret substances, entered as a single line item in the regular Hazardous Substance Report. If trade secret status is approved, the trade secret substance or substances are reported using a special designation number, using the same process as for other reportable substances. If denied, there is provision for appeal to the Toxics Board.
4. An independent auditor's report regarding precautions taken in trade secret substance use and technological alternatives to trade secret substances.

Businesses interested in claiming trade secret status for substances should contact the Toxics Program staff at 541-682-7118 for detailed reporting instructions.

Recordkeeping

A partial list of records that a facility may need to maintain for report generation and verification during audits includes:

- Previous years' reports
- Engineering calculations and other notes
- Purchase records from suppliers

- ~~Material~~ Safety Data Sheets (~~M~~SDSs)
- Inventory data
- Production records
- Records of sales or transfers of products from the facility
- NPDES monitoring reports
- Office of State Fire Marshal Hazardous Substance Information Survey
- Flow-meter data
- RCRA Hazardous Waste Generator’s Report to DEQ
- Pretreatment reports filed by the facility with the wastewater treatment plant
- Invoices from hazardous waste management companies
- Hazardous waste profiles
- Process diagrams that indicate emissions and other releases
- Any other records that your facility will need to substantiate the inputs and outputs of all reportable hazardous substances, including method of estimation (see pages 20-22).

What to Report

Reporting businesses are required to determine which substances they need to report, and then to report the inputs and outputs, by type, of each of those chemicals, such that total inputs and outputs for each chemical are equal within the smallest accounting unit. A thorough review of this handbook, especially the Charter Amendment (see Appendix A) and the list of reportable chemicals (see Appendix C), is recommended.

Examples of Reportable and Not Reportable Substances

	<u>Reportable?</u>
Articles, and substances contained in articles	No
Hazardous fuel used to control a manufacturing process	Yes
Natural Gas (See Appendix F, Question 37)	No
Solvents used for cleaning manufacturing equipment	Yes
Substances used for fuel in motors on mobile vehicles	No
Reportable substances used for maintenance of non-motorized vehicles used in manufacturing processes	Yes
Hazardous boiler additives to reduce scale formation during manufacturing	Yes
Substances used as a structural component of the facility	No
Janitorial, grounds maintenance and office supplies	No
Substances used in building maintenance and construction activities	No
Substances used for environmental monitoring not related to manufacturing	No
Products in retail stores	No
Radioactive substances that are part of sealed measuring devices	No
Waste aerosol cans	No
Reportable substances in waste aerosol cans (See Appendix F, Question 40)	Yes
<u>Hazardous substances related to research and development (See Appendix F, Section D: Manufacturing vs. Maintenance Uses)</u>	No

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What Substances Must Be Reported

To be reportable, a chemical must appear on the City’s list **or** be known to possess one or more

of the characteristics described in 40 CFR 261, Subpart C (see Appendix D). Radioactive substances are also reportable (see paragraph below and Appendix A, Article III(E)(3)).

The list of reportable chemicals is available on the Toxics Program's website (see link below), or in printed form upon request by contacting Toxics Program staff at 541-682-7118.

To view the current list of reportable chemicals; or to search for a particular chemical, go to: https://ceapps.eugene-or.gov/toxics/chem_reportable_list.aspx; https://ceapps.eugene-or.gov/toxics/chemical_list.aspx.

To search for a particular chemical, go to: https://ceapps.eugene-or.gov/toxics/chemical_list.aspx.

To determine whether or not a chemical is reportable, check if the chemical matches a City listing. If the chemical cannot be found by matching name or CAS number, then determine if it is in one of the reportable chemical categories (see Table of Special Designations on page 13) or if it is a reportable "characteristic" substance as defined by 40 CFR 261. If neither name nor CAS number nor category nor characteristic match the Eugene Toxics Program's definitions of reportable substances, then your substance is not reportable.

"Characteristic" substances as described in 40 CFR 261, Subpart C (Appendix D): Businesses are expected to conscientiously identify non-listed substances that "if it were in a container, would possess the characteristics of a hazardous waste, as defined in 40 CFR 261.20 through §261.24, authorized by RCRA." Substances that possess the characteristics of hazardous waste are commonly referred to as "characteristic chemicals" or "characteristic substances."

In the list of reportable chemicals there are two columns: one entitled *Characteristic*; and another entitled *Source Lists*. Chemicals/substances with a "Y" shown in the Characteristic column and a Toxics Program reporting business number in the Source Lists column, indicate that those chemicals were previously reported as characteristic by at least one reporting business, meaning that they do not appear on the Federal lists comprising the majority of Eugene's definition of "hazardous substance" (see Appendix A, Article III-E). These characteristic substances shall not be required to be reported by any business or added to the List of Reportable Chemicals until the following steps have been completed:

1. If a business identifies a non-listed substance, and concludes that the substance does indeed possess the characteristics of a hazardous waste as defined in 40 CFR 261.20 through §261.24, the business representative must:
 - a. Verify the chemical's name and CAS number (or other designation used by the program);
 - b. Verify whether the chemical is an EHS, EPBT and/or Radioactive;
 - c. Obtain a copy of an MSDS or laboratory analysis for the chemical as proof that the substance meets the requirements to be considered a characteristic chemical/waste (if no MSDS or no laboratory analysis is available, a written account as to what has caused this chemical to be identified as a characteristic chemical/waste is acceptable); and
 - d. Submit the above information to Toxics Program staff requesting Toxics Board consideration for the substance to be added to the list as a characteristic chemical.

2. After review of the business representative’s request and required information, if the substance is deemed a characteristic chemical by six (6) of the seven (7) Toxics Board members, the Toxics Board will submit a written recommendation to the City Manager requesting the substance be added to the list as a characteristic chemical. The recommendation will include the reason for the recommended addition.
 - a. If the Toxics Board rejects the request, the Toxics Board will notify the business representative in writing the reason for rejection, and the chemical shall not be reportable.
3. The City Manager may then either accept or reject the Toxics Board’s recommendation for inclusion of the substance.
4. If the City Manager agrees to include the chemical on the List of Reportable Chemicals, the City Manager will establish a date when the additional chemical shall be subject to the materials balance reporting requirements.
 - a. If the City Manager rejects the recommendation, the City Manager will notify the Toxics Board in writing the reason for rejection, and the chemical shall not be reported.

“Chemical Category” substances: In the list of reportable substances, a number of chemical categories are listed. They are designated by “N” followed by a three-digit number, rather than a CAS number. These categories are defined in SARA 313 (EPCRA), and chemicals included in the listed categories are reportable under Eugene’s Toxics Right-to-Know law.

A ~~Material~~ Safety Data Sheet (~~M~~SDS) will often be helpful in determining whether you are working with Chemical Category substances. This information may appear on the list of hazardous ingredients on the ~~M~~SDS, and/or under “Regulatory Information,” where one or more chemicals may be listed without a CAS number, but as reportable under SARA 313.

Chemicals listed federally without CAS numbers: The Toxics Board has identified a small number of chemicals or groups of chemicals that appear on the federal lists that comprise the Eugene list of reportable substances, but that do not have CAS numbers. These appear on the list with the designation “TB” followed by a number. They are reportable in the same manner as other reportable chemicals.

Table of Special Designations

C	The generic designations C1 through C7 indicate chemicals whose identity (CAS number) is not known to the reporting business, but which are known to possess one or more of the characteristics of hazardous waste as defined in 40 CFR Part 261, Subpart C (Appendix D).
N	The N designation (followed by a three-digit number) indicates chemical categories listed as reportable in SARA 313. They include any compound that contains the listed chemical as part of its infrastructure.

SG	If an M SDS lists a substance as reportable under SARA 313 or SARA 302, but does not identify the chemical because it is a trade secret of the supplier, the chemical may be reported as SG.
TB	TB followed by a number indicates a chemical or group of chemicals appearing on one or more of the Federal lists of reportable substances cited in the Charter Amendment, but without CAS numbers. The TB designator simply takes the place of a CAS number for these chemicals.

Compounds and Mixtures

See Appendix F, Questions 18-23 and 49

When hazardous substances occur in compounds or mixtures with other substances, facilities are required to report only the weight of actual hazardous substances. The **M**aterial Safety Data Sheet (**M**SDS) may give the percentage of hazardous substances contained in a mixture or compound, and the weight of each can then be calculated. Otherwise, businesses are expected to use their best engineering judgment and to document it for purposes of audits.

Unidentified Chemicals

See Appendix F, Question 25

Often a company will know that a substance is reportable because it possesses one of the characteristics of hazardous waste as defined in 40 CFR Part 261, but the company will not know the identity of the chemical (usually because it is a trade secret of the supplier). These chemicals should be reported in the appropriate generic category (C1 through C7).

Occasionally, a chemical will be listed on an **M**SDS under a generic name and, instead of a CAS number, a phrase such as “SARA 313 Reportable” is used. When specific chemical identity information is not available, but you have information indicating that a substance is reportable, provision is made to report the chemical in a generic category with the chemical identifier SG in lieu of a CAS number.

For example, the generic name “chlorinated aromatic” is listed as an ingredient/component on the **M**SDS. If your facility uses 20,000 pounds of a solvent that contains 80% “chlorinated aromatic,” you know that you have used 16,000 pounds of a reportable hazardous substance. You would report the substance as SARA Generic, which appears on the City’s list of reportable substances along with the chemical identifier SG.

Radioactive Materials

Companies must report the identity of radioactive materials for which they have inputs above 1 gram (0.0022 pounds), and must report the amount of input for radioactive substances whose input exceeds 2.2 pounds. Materials accounting, including all four inputs and all 11 outputs, is not required for radioactive substances.

Exception: Sealed source radioactive materials, as defined by OAR 333-100-055(71), contained in smoke detectors, survey equipment, and small laboratory testing equipment, are not required to be reported.

Articles

For purposes of reporting under this program, the Toxics Board has defined “article” as: a solid manufactured item which remains solid throughout the manufacturing process, the unit size of which weighs more than 1 gram (0.0022 pounds), that is used by a facility in whole or in part, without undergoing any chemical changes, in manufacturing of a product or a portion of a product, and that does not release a reportable hazardous substance under normal conditions of the processing of that item at the facility.

See Appendix F,
Questions 1-17

Any fumes, dusts, and grindings of reportable hazardous substances that are created during processing, or any portion of the original article that is sent to a public landfill, waterway, or otherwise released to the environment, are reportable.

The remainder of the article which remains unchanged after processing is not reportable. However, if a facility’s reporting is made easier by reporting the entire article as input, that practice is also acceptable.

Inputs of reportable hazardous substances that came to the facility as an article may be calculated by summing the reportable outputs (fumes, dusts, grindings, and any other fractions that are released to the environment). However, input category 3, produced on-site, should not be used. This category is reserved for chemicals created from other chemicals during a facility’s processes. Instead, input categories 1, 2, and 4 should be used as appropriate.

Metal Fumes, Dusts, and Filings: Report hazardous substances that are fumes, dust, filings or grindings that result from the manufacturing process of an article that consists of or contains the hazardous substance. The portion of the article that is not converted into fumes, dust, filings or grindings is not reportable.

Metals and Metal Compounds

Determine which of your metals and metal compounds are on the Chemical List, and which are not. For those that are listed with a specific name, e.g., “lead phosphate,” report these substances as you would any other reportable hazardous substance, subject to the thresholds given on page 15. For metal compounds that are not listed with a specific name but fit into a generic category, e.g., “lead compounds,” report the aggregate amounts of these compounds in the appropriate input and output categories. However, do not report in the generic category those substances that were reported under a specific name. This will avoid double counting.

Example: Lead, lead phosphate, and lead compounds are each listed as reportable. If a business has a lead input and manufactures lead phosphate, it would first do materials accounting for the inputs and outputs of lead, including its incorporation into lead phosphate during manufacturing (output types 1 or 2). Then the business would do materials accounting for the inputs (in this case, produced at the facility, type 3) of lead phosphate, and account for its outputs. If the lead phosphate is subsequently converted into another lead compound that is not specifically listed, the business would include the new lead compound in its materials accounting for “lead compounds.” In the latter case, the amount of “lead compound” would be aggregated with other amounts of “lead compounds,” if any, that are used by the facility in the manufacturing process.

Threshold Amounts for Reporting

To help make reporting feasible, the Toxics Board has developed the following policies. If you do not know whether a chemical is reportable, or how it should be reported, contact Toxics Program staff at 541-682-7118.

1. Minimum Amounts for Individual Chemicals: Total inputs of a single chemical must meet the smallest accounting unit threshold (2.2 pounds for hazardous substances and 0.022 pounds for extremely hazardous substances and extremely persistent bioaccumulative toxins), or else that chemical is not reportable. For radioactive substances, see page 14.
2. Thresholds for Full Materials Accounting: If total inputs fall below 50 pounds for a hazardous substance or five pounds for an extremely hazardous substance or an extremely persistent bioaccumulative toxin, but above the smallest accounting unit, then the substance’s name and total inputs must be reported, but materials balance accounting is not required. However, these amounts count toward the 2,640-pound overall reporting threshold.
3. When All Chemicals Fall Below the Threshold for Materials Accounting: If no chemical has inputs exceeding 50 pounds, but the facility exceeds the 2,640-pound aggregate input threshold, then materials balance accounting IS required for the one chemical with the greatest input.

See Appendix F,
Question 39

The following table summarizes threshold amounts for reporting.

	NON REPORTABLE	REPORTABLE WITHOUT FULL MATERIALS ACCOUNTING	REPORTABLE WITH FULL MATERIALS ACCOUNTING
EXTREMELY HAZARDOUS SUBSTANCE	<0.022 pounds	0.022 – 4.99 pounds	≥ 5 pounds
HAZARDOUS SUBSTANCE	<2.2 pounds	2.2 – 49.99 pounds	≥ 50 pounds

How to Calculate Inputs and Outputs

The electronic data entry reporting program will have fields to accommodate each input and output type. In reporting, it is required that total inputs and total outputs for each substance must balance to within the smallest accounting unit for that substance. The following table shows all input and output categories.

I1	Input 1	January 1 Inventory	O4	Output 4	December 31 Waste
I2	Input 2	January 1 Waste	O5	Output 5	Emitted to Air
I3	Input 3	Produced On-site	O6	Output 6	Discharge to POTW
I4	Input 4	Brought On-site	O7	Output 7	Surface Water Release

O1	Output 1	Chemically Altered	O8	Output 8	Treated On-site
O2	Output 2	Shipped as Product	O9	Output 9	Recovered On-site
O3	Output 3	Shipped as Waste	O10	Output 10	Disposed On-site
			O11	Output 11	December 31 Inventory

Input Types

The law specifies four different types of inputs of hazardous substances:

1. Inventory at the facility at the beginning of the accounting period: Report the quantity of each substance that is on-site on January 1 in purchased or manufactured condition. This does not include the quantity of a substance that is considered waste waiting for treatment or disposal (see input type 2). **For each substance, this amount should be the same as the amount reported in Output Type 11 (inventory at the facility at the end of the accounting period) for the previous year.**
2. Waste stored at the facility at the beginning of the accounting period: Report the quantity of the substance that is on-site on January 1 that is waste. This is the portion of the substance that has been used in a manufacturing process and is waiting for treatment or disposal. **For each substance, this amount should be the same as the amount reported in Output Type 4 (waste stored at the facility at the end of the accounting period) for the previous year.**
3. Quantity produced at the facility: Report the total quantity of the substance produced by chemical processes on-site during the calendar year. The total quantity includes material prepared in a production process whether as a final product or as an isolated intermediate, and quantities generated as waste that were not stored on-site on January 1 (Input #2). The quantities produced as transient, non-isolated intermediates should not be reported.
4. Quantity brought to the facility: Report the total quantity of the substance brought into the facility from all off-site suppliers, including other facility locations and divisions of your own company, during the calendar year.

Output Types

The law specifies 11 different types of outputs of hazardous substances:

1. Quantity chemically altered (consumed) in the facility's processes: Chemically altered, or consumed, means "undergoes a chemical reaction to produce a new chemical." Reportable substances that are chemically altered in manufacturing processes must be accounted since they represent a reduction of the quantity present. Reportable substances generated during chemical alteration of another substance must be reported as inputs of type 3 in the section above.

See Appendix F, Questions 50 and 52

Transient intermediates, those compounds that are produced and then fully

consumed in a continuous process, even if on the list of reportable hazardous substances, are not reportable.

Businesses may choose average yields of reactions performed at the facility for the purposes of calculating quantities chemically altered, and apportioning the product to other output types, e.g., between product and waste.

2. Quantity shipped from the facility in product: This output includes any reportable substance that is shipped as a product, or part of a product. This includes substances shipped in a form suitable for final use (end product) or as intermediates subject to further processing leading to final use. Report the quantity of the substance only, not the total quantity of the product within which it is a component.

Examples:

- a. Metals such as Zn or Ni plated onto an article. Report only the weight of the metal that was plated onto the article, not the total weight of the final product.
 - b. Reportable substances contained in a paint or solvent. Report only the weight of reportable hazardous substances contained in the product, not the entire weight of the product.
 - c. A monomer, dimethyl phthalate, is produced in Eugene and shipped to California to be polymerized. The polymer is shipped to Texas where it is used to make beverage containers. The original monomer, which is reportable under the Eugene law, even though far from a final product, must be reported as product shipped from the facility.
3. Quantity transferred away from the facility as waste: Report the quantity of the reportable hazardous substance that is transferred to other locations as waste, whether for recycling, energy recovery, treatment or disposal. Report the quantity of the substance only, not the total quantity of the waste within which it is a component.

NOTE: If your company is paid for materials taken away by recyclers or anyone else, then those materials are products and their reportable components should be reported in Output Category 2 above.

4. Waste stored at the facility at the end of the accounting period: Report the quantity of the reportable substance remaining on-site on December 31 that is waste, regardless of its eventual intended disposition (e.g., recycling, energy recovery, treatment or disposal). This is the portion of the substance that has been used in the process and is waiting for treatment or disposal. Report the quantity of the substance only, not the total quantity of the waste within which it is a component. **This amount should carry over to Input Type 2 (waste stored at the facility at the beginning of the accounting period) for the following year.**

5. Quantity emitted to the air: Report the quantity of the reportable hazardous substance that was emitted to the air. Include not only stack emissions, but also fugitive emissions from your facility.

Stack emissions are emissions that are released into the atmosphere from a readily identifiable point source. This includes emissions from stacks, exhaust vents, ducts, pipes, or other confined air streams.

Fugitive emissions are emissions that are not released through stacks, vents, ducts, pipes or other confined air stream. Included are evaporation, leakage, or releases from the following sources: blending operations; transfer operations; charging and discharging reaction vessels; storage piles and tanks; leaking seals, pumps, flanges, valves, etc.; furnaces or kilns; open vats or pits; crushing, pelletizing or grinding operations; and loading and unloading operations.

6. Quantity discharged into publicly treated sewage: Report the quantity of the substance discharged into the wastewater collection system (sanitary sewer). Report the actual amount of the hazardous substance, not the total discharge.
7. Quantity released into surface waters: Report the quantity of the substance discharged directly into surface waters, other than quantities that went to surface waters via the sewer system (output type 6). This would include storm water runoff and any spills that ran into surface waters.

8. Quantity eliminated through treatment at the facility: Report the quantity of the reportable substance that was destroyed or neutralized through on-site treatment processes, including gaseous, wastewater (aqueous), liquid (non-aqueous), and solid. Destruction may include any process that changes the physical, chemical, or biological character or composition of the substance so as to neutralize or chemically decompose the waste. If during treatment new reportable substances are created that leave the facility as other forms of output, they must be reported as inputs of type 3 (produced at the facility) and as outputs.

See Appendix F, Question 46

Example: A facility uses nitric acid and sodium hydroxide for neutralization. During the process they react to form water, nitrate and sodium ions. Both the nitric acid and the sodium hydroxide are treated and neutralized in the process. The mass of sodium nitrate produced must be calculated and is reportable as a nitrate compound (water dissociable).

9. Quantity eliminated through energy recovery at the facility: Reportable energy recovery is the combustion of residual material containing a hazardous substance when (a) the combustion unit is integrated into an energy recovery system (boilers, industrial furnaces and industrial kilns), and (b) the substance that is combustible has a heating value high enough to sustain combustion.

Metals and metal compounds cannot be reported in this output because they are

not combustible. The metal component of the material being combusted could be in the ash or could be in the exhaust. If it is in the ash, the metal component that is a hazardous substance would be reported as output of type 3 (quantity transferred away from the facility as waste), or output of type 10 (quantity disposed on-site), depending on what happens to the ash. If it is exhausted, it would be reported as output of type 5 (quantity emitted to the air).

10. Quantity disposed on-site: Report each hazardous substance that is ultimately disposed of on the same site as the manufacturing facility. This category includes settling ponds, irrigation, on-site landfills and land treatment (i.e., incorporating waste into soil for treatment). If there is any volatilization of a hazardous substance into the air during the disposal on-site, that amount must be included in output type 5 (quantity emitted to the air).
11. Inventory at the facility at the end of the accounting period: Report the unused quantity of the substance that is remaining on-site on December 31 in purchased or manufactured condition. This does not include the quantity of the substance used in the manufacturing process that is waste waiting for treatment or disposal (i.e., output type 4, waste stored at the facility). **This amount should carry over to Input Type 1 (inventory at the facility at the beginning of the accounting period) for the following year.**

Degree of Precision

For the purpose of reporting, decimal amounts (rounding to one decimal for hazardous substances and to three decimals for extremely hazardous substances and extremely persistent bioaccumulative toxins) are to be used only when the whole number of pounds for hazardous substances is less than 10 and for extremely hazardous substances or extremely persistent bioaccumulative toxins less than 1.

Expected Accuracy of Reporting

The Toxics Board recognizes that measurement to the level of the smallest accounting units will be difficult or impossible to achieve in many cases. Businesses are expected to do their best to be as accurate as possible, and each input/output category should be reported in a discrete number of pounds. See “Degree of Precision” above. Reporting in ranges, as is done for the State Fire Marshal, is not acceptable.

Businesses are expected to use the best information that is already available to them. See Recordkeeping on pages 10 and 11. Businesses are not expected to purchase new monitoring or measuring equipment for the purposes of reporting, unless such equipment is required by Federal or State regulatory agencies. Neither are businesses required to perform additional sampling or laboratory analysis in order to generate input/output reporting data.

The basis for reporting should be internally documented by the facility.

Priority System for Estimating/Determining Input/Output Amounts

Businesses are expected to use information that is already available to them, using the priority system (M>C>E>O) described below. A business may be asked to explain its choice of estimation method in an audit.

The priority system (M>C>E>O) is intended as a general guidance for estimating amounts. However, in certain cases, method E (estimate based on emission factors) may yield better data than method C (estimate based on mass balance), and should be used.

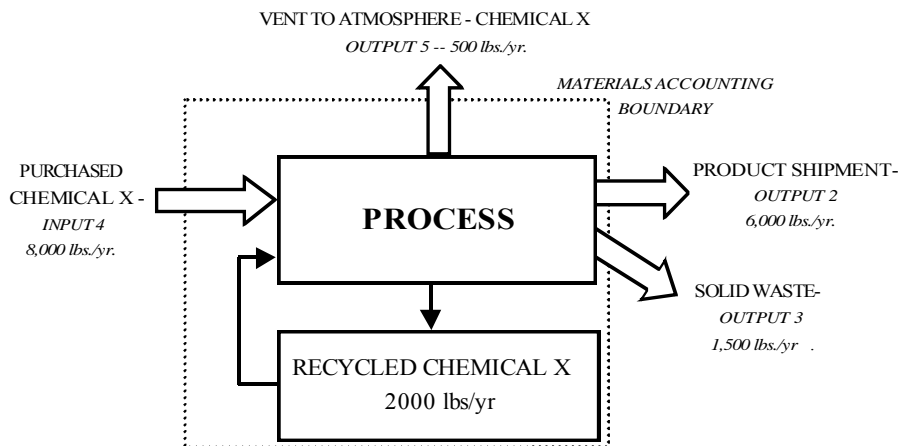
See Appendix F,
Questions 43-44

- M Estimate based on monitoring data or measurements for the substance.
Note: These are “estimates” because even the best measurements have some error associated with them.
- C Estimate based on mass balance calculations if directly used to calculate mass.
- E Estimate based on published emission factors.
- O Estimate based on engineering calculations (using published mathematical formulas, e.g., evaporation rates) or best engineering judgment.

Examples of Each Estimation Method

- Method M: Averages of measurements of Volatile Organic Compounds (VOCs) in water sent to publicly owned treatment works (POTW) multiplied by the total water discharge as recorded by the public utility may be used to estimate outputs to the POTW of those compounds.
- Method C: To estimate releases of Chemical X to air from a process vent:

Step 1. Draw a diagram, label all streams, and list input and output values.



Consider a unit process that uses Chemical X to produce a product. In a year, 10,000 pounds of Chemical X are used to produce 24,000 pounds of a product containing 25% (6,000 pounds) of Chemical X by weight. The input consists of 8,000 pounds of purchased Chemical X and 2,000 pounds that are collected from recycling. This process generates 10,000 pounds of solid waste containing 15% (1,500 pounds) of Chemical X, and re-generates 2,000 pounds of Chemical X for

recycling. The only other unit process stream is a process vent, which emits an unknown amount of Chemical X to the atmosphere.

Step 2. Set up equations with input streams equal to output streams.

Considering the quantities of Chemical X in all streams that enter or leave the process, the amount of Chemical X that is lost through the process vent on an annual basis can be estimated as follows:

Input = Amount purchased (8,000 pounds)

Output = Product (24,000 lbs x 25%) + waste (10,000 lbs x 15%)
+ process vent loss

Input = Output

8,000 lbs Chemical X = 6,000 lbs + 1,500 lbs + process vent loss

Process vent loss = 8,000 - 6,000 - 1,500 = 500 lbs Chemical X per year

3. Method E: Emission Factors published in the EPA document AP-42, or those already approved by LRAPA, or those developed specifically for your facility, are all acceptable means of estimation of air emissions, unless monitoring data are available. AP-42, "Compilation of Air Pollutant Emission Factors," 5th edition, is available at: (1) LRAPA office, (2) University of Oregon library, or (3) on the Internet at <http://www.epa.gov/ttn/chief/ap42/index.html>.
4. Method O: When no data exist and document-driven estimation methods are not available, a business may use its best engineering judgment in calculating reportable quantities. When engineering calculations are appropriate, businesses are encouraged to consult EPA 560/4-88-002, "Estimating Releases and Waste Treatment Efficiencies for the Toxic Chemical Release Inventory Form," Dec. 1987 at [http://nepis.epa.gov/Exe/ZyNET.exe/10003BA2.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1986+Thru+1990&Docs=&Query=FNAME%3D10003BA2.TXT%20or%20\(%20Estimating%20or%20Releases%20and%20Waste%20or%20Treatment%20or%20Efficiencies%20or%20for%20or%20the%20or%20Toxic%20or%20Chemical%20or%20Release%20or%20Inventory%20or%20Form\)&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=1&ExtQFieldOp=1&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C86thru90%5CTxt%5C0000002%5C10003BA2.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=10&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p%7Cf&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeeKPage=x&ZyPURL](http://nepis.epa.gov/Exe/ZyNET.exe/10003BA2.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1986+Thru+1990&Docs=&Query=FNAME%3D10003BA2.TXT%20or%20(%20Estimating%20or%20Releases%20and%20Waste%20or%20Treatment%20or%20Efficiencies%20or%20for%20or%20the%20or%20Toxic%20or%20Chemical%20or%20Release%20or%20Inventory%20or%20Form)&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=1&ExtQFieldOp=1&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C86thru90%5CTxt%5C0000002%5C10003BA2.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=10&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p%7Cf&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeeKPage=x&ZyPURL). This document is also available from National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. The NTIS

Accession Number is PB 88-210380.

Use of Material Safety Data Sheet (MSDS) Information

Information taken directly from a MSDS is considered accurate for the purposes of reporting, unless the reporting company has more accurate information.

If the MSDS of a purchased material identifies a contaminant as belonging to a SARA 313 Chemical Category and that material represents less than 1% of the total weight of the purchased material, reporting of that contaminant is not required. Chemical categories are defined in SARA 313 (EPCRA). These are groups of materials such as “copper compounds” or certain “glycol ethers” that are not definable by a discrete CAS number.

Use of Ranges

In estimating the amounts of hazardous substances to report, a business may consider the range of compositions that it receives as articles during the year, and choose an average value within the range. For example, if the stainless steel that a business uses for manufacturing contains, among other substances, chromium, and the business generated 900 pounds of fumes, dust, filings or grindings from such articles, and the chromium content ranged from 6-8%, the business could choose 7% (or another percentage they feel is more justifiable) and then report 63 pounds of chromium in the appropriate output category(ies).

Likewise, when an MSDS gives ranges of components of mixtures, the business may report the midpoint of the range, or be prepared to explain their rationale for any other choice used for reporting.

See Appendix F,
Question 49

Example: An MSDS gives the following composition:

	Reasonable Reporting:
Material 1 50-60%	55%
Material 2 10-20%	15%
Material 3 20-30%	25%
Material 4 5-10%	5%
TOTAL 85-120%	100%

Administration

Enforcement Actions

The law gives the Toxics Board broad powers to enforce violations. However, it is the intent of the Toxics Board to assist companies in their efforts to comply with the law. Companies that make an honest and conscientious effort to comply with the law and that work with the Toxics Board to continuously improve the quality of their reporting are unlikely to face enforcement actions. Blatant disregard for the law or the truth, or an unwillingness to provide adequate information as directed by the Toxics Board, however, is likely to result in enforcement actions. There will be intermediate cases of reporting errors involving gross inaccuracies and/or omissions and/or data accumulation process errors. Whether or not these errors result in enforcement actions will be a decision of the Toxics Board, which will take into account the factors listed in Section 8.2.C of the law.

See Appendix F,
Question 44

Concerning companies that are required to report but have not reported, the Toxics Board will consider the merits of each case that comes to its attention. Companies voluntarily coming forward, even years late, are unlikely to face the level of penalties that may be assessed against companies identified by the Toxics Board through other means.

Appeal of Penalty

Prior to imposition of any penalty, a business shall have an opportunity to be heard by the Toxics Board as to the occurrence or nonoccurrence of a violation, the circumstances surrounding a violation, and the amount of a penalty, if any, that should be imposed. The Board may ask a hearings official, City staff member, or the City Attorney to preside at the hearing and to advise the Board as the Board deems appropriate. Prior to any hearing on a penalty, the Board shall provide to the business, and to any person who the Board knows is interested in the matter, notice of the specific procedures that it will follow at the hearing. The decision of the Toxics Board shall be final, except that under Section 8.1.B of the law, any person may appeal the decision to the Circuit Court for Lane County.

Audits

Toxics Program staff will audit every reporting business at least once every three years. The charter amendment provides for advance audit notification of no more than one month. For reporting businesses that have previously been inspected by program staff, the audit consists of a review of all data reported since the previous audit, followed by written notification of questions and/or required corrections. A business is given 30 days to respond to an audit letter. Failure to respond in a timely fashion may be considered a violation of the City Charter (see Appendix A, Article VIII). There is no penalty for an initial violation, but such violation will be recorded. Penalties are provided for subsequent violations.

In the case of a business that has not been physically inspected, the audit shall consist of such inspection followed by a written report of any observations made during the inspection and/or in a review of the data reported. Again, the business will be given 30 days to respond to the written audit report.

Businesses that are suspected of being required to report but have not filed a report may be audited at any time with 24 hours' notice and during regular business hours.

Right to Dispute an Audit Finding

If a business believes an audit finding is incorrect, or a recommendation made by the Toxics Program staff for a change in reporting method is incorrect or inadvisable, the business may appeal that recommendation to the Toxics Board, stating the reasons for the appeal. The Toxics Board's decision stands, except that under Section 8.1.B of the law, any person may appeal the decision to the Circuit Court for Lane County.

Supplying of Forms/Directions/Updates

At the end of the reporting year, instructions necessary to complete the reporting process for the current year will be sent to businesses required to report. The Toxic Right-to-Know Program's Hazardous Substance Tracking Instructions handbook is available in printed and other forms upon request by contacting Toxics Program staff at 541-682-7118, and is also available at the Eugene Public Library.

Individual Source Lists

See Eugene City Charter Amendment IV, Section III, paragraphs A and E, for the list of covered chemicals.

IMPORTANT NOTE: Due to the 1999 Oregon Court of Appeals ruling, the provisions of the Eugene Charter Amendment IV governing chemicals listed pursuant to the Federal Insecticide, fungicide, and Rodenticide Act (FIFRA), and those chemicals defined as pesticides under ORS 634.006(8) are not reportable under the Eugene Toxics Right-to-Know Program.

Characteristics of Hazardous Waste: See 40 CFR 261.20-261.24 (Appendix D of this handbook)

Clean Air Act Section 112(b), Hazardous Air Pollutants: See 42 USC 7412(b)

Clean Air Act Section 602(b), Class II ozone-depleting substances: See 42 USC 7671a(b)

Clean Water Act Section 307(a), Priority Pollutant List: See 40 CFR Ch. 1, pt. 423, Appendix A

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 102: See 40 CFR Ch. 1, pt. 302.4, Appendix A

Emergency Planning and Community Right-to-Know Act (EPCRA) Section 302, Extremely Hazardous Substances: See 40 CFR Ch. 1, pt. 355, Appendix A or B

Emergency Planning and Community Right-to-Know Act (EPCRA) Section 313 substances: See EPA Toxic Chemical Release Inventory (TRI) Reporting Form R and Instructions book, Table II

Radioactive substances: See ORS 469.300 and ORS 453.005

Resource Conservation and Recovery Act (RCRA) Section 3001: See 40 CFR Ch. 1, pt. 261.33(e) and Appendix VIII to pt. 261

Appendix A
Toxics Right-to-Know Charter Amendment

(Excerpt from Eugene City Charter (including 2002 amendments):

Section 54. Amendment IV.

The City of Eugene Charter is hereby amended as follows:

ARTICLE I - FINDINGS AND STATEMENT OF LOCAL PROBLEM

Section 1. The people of Eugene do hereby find that:

- A. exposure to toxic chemicals can damage human health and the environment; and
- B. citizens have a fundamental right to know the identity and amounts of toxic chemicals that are released into the workplaces, air, water, soil, and environment of their community.

ARTICLE II – SCOPE

Section 2.1. Facilities covered by this Section.

- A. Except as exempted in Section 2.2, this Section shall apply to facilities within the City of Eugene that are:
 1. within the Standard Industrial Code categories #20 - #39, inclusively as listed in Standard Industrial Classification Manual (Office of Management and Budget, 1987);
 2. solid waste incinerators that accept infectious waste; and
 3. hazardous waste disposal incinerators.

Section 2.2. Facilities exempted by this Section. This Section shall not apply to:

- A. state and federal facilities; and
- B. public educational institutions.

ARTICLE III – DEFINITIONS

Section 3. As used in this Section, the following definitions shall apply:

- A. "Extremely hazardous substance" means all substances listed in Section 302 of the Emergency Planning and Community Right-To-Know Act (42 USC 11002) as of the effective date of this Section. If a substance is added to or removed from the federal list of reportable substances under section 302 of 42 USC 11002, the Toxics Board may recommend to the City Council that the substance be added to or removed from the definition of "extremely hazardous substance" in this Section. The council may remove a substance from the definition only if the Toxics Board has recommended its removal.
- B. "CAS number" means the identification number assigned to a substance by the Chemical Abstract Service.

- C. "Chemical Name" means the scientific designation of a substance in accordance with the nomenclature system developed by the Chemical Abstract Service.
- D. "Facility" means all buildings, equipment, structures and other stationary items that are located and operated on a single site or on contiguous or adjacent sites and that are owned or operated by the same person(s) and relate to a common product or service.
- E. "Hazardous substance" means:
1. any substance listed or described, as of the effective date of this Section, on any of the following lists of chemicals regulated or identified as of concern:
 - (a) Section 112(b) of the Clean Air Act(CAA) as amended in 1990 (Hazardous Air Pollutants); 42 USC 7412(b);
 - (b) Section 602(b) of the CAA (Class II ozone depleting substances); 42 USC 7671a.(b);
 - (c) Section 307(a) of the Clean Water Act (CWA) (Priority Pollutant List); 33 USC 1317(a);
 - (d) U.S. Environmental Protection Agency Active Ingredients, including Special Review, Canceled/Denied or Suspended, and Restricted Use Pesticides, pursuant to the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA; 7 USC 136 et seq.);
 - (e) U.S. Environmental Protection Agency List 1 Inert Ingredients of Pesticides ("Inerts of Toxicological Concern"), pursuant to the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA; 7 USC 136 et seq.);
 - (f) Section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); 42 USC 9602;
 - (g) Section 3001 of the Resource Conservation and Recovery Act (RCRA; 42 USC 6921) and chemicals listed at 40 CFR 261.33 (e) and Appendix VIII.
 2. any substance which, if it were in a container, would possess the characteristics of a hazardous waste, as defined in 40 CFR 261.20 through §261.24, authorized by RCRA;
 3. radioactive waste and material as defined in ORS 469.300 and radioactive substance as defined in ORS 453.005;
 4. any substance, regardless of quantity, required to be reported pursuant to Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA); 42 USC 11002; or
 5. If a substance is added to or removed from the lists described in Article III, Section 3 E.1. or E.4. of this Section, the Toxics Board may recommend to the city council that the substance be added to or removed from the definition of "hazardous substance" in this Section. The council may remove a substance from the definition only if the Toxics Board has recommended its removal.

- F. "Hazardous substance user" means: the owner and/or operator of a commercial or public facility that is stationary within the boundaries of the City of Eugene and that:
1. has a total input of more than 2,640 pounds of hazardous substances during a calendar year;
 2. employs ten or more full-time equivalent employees;
 3. is not exempted pursuant to Section 2 .2.
- G. "Input" means the sum of the following categories of each hazardous substance:
1. inventory at the facility at the beginning of the accounting period;
 2. waste stored at the facility at the beginning of the accounting period;
 3. quantity produced at the facility; and
 4. quantity brought to the facility.
- H. "Materials balance" means an accounting of the flow of individual hazardous substances into a facility, through its processes, and into its products and wastes such that inputs equal outputs of each hazardous substance to the accuracy of the smallest accounting units (Article III(K)) for each hazardous or extremely hazardous substance.
- I. "Output" means the sum of the following categories of each hazardous substance:
1. quantity chemically altered in the facility's processes;
 2. quantity shipped from the facility in product;
 3. quantity transferred away from the facility as waste;
 4. waste stored at the facility at the end of the accounting period;
 5. quantity emitted to the air;
 6. quantity discharged into publicly treated sewage;
 7. quantity released into surface waters;
 8. quantity eliminated through treatment at the facility;
 9. quantity eliminated through energy recovery at the facility;
 10. quantity disposed on-site; and
 11. inventory at the facility at the end of the accounting period.
- J. "Person" means an individual, corporation, partnership, trust, association, the City of Eugene, or any officer, agent, or employee thereof.
- K. "Smallest accounting unit" means 2.2 pounds of a hazardous substance; 0.022 pounds of an extremely hazardous substance.
- L. "Trade secret information" means information which is exempted from disclosure as a trade secret pursuant to any Federal or State law including but not limited to 42 U.S.C. 11042(b) of the Federal Emergency Planning and Community Right to Know Act.

ARTICLE IV – RESOLUTION

Section 4. Be it resolved and ordained by the people of Eugene that: all hazardous substance users in Eugene shall file an annual, public, materials balance report listing inputs and outputs of all hazardous substances obtained, used, or generated.

ARTICLE V - HAZARDOUS SUBSTANCES PUBLIC REPORTING

Section 5.1. Materials balance reporting

- A. Materials balance reports shall indicate the weight in pounds of hazardous substances in each of the categories enumerated in Article III(G) and III(I).
- B. Each hazardous substance shall be designated by full chemical name and CAS number.
- C. All materials balance reports shall be filed electronically on forms provided by the Toxics Board as defined in Section 6.1 of this Section. These completed forms shall be compatible with the Eugene Public Library's computer system. These forms, common to all reporting entities, shall be in an easily understood format for both the reporting entity and the public.
- D. An authorized representative of the reporting facility shall file a signed declaration with the Toxics Board certifying that the facility has filed the report and that it is accurate and complete.
- E. The materials balance reports shall be filed by April 1 of each year for the previous calendar year.
- F. The repository for all materials balance reports shall be the Eugene Public Library, where they shall be readily accessible by the public for seven years after reporting. Reports older than seven years shall be archived by the City Recorders Office.

Section 5.2. Reporting related to trade secret chemicals.

- A. If a claim of trade secrecy is made by any hazardous substance user for one or more hazardous substances, that user must:
 1. file with the Office of the Fire Marshal a notarized report documenting that the hazardous substance is comprised of a substance which satisfies all conditions of the definition of trade secret information as found in Article III(L). A separate report must be filed for each trade secret chemical. The notarized report shall be on file with the Fire Marshal prior to commencement of procurement or production of each trade secret chemical.
 2. file with the Toxics Board, on a form provided by the Toxics Board, notification of each trade secret report filed with the Office of the Fire Marshal.
 3. file with the Toxics Board, on a form provided by the Toxics Board, an aggregate materials balance account for all trade secret hazardous substances, if trade secrecy is claimed for more than one hazardous substance by any hazardous substance user. This report shall be filed by April 1 of each year.
 4. file with the Toxics Board, prior to April 1 of each year, an annual, public report prepared by a qualified independent auditor, on a form supplied by the Toxics Board, which reports:
 - (a) whether the hazardous substance user has taken and is taking the greatest possible precautions in its use of each trade secret hazardous substances; and

- (b) whether or not there are, for each trade secret chemical, technological options available for using alternative processes or chemicals that likely are more protective of workers, the community, and natural resources.
- B. The repository for the annual public reports on use and alternatives to use of trade secret chemicals shall be the Eugene Public Library, where the reports shall be readily accessible for seven years after reporting. These completed forms shall be readable by the Eugene Public Library's computer system. Reports older than seven years shall be archived by the City Recorders Office.

ARTICLE VI - ADMINISTRATION OF HAZARDOUS SUBSTANCE REPORTING

Section 6.1. Appointment of the Toxics Board

- A. The City Council shall appoint a Toxics Board of seven people to enforce and implement this Section.
 - 1. Three members shall be appointed who are employed by or are agents of "persons" required to report under this Section.
 - 2. Three members shall be appointed who are not employed by or are not agents of "persons" required to report under this Section, and who have a demonstrable record of advocating for the public's right-to-know.
 - 3. One member shall be nominated by a two-thirds majority of the six appointed members.
- B. Any vacancies in the membership of the Toxics Board shall be filled, so as to maintain the balance set forth in Section 6.1(A), within two months of the creation of a vacancy.
- C. Term of Office:
 - 1. The term of office shall be three years, except that two members, one from Section 6.1(A)(1) and one from Section 6.1(A)(2), of the first Toxics Board shall be appointed to serve a first term of one year; three members, one each from Section 6.1(A)(1), 6.1(A)(2) and 6.1(A)(3) shall be appointed to serve a first term of two years; and two members, one from Section 6.1(A)(1) and 6.1(A)(2), shall be appointed to serve a first term of three years. No member shall serve more than two consecutive terms.
 - 2. Beginning in 2003, the terms of members of the Toxics Board shall conform to those of the standing committees to the City Council as defined by and set in the City Code.

Section 6.2. Responsibilities of the Toxics Board

- A. The Toxics Board shall, within three months of appointment of the sixth member, supply forms for materials balance reports and audits of precautions taken during use and alternatives to use of chemicals for which the trade secrecy reporting exemption has been invoked.
- B. The Toxics Board shall annually:
 - 1. recommend the fee structure necessary to implement this Section;

2. establish the qualifications necessary for a person to independently audit precautions used with trade secret chemicals, and independently audit the existence of technological alternatives that likely would be more protective of the environment, as required in Section 5.2(A)(4); and
 3. file a public report on the effectiveness of implementation of this Section, and any recommendations for improved implementation of this Section.
- C. By May 1 of each year, the Toxics Board shall report to the Fire Marshal the names of any hazardous users in non-compliance with the requirement to file materials balance reports.
 - D. The Toxics Board shall cause to be published a notice listing the names of non-complying entities in a daily newspaper with general circulation in the city of Eugene by June 1 of each year.
 - E. The office of the City Fire Marshal shall investigate all credible evidence that hazardous materials balance reports or trade secret chemical reports are not being filed in compliance with this Section.
 - F. The office of the City Fire Marshal shall audit the accuracy of the reporting processes of each hazardous substance user in an order such that all hazardous substance users are audited in a random order at least once every three years. Companies to be audited shall be given an advance audit notification of no more than one month.
 - G. The Toxics Board shall certify the qualifications of independent auditors who will audit the precautions used by hazardous substance users with trade secret chemicals and the technological options available for more protective alternatives. Documentation for certification of the qualifications of each auditor shall be public information.
 - H. For the purposes of complying with Section 5.2(A)(4), hazardous substance users may hire only independent auditors certified by the Toxics Board pursuant to Section 6.2(G).

Section 6.3. Responsibilities of the City Manager
 The City Manager shall consult with the Toxics Board in order to jointly determine the appropriate support services that shall be provided to the Toxics Board by City employees for the implementation of this Section. As set forth in Article VII(A), the cost of these support services shall be paid by fees collected pursuant to this Section.

ARTICLE VII - FEES

- Section 7.
- A. Each hazardous substance user shall pay an annual fee to the City of Eugene, sufficient to jointly cover the implementation of this Section, including expenses incurred by the Eugene Public Library, Fire Marshal, City of Eugene and the Toxics Board.
 - B. In order that this Section be self-supporting through hazardous substance user fees, the fee amounts shall be recommended annually by the Toxics Board and approved and amended as necessary by the Eugene City Council.

- C. All fees due under this Section shall be paid by May 1 of each calendar year.
- D. The operational budget for implementing this Section prior to the first collection of fees as set forth in Article VII shall be paid for out of City of Eugene general funds. The operational budget thereafter shall be funded wholly by hazardous substance user fees.

ARTICLE VIII – ENFORCEMENT

Section 8.1. Toxics Board enforcement and judicial review

- A. In the event of noncompliance, the Toxics Board shall have the authority to enforce the reporting requirements of this Section and impose penalties as set forth in Section 8.2.
- B. Any person may appeal a Toxics Board decision to the Circuit Court of Lane County, pursuant to the procedures providing for a writ of review (ORS 34.010) or a writ of mandamus (ORS 34.105).

Section 8.2. Penalties

- A. Any hazardous substance user or person who violates this Section shall be subject to a penalty not less than \$250 per day and not greater than the maximum penalty allowed by state law.
- B. Each day that a violation continues shall be considered a separate violation subject to civil penalties. A violation occurs when a regulated entity fails to file a complete and correct report on or before the day the filing of a report is required.
- C. In determining the appropriate amount of the penalty, the following shall be considered:
 1. the likelihood at the time of the noncompliance that harm would arise from the violator's noncompliance;
 2. the degree of the violator's awareness of that likelihood;
 3. the profits reasonably related to the violator's non-compliance;
 4. the duration of the non-compliance and any concealment of it;
 5. the attitude and conduct of the violator upon discovery of the concealment;
 6. the number of previous violations by the specific violator of this Section;
 7. the financial condition of the violator;
 8. the total deterrent effect upon the specific violator at issue and other potential violators; and
 9. other penalties paid by the specific violator for the specific violations at issue.
- D. Any penalties imposed under this Section or Section 8.3 shall be paid to the City of Eugene for use in implementing this Section.
- E. If a hazardous substance user repeatedly violates this Section in a fashion contrary to the public interest, the City Manager shall order that hazardous substance user to cease and desist using hazardous substances in the City of Eugene.

- F. Nothing in this Section is intended to restrict or limit any other enforcement remedies available, at law or in equity, arising out of the same circumstances upon which an alleged violation of the Section may be based.

Section 8.3. Citizen enforcement

- A. Any person may petition to the Toxics Board on her/his own behalf against a hazardous substance user or person for failure to comply with any of the terms of this Section. The Toxics Board shall set forth procedures by which persons may petition the Toxics Board.
- B. The Toxics Board must issue a decision in response to a petition within 45 days of receiving the petition. If the Toxics Board fails to issue a decision within 45 days, the petition shall be deemed denied on the 45th day for the purpose of exhaustion of remedies and may be judicially reviewed pursuant to Section 8.1(B).
- C. The petitioner must notify the Toxics Board and alleged violator ten days prior to seeking judicial review, except that such action may be brought immediately after such notification in the case of an action under this Section respecting an emergency posing a significant risk to the well-being of workers, people present in the community, or any species of fish or wildlife or plants.
- D. No action may be commenced under paragraph A of this Section if the City of Eugene has commenced an action to impose a penalty pursuant to Section 8.2 and is pursuing a prompt resolution of that action.

ARTICLE IX - EXCLUSIONS

Section 9.

- A. Nothing in this Section is intended to apply to the government of the United States or to the government of the State of Oregon, or to the agencies or political subdivisions of either government.
- B. Nothing in this Section is intended to restrict, impede, or otherwise interfere with the exercise of rights guaranteed by the United States Constitution or the Constitution of the State of Oregon.

ARTICLE X – IMPLEMENTATION

- Section 10. Insofar as it is reasonable and practicable to so assume, the provisions of this Section are intended to be self-executing. In every other case, however, and any other provision of the Eugene City Charter or the ordinances of the City of Eugene notwithstanding, the City Council shall, upon recommendation of the Toxics Board and without unreasonable delay, enact reasonable ordinances necessary and proper for carrying into execution the provisions of this Section.

ARTICLE XI – SEVERABILITY

- Section 11. If any section, subsection, paragraph, phrase or word (hereafter the parts) of this Section shall be held to be unconstitutional, void, or illegal, either on its face or as

applied, this shall not affect the applicability, constitutionality, or legality of any other parts hereof; and to that end, the parts of the Section are intended to be severable. It is hereby declared to be the intent of this Section that the same would have been adopted had such unlawful or unconstitutional provisions, if any, not been included herein.

ARTICLE XII - EFFECTIVE DATE

Section 12. This Section shall be in full force and effect 31 days following passage.

Appendix B Reporting Forms and Suggested Worksheet

The four pages in Appendix B contain examples of electronic reporting forms, and an example of the certification form required to be submitted with materials balance reports, as well as a worksheet that can be used to document chemical use.

Pages 34 and 35 show the electronic reporting forms as they will appear to businesses using the reporting software supplied by the City. User instructions will be sent to businesses required to report each year.

Below is an example of a completed on-screen facility information page.



Below is an example of a completed on-screen materials balance report for a single chemical.

TOXICS RIGHT TO KNOW -- DATA ENTRY

FORMALDEHYDE Last Modified: 8/11/2012 1:45:18 PM

CAS No.: 50005-00-8
 Reporting Year: 2011 Facility: TX10 - ABC Company
 Characteristic: H (HAZ), V (VOC), E (EXT), N (NAPHA), C (COR)

INPUTS (LBS.)		OUTPUTS (LBS.)	
As a Feedstock (F)	150,000	Chemical Altered (C)	0,000
As a Product (P)	20,000	Released to Product (R)	0,000
Process Drains (D)	400,000	Released as Waste (W)	250,000
Spillage Drains (S)	0,000	Dec. (D) Waste (R)	0,000
Released to Air (A)	0,000	Exported to Air (E)	0,000
Released to POTW (POTW)	0,000	Released to POTW (R)	30,000
Total Inputs	570,000	Surface Water Release (S)	0,000
		Treated On-site (T)	0,000
		Energy Recovery (E)	0,000
		Recovery On-site (R)	0,000
		Dec. (D) Incinerated (I)	180,000
		Total of Outputs	673,680

Successfully saved.

On page 36 is an example of the certification form that is to be executed by each reporting company and submitted to the City along with the electronic materials balance report each year.

Page 37 is a suggested worksheet that companies may use to assist them in documenting chemical use and calculation methodology. This worksheet is not required, but businesses are expected to produce adequate documentation when their reports are audited.

**EUGENE TOXICS RIGHT-TO-KNOW PROGRAM
MATERIALS BALANCE REPORT CERTIFICATION FORM**

Reporting Year 2012

PRIMARY CONTACT INFORMATION:			
BUSINESS NAME:			
PROGRAM ID NUMBER:			
BUSINESS ADDRESS:			
MAILING ADDRESS:			
PRINTED NAME:			
TITLE:			
PHONE NUMBER:			
EMAIL ADDRESS:			
SIGNATURE:		By checking this signature box, I hereby certify that the information contained in the accompanying electronic materials balance report is complete and accurate to the best of my knowledge, based on readily available information.	DATE:

PERSON COMPLETING REPORT IF DIFFERENT FROM ABOVE (NOT TO BE RELEASED TO THE PUBLIC):	
PRINTED NAME:	
TITLE:	
PHONE NUMBER:	
EMAIL ADDRESS:	

WORKSHEET

The Toxics Board provides the following suggested format for use by companies in maintaining records. While there is no requirement to use exactly this format, all the information contained on this worksheet will be needed during audits, and such information will be an essential part of audit "proof" that the reported numbers have appropriate bases in fact. During audits, companies must be prepared to produce the records that were used to determine their reported pounds of all inputs and outputs. The auditor will need to know the basis of the estimate, and may recommend that a different basis be used in the future, or recommend to the Toxics Board that the current report be corrected. All recommendations are subject to review. It is the intent of the Toxics Board to work with companies to achieve the most appropriate level of reporting accuracy.

Input # _____ **Output #** _____

Description _____

Reporting Year:

Company Name _____

CAS # _____

Chemical Name _____

EHS: Yes / No (circle one)

Amount reported: _____ pounds

Basis of Estimate (see page 19 of this handbook). Circle one: M C E O

Rationale for Basis of Estimate: _____

Location(s) of raw data: _____

Appendix C
Reportable Chemicals

~~To view the current list of reportable chemicals, go to:
https://ceapps.eugene-or.gov/toxics/chem_reportable_list.aspx.~~

~~To search for a particular chemical, go to: https://ceapps.eugene-or.gov/toxics/chemical_list.aspx.~~

~~To view the current list of reportable chemicals or to search for a particular chemical, go to:
https://ceapps.eugene-or.gov/toxics/chemical_list.aspx.~~

Appendix D
Characteristics of Hazardous Waste
Code of Federal Regulations Provisions

40 CFR Part 261, Subpart C

Section 261.20 -- General.

- (a) A solid waste, as defined in Section 261.2, which is not excluded from regulation as a hazardous waste under Section 261.4(b), is a hazardous waste if it exhibits any of the characteristics identified in this subpart.

(Comment: Section 262.11 of this chapter sets forth the generator's responsibility to determine whether his/her waste exhibits one or more of the characteristics identified in this subpart.)

- (b) A hazardous waste which is identified by a characteristic in this subpart is assigned every EPA Hazardous Waste Number that is applicable as set forth in this subpart. This number must be used in complying with the notification requirements of Section 3010 of the Act and all applicable record-keeping and reporting requirements under parts 262 through 265, 268, and 270 of this chapter.

- (c) For purposes of this subpart, the Administrator will consider a sample obtained using any of the sampling methods specified in Appendix I to be a representative sample within the meaning of part 260 of this chapter.

(Comment: Since the Appendix I sampling methods are not being formally adopted by the Administrator, a person who desires to employ an alternative sampling method is not required to demonstrate the equivalency of his/her method under the procedures set forth in Sections 260.20 and 260.21.)

(45 FR 33119, May 19, 1980, as amended at 51 FR 40636, Nov. 7, 1986; 55 FR 22684, June 1, 1990; 56 FR 3876, Jan. 31, 1991)

Section 261.21 -- Characteristic of Ignitability.

- (a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:
- (1) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and has flash point less than 60 degrees Celsius (140 degrees Fahrenheit), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78 (incorporated by reference, see Section 260.11), or as determined by an equivalent test method approved by the Administrator under procedures set forth in Sections 260.20 and 260.21.
 - (2) It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.

(3) It is an ignitable compressed gas as defined in 49 CFR 173.300 and as determined by the test methods described in that regulation or equivalent test methods approved by the Administrator under Sections 260.20 and 260.21. [NOTE: 49 CFR 173.300 does not provide a definition of ignitable compressed gas. Definitions applicable to the section are given in 49 CFR 173.115.]

(4) It is an oxidizer as defined in 49 CFR 173.151. [NOTE: 49 CFR 173.151 does not provide a definition of oxidizer. The term is defined in 49 CFR 173.127.]

(b) A solid waste that exhibits the characteristic of ignitability has the EPA Hazardous Waste Number of D001.

(45 FR 33119, May 19, 1980, as amended at 46 FR 35247, July 7, 1981; 55 FR 22684, June 1, 1990)

Section 261.22 -- Characteristic of Corrosivity.

(a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

(1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter.

(2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55 degrees Celsius (130 degrees Fahrenheit) as determined by the test method specified in NACE (National Association of Corrosion Engineers) Standard TM-01-69 as standardized in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter.

(b) A solid waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number of D002.

(45 FR 33119, May 19, 1980, as amended at 46 FR 35247, July 7, 1981; 55 FR 22684, June 1, 1990; 58 FR 46049, Aug. 31, 1993)

Section 261.23 -- Characteristic of reactivity.

(a) A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

(1) It is normally unstable and readily undergoes violent change without detonating.

(2) It reacts violently with water.

(3) It forms potentially explosive mixtures with water.

(4) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

- (5) It is a cyanide or sulfide bearing waste which, if exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
- (6) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
- (7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
- (8) It is a forbidden explosive as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.88.

(b) A solid waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number of D003.

(45 FR 33119, May 19, 1980, as amended at 55 FR 22684, June 1, 1990)

Section 261.24 -- Toxicity characteristic.

- (a) A solid waste exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procedure, test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter, the extract from a representative sample of the waste contains any of the contaminants listed in Table 1 (shown on next page) at the concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purpose of this section.
- (b) A solid waste that exhibits the characteristic of toxicity has the EPA Hazardous Waste Number specified in Table 1 (shown on next page) which corresponds to the toxic contaminant causing it to be hazardous.

(55 FR 11862, Mar. 29, 1990, as amended at 55 FR 22684, June 1, 1990; 55 FR 26987, June 29, 1990; 58 FR 46049, Aug. 31, 1993)

TABLE 1 -- Maximum Concentration of Contaminants for the Toxicity Characteristic

EPA Hazardous Waste Number	Contaminant	CAS Number	Regulatory Level (mg/L)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	200.0(a)
D024	m-Cresol	108-39-4	200.0(a)
D025	p-Cresol	106-44-5	200.0(a)
D026	Cresol	200.0(a)
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	0.13(b)
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	0.13(b)
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D038	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	5.0(b)
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

(a) If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/L.

(b) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

Appendix E **Instructions for Reporting of Trade Secret Chemicals**

Four reports are required for reporting trade secret chemicals. All except #3 below are included in this appendix.

1. Substantiation to Accompany Claims of Trade Secrecy Under Eugene Charter Amendment IV

A manufacturer reporting under Charter Amendment IV files this form with the Fire Marshal prior to commencement of procurement or production of each trade secret chemical. This report remains confidential.

2. Notice to Toxics Board of Trade Secret Reports Filed with the Office of the Fire Marshal

A manufacturer files this form with the Toxics Board when it files one or more substantiation forms with the Office of the Fire Marshal. This form is available to the public.

3. Aggregate Materials Accounting of Trade Secret Chemicals

If more than one trade secret chemical is claimed, an aggregate accounting of the inputs and outputs of all trade secret chemicals is entered into the manufacturer's public materials accounting report as a separate line. Due April 1 of each year.

4. Public Report of Precautions in Use and Alternatives to Use of Trade Secret Hazardous Substances

This form is completed by a Toxics Board-certified independent auditor for each trade secret chemical, and submitted by the manufacturer to the Toxics Board prior to April 1 of each year. This form is available to the public.

Businesses are advised to track their use of ALL reportable hazardous substances, including trade secret chemicals, whether or not they believe they will be required to report that use. Tracking is important in preparation for required audits, and in the event that a business adds a trade secret chemical during a reporting year (triggering the requirement for aggregate materials balance accounting) or has a trade secret claim denied.

Reports and questions should be addressed to:

**Eugene Toxics Program Staff c/o Eugene Fire Marshal/Eugene Toxics Board
541-682-7118 or Toxics@ci.eugene.or.us
1705 W. 2nd Ave., Eugene, OR 97402**

Trade Secret Chemical Code Number¹: _____

**SUBSTANTIATION TO ACCOMPANY CLAIMS OF TRADE SECRECY
UNDER EUGENE CHARTER AMENDMENT IV**

Part 1. Facility Identification Information

Company Name: _____

Street Address: _____

City, ZIP Code: _____

Tax Identification Number: _____

Part 2. Responses to Substantiation Questions

2.1 Describe the specific measures you have taken to safeguard the confidentiality of the chemical identity claimed as trade secret, and indicate whether these measures will continue in the future.

2.2 Have you disclosed the information claimed as trade secret to any other person who is not an employee of your company or of a local, state, or federal government entity, or a member of a local emergency planning committee, who has not signed a confidentiality agreement requiring the person to refrain from disclosing the chemical identity to others?

Yes _____

No _____

¹ Trade Secret Chemical Code Number is the facility's 9-digit Tax Identification Number followed by a hyphen followed by a whole number (1, 2, 3 . . . n) which uniquely identifies each reportable trade secret chemical. A company with two reportable trade secret chemicals would have Code Numbers for those two chemicals of:

Tax Identification Number-1 (xx-xxxxxxx-1)
Tax Identification Number-2 (xx-xxxxxxx-2)

2.3 List all local, state, and federal government entities to which you have disclosed the specific chemical identity. For each, indicate whether you asserted a confidentiality claim for the chemical identity and whether the government entity denied that claim.

Government Entity	Confidentiality Claim Asserted		Confidentiality Claim Denied	
	Yes	No	Yes	No

2.4 In order to show the validity of a trade secrecy claim, you must identify your specific use of the chemical claimed as trade secret and explain why it is a secret of interest to competitors. Therefore:

(i) Describe the specific use of the chemical claimed as trade secret, identifying the product or process in which it is used.

(ii) Has your company or facility been linked to the specific chemical identity claimed as trade secret in a patent, or in publications or other information sources available to the public or your competitors (of which you are aware)?

Yes _____

No _____

If yes, explain why this knowledge does not eliminate the justification for trade secrecy.

(iii) If this use of the chemical claimed as trade secret is unknown outside your company, explain how your competitors could deduce this use from disclosure of the chemical together with materials accounting information under Eugene's law.

(iv) Explain why your use of the chemical claimed as trade secret would be valuable information to your competitors.

2.5 Indicate the nature of the harm to your competitive position that would likely result from disclosure of the specific chemical identity, and indicate why such harm would be substantial. (Include an estimate of the potential loss in sales and profitability.)

2.6

(i) To what extent is the identity of the chemical claimed as trade secret readily discoverable to the public or your competitors in your products, articles, or environmental releases?

(ii) Describe the factors which influence the cost of determining the identity of the chemical claimed as trade secret by chemical analysis of the product, article, or waste which contains the chemical (e.g., whether the chemical is in pure form or is mixed with other substances).

Part 3. Certification (Read and sign after completing all sections.)

I certify under penalty of law that I have personally examined the information submitted in this and all attached documents. Based on my inquiry of those individuals responsible for obtaining the information, I certify that the submitted information is true, accurate, and complete, and that those portions of the substantiation claimed as confidential would, if disclosed, reveal the chemical identity being claimed as trade secret, or would reveal other confidential business or trade secret information. I acknowledge that I may be asked by the Eugene Fire Marshal to provide further detailed factual substantiation relating to this claim of trade secrecy, and certify to the best of my knowledge and belief that such information is available. I understand that if the Fire Marshal determines that this trade secret claim is inappropriate, then the chemical must be reported. I understand that if I believe a determination by the Fire Marshal is incorrect, I may appeal that determination to the Toxics Board, stating the reasons for the appeal. The Toxics Board's decision is final, except that under Section 8.1.B of the Charter Amendment, any person may appeal the decision to the Circuit Court for Lane County.

Name and Official Title of owner, facility operator, or senior management official:

Name Title

Signature Date Signed

STATE OF OREGON)
) ss.
County of Lane)

This instrument was acknowledged before me on the _____ day of _____, 20____, by _____.

Notary Public for Oregon
My commission expires: _____

This form is to be filed with Eugene Toxics Program Staff c/o Fire Marshal (1705 W. 2nd Ave., Eugene, OR 97402) prior to the procurement or production of the trade secret chemical being claimed.

PUBLIC REPORT OF PRECAUTIONS IN USE AND ALTERNATIVES TO USE OF TRADE SECRET HAZARDOUS SUBSTANCES

Company Name _____

Address _____

Trade Secret Chemical Code Number¹ _____

Category: _____(Hazardous Substance) _____(Extremely Hazardous Substance)

Date of Audit _____

An independent auditor shall report on “whether the hazardous substance user has taken and is taking the greatest possible precautions in its use of each trade secret hazardous substance; and whether or not there are, for each trade secret chemical, technological options available for using alternative processes or chemicals that likely are more protective of workers, the community, and natural resources.” Eugene Charter Amendment IV, Section 5.2(A)(4).

Note: The law does not require companies with trade secrets to make changes suggested by the auditor in their processes or chemicals.

A. Are this company’s records of all inputs and outputs of this substance accurate within the reporting guidelines adopted by the Toxics Board? _____Yes _____No

If no, then how large is the discrepancy between inputs and outputs? _____ pounds

COMMENTS: _____

B. Do you find that the handling of this hazardous substance by this company is:

_____ as protective as possible (if checked, skip to E)

_____ primarily protective, with minimal improvements suggested

_____ of concern, substantial improvements suggested

COMMENTS: _____

C. Have suggested handling improvements been reported to the company?

Yes No

COMMENTS: _____

D. Did you find the company's response to the suggested handling improvements acceptable?

Yes No

COMMENTS: _____

E. Regardless of the company's reporting and handling practices of the trade secret chemical, has the company provided evidence of a search for feasible, more protective processes or chemicals?

Yes No

COMMENTS: _____

F. Did you document technological options that likely are more protective, and report these to the company? Yes No

COMMENTS: _____

G. In your judgment, are these technological options² for using alternative processes or chemicals available to this company likely to provide:

- minor gains in protection for workers, the community and natural resources
- moderate gains in protection for workers, the community and natural resources
- significant gains in protection for workers, the community and natural resources

COMMENTS: _____

H. In your judgment³ would the implementation of technological options that would produce gains in protection:

- likely result in net savings to the company
- neither save nor cost the company
- likely result in net added costs to the company

COMMENTS: _____

I. For a substance for which a previous year's audit report has been filed, has the company strengthened or relaxed protective measures for any inputs or outputs of this substance since the last audit report?

- Strengthened
- Relaxed
- No Change
- Not applicable

COMMENTS: _____

Signature of Auditor _____ Date _____

Printed Name of Auditor _____

¹ Trade Secret Chemical Code Number is the facility's 9-digit Tax Identification Number followed by a hyphen followed by a whole number (1, 2, 3, ...n) which uniquely identifies each reportable trade secret chemical. A company with two reportable trade secret chemicals would have Code Numbers for those two chemicals of:

Tax Identification Number-1	(xx-xxxxxxx-1)
Tax Identification Number-2	(xx-xxxxxxx-2)

² For example, another company in the same industry uses more protective technology or chemicals, or a promising technology is available.

³ Your judgment will be based on your knowledge of the experience of other companies with the same or similar technology as well as your understanding of this facility.

This form is required to be completed by an independent auditor certified by the Eugene Toxics Board and submitted to the company, which is required to submit it to Eugene Toxics Program Staff c/o Eugene Toxics Board (1705 W. 2nd Ave., Eugene OR 97402) by the reporting deadline April 1 each year, beginning in 1999.

City of Eugene Toxics Right-to-Know Program

TRADE SECRET DENIAL - REQUEST FOR RECONSIDERATION

This form must be submitted within 30 days of receipt of notice of denied trade secrecy claim

Company Name: _____

Street Address: _____

City, Zip code: _____

Trade secret chemical name in question: _____

Person completing form: _____ **Telephone number:** _____

Brief description of facts and arguments supporting the request for reconsideration of a trade secret claim denial (attach additional documentation if necessary):

Will you be represented by Counsel at the Toxics Board meeting to hear your request? _____

Name of Counsel: _____

Signature: _____ **Date:** _____

Appendix F
Questions from Businesses/Answers from Toxics Board

Businesses are encouraged to contact Toxics Program staff at 541-682-7118 with questions about how to complying with the City’s Toxics Right-to-Know law. All questions received will be compiled and presented to the Toxics Board on an annual basis, for review and consideration to include in future updated versions of this handbook.

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A. METALS AND ARTICLES

General guidelines: An article is a manufactured item that may contain reportable hazardous substances, but does not release them during the manufacturing process. Materials contained in articles are not reportable except to the extent that they are released during manufacturing. The Toxics Board has defined the term “article” as follows:

“a solid manufactured item which remains solid throughout the manufacturing process, the unit size of which weighs more than 1 gram (0.0022 pounds), that is used by a facility in whole or in part without undergoing any chemical changes in manufacturing of a product or a portion of a product, and that does not release a reportable hazardous substance under normal conditions of the processing of that item at the facility.”

In the case of articles made of metal, the Toxics Board has determined that fumes, dusts, and grindings generated during the manufacturing process are reportable. The remainder of the article (whatever remains unchanged after processing) is not reportable.

To calculate the reportable amount of fumes, dusts, and grindings from articles made of metal, take 5 percent of the recycled scrap weight. If a reporting business has a better method for calculating reportable amounts of fumes, dusts, and grindings from articles made of metal, they are encouraged to contact Toxics Program staff at 541-682-7118 with the information. This information will be presented to the Toxics Board for review and consideration to include in future updated versions of this handbook.

1. **QUESTION:** The instructions state that fumes, dusts, and grindings that are removed from metal articles during manufacturing are reportable. Regarding metal alloys, how is one supposed to calculate fumes, dusts, and grindings? How can one quantify the amounts without direct emission monitoring of the processes? Are you suggesting that we weigh the input, weigh the output (waste & product) and the difference is the air emission (fume, dusts, and grindings)?

ANSWER: If the facility does not routinely already weigh and record their inputs, product, waste or air emissions, they do not need to make such measurements.

To calculate the reportable amount of fumes, dusts, and grindings from articles made of metal, take 5 percent of the recycled scrap weight.

2. **QUESTION:** Do I need to report substances contained in finished products that I bring in for use as components of my products (e.g., copper wire in electric motors)?

ANSWER: It depends. Substances contained in finished goods used by one manufacturer and used by a secondary manufacturer as raw material are reportable unless the article exemption applies.

3. **QUESTION:** Photographic film used by photo-processors and printers (if they work for a business with a Standard Industrial Classification between 2000 and 3999) contains silver (a listed metal) which is recovered in a system required by the Publicly Owned Treatment Works and subsequently recycled. As an **article**, there are no MSDSs available for the film. Since the necessary information is unavailable, am I required to track and report silver from film?

ANSWER: The silver is removed from the film in processing, and is then no longer a component of the article (film) that was brought into the facility. At that point it becomes reportable as input type 4 (quantity brought to the facility). The output is type 3 (quantity transferred away from the facility as waste). In this case, the recycled silver would be estimated only once, most likely as a percentage of the recycled material, and that estimate would be reported as both the input and the output amount. However, the method of estimation should be documented, as it will need to be verified at the time of an audit. Silver remaining on the film, if any, is not reportable because it remains a part of the article.

4. **QUESTION:** I cast aluminum widgets and re-melt all my scrap. The list of reportable substances includes aluminum (fume or dust). Is the aluminum I use a reportable substance?

ANSWER: Aluminum fumes and dust are reportable as input type 3 (quantity produced at the facility). Several different output types may be applicable in this case (transferred away as waste, emitted to the air, etc.).

If any reportable metal is alloyed with aluminum in solid form in this company's raw material, it is reportable, because all of the raw material is melted at some point in the process and no longer fits the definition of an article.

5. **QUESTION:** My business brings in quantities of prefabricated brake lining, for fitting to brake shoes and other friction apparatus. The **M**SDS for the lining indicates a percentage of phenolic resins, but does not give the percentage of phenol in the resins. Various forms of phenol are listed as reportable. Instead of a CAS number for the resins, the **M**SDS says Mixture. Each **M**SDS lists the percentage of resin in the product, which may vary from 5 to 25 percent. What should I report?

ANSWER: In this case there is not sufficient information available to the manufacturer to make meaningful reporting possible. The amount and form of phenol in the brake lining is unknown. Further, brake lining falls within the definition of an article, and substances in an article, that are not removed from the article in manufacturing, are not reportable.

6. **QUESTION:** We use zinc plated hardware cloth purchased from a local building supply store. There is no **M**SDS (it is an article), and there are no grindings, fumes, or dust when we cut it into squares. We have no way of determining the thickness or weight of the zinc. Is the zinc galvanizing reportable?

ANSWER: No. The cloth falls within the definition of an article. Reportable substances not removed from an article during manufacturing are not reportable.

7. **QUESTION:** In manufacturing our product, our company uses numerous grinding wheels that are made partially of hazardous substances. How do we report these?

ANSWER: In a case such as this it would be necessary to document (or estimate) the weight of the grinding wheels when new (or at the beginning of the year), subtract the weight when removed from service (or at the end of the year), apply the percentages of hazardous materials to the difference, and report those amounts under output type 3, quantity transferred away from the facility as waste. These amounts would also be used as the input amounts for those substances.

8. **QUESTION:** How do we quantify welding rod, the alloy metals and fumes? Most of the metal, minus tips left over, is deposited upon the base metal weld; the flux coating is lost as a fugitive emission. Should we be tracking just the nickel, chromium, lead, and other alloys, and how do we measure fumes?

ANSWER: Inputs will be the weight of welding rod in the input categories. Outputs include amounts shipped as product, fugitive emissions, waste (tips), etc.

Use emission factors developed for each type of welding operation and type of welding rod. Consult the EPA document AP-42, Compilation of Air Pollutant Emission Factors,

5th Edition, Chapter 12.19, Electric Arc Welding. AP-42 is available at the Lane Regional Air Pollution Authority, the University of Oregon Library, the Eugene Fire Marshal's Office, and on the internet at <http://www.epa.gov/ttn/chief/ap42/index.html>. Identify the welding process used (shielded metal arc welding is the most common), and the electrode type from the **M**SDS, then refer to Table 12.19-1 to find total fume emission factor. The table breaks these down further into Hazardous Air Pollutants (HAPs).

9. **QUESTION:** What is the proper output type under which to report welding material that becomes a part of manufacturing equipment?

ANSWER: Only the fumes are reportable, as output type 5, quantity emitted to the air. Metals used in welding are not reportable as they are not chemically altered in processing.

10. **QUESTION:** We cut copper wire into segments which are then wound around a motor part. The ends are not stacked and our engineer has determined that no copper is released. Is the wire still an article?

ANSWER: Cutting the wire into segments and winding it around a motor part do not negate the exemption since the diameter and thickness of the wire is not changed. The copper wire remains an article as long as no toxic chemicals are released during use. Since your engineer has determined that no copper is released, the article exemption does apply and the copper wire does not have to be reported.

11. **QUESTION:** Copper wire at a facility is cleansed by dipping it into a sulfuric acid solution. The acidic solution etches away a portion of the surface of the wire. The etched copper reacts with the acid to form copper sulfate. The waste stream containing the copper sulfate is sent directly to a publicly owned treatment works (POTW) and no other releases of copper occur onsite to any other environmental media. Is the copper wire still considered an article?

ANSWER: The copper wire is not reportable, but the copper sulfate is reportable as copper compounds (category N100). In this case, estimate this output and use that number of pounds as the input also.

12. **QUESTION:** A facility crushes light bulbs and uses the crushed glass in their process. The light bulb stems are not used in the process and are disposed. There is a lead button in each light bulb stem that is disposed. Is this button considered an article and therefore exempt from threshold and other materials accounting calculations?

ANSWER: It depends. If the lead buttons were recovered and reused in manufacturing of new light bulbs, and the lead buttons fulfill all article criteria, they would not be reportable. But if they are disposed, then they would not be considered articles and the

lead would be reportable because it is removed from the manufactured article (light bulb) during manufacturing.

13. **QUESTION:** Our business manufactures a product from raw metal containing a percentage of reportable metals. What should we report?

ANSWER: If the raw metal is an article, report hazardous substances contained in fumes, dusts, and grindings that result from the manufacturing process. The portion of the raw metal that is not converted to fumes, dusts, and grindings, and that remains solid throughout the manufacturing process, is not reportable.

In estimating the amount of a hazardous substance to report, a business may consider the range of percentages of that substance that are contained in articles that it receives during the year, and choose an average value within the range. For example, if the stainless steel that a business uses for manufacturing contains chromium among other substances, and the business generated 900 pounds of fumes, dusts, and grindings from such articles, and the chromium content ranged from 6-8%, the business could choose 7% or another percentage they feel is more justifiable. An input of 63 pounds of chromium, and an equal amount in the appropriate output category(ies), would be reported.

14. **QUESTION:** My company buys partially cured rubber in slabs. We complete the polymerization process when we mold the rubber into parts using heat and pressure. The scraps (of both uncured and cured rubber) are a non-regulated substance and go directly to a sanitary landfill or to a rubber recycler. Is this material an article?

ANSWER: No. The article exemption does not apply because chemical changes are occurring. However, the rubber itself and any non-listed components are not reportable. Listed hazardous components of the rubber, if any, should be reported.

15. **QUESTION:** My company manufactures circuit boards and other electronic devices requiring solder. Is this a reportable material?

ANSWER: Yes, to the extent that it contains reportable substances, such as lead.

16. **QUESTION:** I am a metal fabricator. I laser-cut small parts from large pieces of sheet metal. From the way I interpret the instructions, the only portion of that metal that I must track is the “kerf” (the portion vaporized). Is this a correct interpretation?

ANSWER: Yes, as long as no filings, dusts, or grindings are produced. The rest of the sheet metal (product and waste) is an article because it remains solid throughout the manufacturing process, and is not reportable. The kerf (portion vaporized) would be reported as output type 5 (quantity emitted to the air).

17. **QUESTION:** We bring in raw sheets of 99% pure copper, a reportable substance. We have the sheets water-cut by an outside business, and then use them as a part of our

product. We understand that our copper filings, dusts, and grindings are reportable, but what about the raw copper and the pieces that go onto the product?

ANSWER: Only the filings, dusts, and grindings are reportable, as long as all the rest of the copper remains solid throughout the manufacturing process.

B. MIXTURES AND COMPOUNDS

General guidelines: Report only the weight of listed hazardous substances and characteristic substances (see Appendix D) contained in mixtures and compounds used in manufacturing. Do not report the weight of the entire mixture or compound unless reporting the entire weight is easier.

If a mixture or compound contains a characteristic substance, but the mixture or compound itself is not characteristic and does not become characteristic during its life cycle in Eugene, then the characteristic substance contained in the mixture or compound is not reportable.

In other cases, it is necessary to calculate the percentages of reportable substances contained in mixtures and compounds and report these amounts by weight.

18. **QUESTION:** Particleboard and certain plywood products are manufactured with formaldehyde-based adhesives. Most manufacturers of these products provide MSDSs stating the board contains formaldehyde, a listed EHS chemical, but they do not list percentages. Does this exempt these products from being reportable by secondary manufacturers (cabinet shops)?

ANSWER: In this case, one cannot know the amounts of formaldehyde. Most of the formaldehyde reacts with the phenolic, hydroxyl or amine components of the adhesives and thus is no longer formaldehyde, but there is no way to know how much of the formaldehyde reacts and how much is residual or emitted to the air without very sophisticated measurements, and thus any reported amounts would be meaningless.

19. **QUESTION:** The MSDS for an ink lists three ingredients, but no percentages. One of the ingredients is a reportable substance. What should we report?

ANSWER: While businesses are not required to do extra research, an inquiry to the supplier would not be especially burdensome. Otherwise, it would be necessary to estimate the percentage of the reportable substance in the ink, using best engineering judgment, and report the substance accordingly.

20. **QUESTION:** In our business we spray a compound that contains hazardous substances onto our products. We have three types of outputs for the substances in this compound: shipped as product, shipped as waste (residue cleaned from equipment), and emitted to air. What is the best way to estimate percentages for each output type?

ANSWER: If you know that a portion of a listed hazardous substance (HS) remains with the product as shipped, provide your best estimate of the percentage of the HS in the product and multiply that by the estimated total pounds of product. Estimate the pounds of waste that were generated and the percentage of the listed HS in the total waste.

Multiply to estimate the pounds of HS in the waste. Any remainder HS input is assumed to be emitted to the air.

Total Inputs = Output shipped as product + Output shipped as waste + Output as air emission

21. **QUESTION:** Suppose we have a mixture containing substances that are not on the list of hazardous substances and the mixture does not meet the definition of a characteristic chemical, yet some of its individual components may be corrosive. If these components do not separate during the manufacturing process, would the corrosive component(s) be considered characteristic?

ANSWER: No. Characteristic substances in a non-characteristic mixture are not reportable as long as they remain in the mixture -- and the mixture remains non-characteristic -- throughout their life cycle in Eugene.

22. **QUESTION:** Do we have to double-report chemicals under this act? For example, suppose a mixture is corrosive, and one of the components is reportable. How should the mixture be reported? How would this be reported if the same corrosive substance is also reportable?

ANSWER: Double-reporting is explicitly discouraged. In the case of a listed reportable substance that is part of a characteristic mixture, report the listed substance as a specific hazardous chemical. **If you do not know whether the remainder of the mixture is corrosive, then the remainder need not be reported. If the remainder is corrosive, but its ingredients are unknown, then the remainder should be reported in the generic "corrosive" characteristic substance category.**

23. **QUESTION:** Some chemicals are included on the chemical list as a specific isomer and are also included on the list as mixed isomers. For example, o-xylene is on the list, and so is xylene (mixed isomers). How should these types of substances be reported?

ANSWER: To avoid double counting, the reporting business will have the option of reporting a substance as either the mixed isomers or as the specific isomer.

C. CHARACTERISTIC CHEMICALS

Characteristic chemicals include any chemicals that do not appear on the Federal lists comprising the majority of Eugene's definition of "hazardous substance" (see Appendix A, Article III-E), but that are known by the reporting facility that "if it were in a container, would possess the characteristics of a hazardous waste, as defined in 40 CFR 261.20 through §261.24, authorized by RCRA." Substances that possess the characteristics of hazardous waste are commonly referred to as "characteristic chemicals" or "characteristic substances." (see Appendix D). Characteristic chemicals are reportable.

Reporting entities are not expected to take extraordinary steps to determine whether substances are characteristic, but often this can be determined either by examining the MSDS for a substance or by observing the substance's behavior.

24. **QUESTION:** Some paints, stains, dyes, and inks may contain petroleum distillates that have ignitable characteristics (flash point <140 degrees Fahrenheit), but when combined with the pigments may raise the flash point to more than 140 degrees Fahrenheit, as stated on the MSDSs. If the CAS numbers are not on the Eugene list, are these products exempt from reporting?

ANSWER: If the MSDS lists a flash point above 140 degrees Fahrenheit, then the business using the material does not need to report the material as a characteristic material, if the material's CAS number is not in the list already, and if the flash point of the material does not fall below 140 degrees during its life cycle in Eugene.

This answer follows the principle of using MSDS information and not having to obtain information that is not already available to the business; i.e., flash point information for the component must be (a) on the MSDS from the supplier of the product they are using, (b) be their own information on the material because that business has manufactured the product from its component parts, for which it would have an MSDS showing the under 140 degrees Fahrenheit flash point of the component, or (c) be otherwise known by the manufacturer, or else the material is not reportable.

Thus, even if the information exists in a reference book, the business is not obligated to look for the information in a book that they may or may not have, or do other research into the flash points. If the flash point of a substance is known and/or documented, and it is below 140 degrees Fahrenheit, the business is expected to report that substance **or its reportable components**.

25. **QUESTION:** My business uses a substance whose composition is a trade secret of the supplier, but which I know to be hazardous and reportable as a characteristic chemical. How should I report this?

ANSWER: Report the substance in your regular materials balance accounting report **under the appropriate generic characteristic substance category**. You do not need to

report it as a trade secret because it is not YOUR trade secret; it is someone else's. Businesses are not required to seek additional information from suppliers.

26. Many paints contain up to 15 ingredients which can be solvents, pigments, defoamers, or resins. The user cannot tell from the MSDS which of these ingredients are solvents and/or may fall into the "characteristic" category. Furthermore, the aggregate flash point of the total mixture may fall below the 140 degrees Fahrenheit threshold for ignitability or it may be above 140 degrees Fahrenheit. We need some specific guidelines on how to report solvent-based paints and their ingredients.

QUESTION: Do we report the individual ingredients (if listed) when the flash point of the mixture is greater than 140 degrees Fahrenheit?

ANSWER: Only report listed individual ingredients with flash points less than 140 degrees Fahrenheit when they are removed from the mixture during the process, so as to become ignitable.

QUESTION: Can we report the entire mixture without listing individual ingredients if the flash point is less than 140 degrees Fahrenheit?

ANSWER: Only when the individual ingredients are unknown. Known hazardous ingredients of mixtures should be reported individually. Remaining quantities of mixtures, if the remainder is known to be hazardous (characteristic) but the ingredients are not known, should be reported under the appropriate generic characteristic substance category.

QUESTION: Are we required to report **unlisted** solvents which have a flash point of **less** than 140 degrees Fahrenheit even though the total mixture has a flash point **greater** than 140 degrees Fahrenheit?

ANSWER: No, unless you have documentation that the solvent has a flash point less than 140 degrees Fahrenheit, and the solvent leaves the mixture so as to become ignitable during processing.

D. MANUFACTURING vs. MAINTENANCE USES

General guidelines: ~~Hazardous substances that are on a site, but whose use is not directly related to manufacturing or related to research and development, are not reportable. Hazardous substances at a facility that are not directly used in manufacturing are not reportable. Hazardous substances at a facility that are related to research and development are also not reportable.~~ This

area is subject to considerable interpretation, mostly concerning maintenance and operation of equipment. In general, the Toxics Board has drawn a distinction between substances used for cosmetic purposes (not reportable) and those used for necessary maintenance (reportable); and between the maintenance of actual manufacturing equipment (reportable) and equipment with non-manufacturing purposes (not reportable). The Toxics Board has also drawn a distinction between materials used to maintain and operate motorized vehicles (e.g., forklifts) and those used to operate and maintain non-motorized vehicles (e.g., carts). Materials in the former category are not reportable, while those in the latter are.

27. **QUESTION:** A listed toxic chemical is used to clean a process-related tower at a manufacturing facility. Is the use of the chemical exempt from threshold and materials accounting calculations under the routine janitorial and facility grounds maintenance exemption?

ANSWER: No. Materials used to maintain process-related equipment at a facility (e.g., cleaners and lubricants) are not exempt. Because the tower is process-related, the exemption does not apply. This exemption only applies to the use of products that are specifically used for routine janitorial, facility grounds maintenance, building maintenance, and office supplies.

28. **QUESTION:** Would lubrication of bearings on product mixing machines (assuming the lubricants had a reportable chemical) be considered part of the manufacturing process and therefore reportable?

ANSWER: Yes.

29. **QUESTION:** We paint and sometimes don't paint our equipment. It is not necessary to the functioning or maintenance of the machine, but is more cosmetic in purpose. Would the paint used be reportable or would that come under facility maintenance?

ANSWER: Substances not used in the manufacturing process, or to perpetuate the manufacturing process, are not reportable. Therefore paints used for cosmetic purposes, even on manufacturing equipment, are not reportable.

30. **QUESTION:** Would lubricating the wheel bearings on transport racks that carry the finished product to another part of the facility for shipping be reportable? What about lubrication of bearings on racks that do not contain finished product, such as proofing racks?

ANSWER: Substances used to maintain racks, carts, etc., that transport articles PRIOR TO OR DURING manufacture are reportable. Substances used to maintain racks, carts, etc., that transport FINISHED PRODUCTS ONLY are not reportable, because these racks, carts, etc., are not being used in the manufacturing process.

31. **QUESTION:** Would a forklift that is used to transport product for further processing be considered part of the manufacturing process like a process conveyor, or would any hazardous chemicals used in its maintenance be exempt under a motor vehicle exemption?

ANSWER: Materials used to maintain or operate mobile motorized vehicles used in manufacturing are exempt from reporting.

32. **QUESTION:** What about welding or grinding on equipment? For example, we grind and weld on a hunk of steel to make a bump guard to protect the wall. Would this be reportable because it would be facility maintenance? On the other hand, we might weld or grind on our bread mixer, bulk flour silo, or bread oven. Would the fumes and grindings be reportable?

ANSWER: If grinding and welding are needed on manufacturing equipment in order to allow it to continue to function properly, then materials used in that type of equipment maintenance are reportable, assuming they meet reporting thresholds. However, materials used in similar maintenance on non-manufacturing-related equipment or structural members are not reportable.

33. **QUESTION:** If I use a detergent with a reportable chemical in it to clean the exterior side of the oven panels, is this facility maintenance? It does not affect the operation of the oven. What about chemicals used to wash the outside of the mixers?

ANSWER: These applications are not integral to manufacturing, and so the substances used would not be reportable.

34. **QUESTION:** Would there be a distinction between chemicals used for cosmetic purposes and those that are needed for the manufacturing process? For example, we use reportable chemicals to clean our yeast system (interior), and this is clearly not facility maintenance, but what about cleaning the outside of the tank and the general area? Isn't that facility maintenance or facility cleaning (janitorial)?

ANSWER: There is such a distinction, as noted above. Businesses should use their best engineering judgment, available data, or actual measurements to calculate amounts used to facilitate the manufacturing process, and report those amounts.

35. **QUESTION:** We have a kerosene-operated hot-water pressure washer. It is used to steam-clean a number of items, such as bread troughs, the shipping and proofing racks,

pieces of manufacturing equipment, and non-manufacturing-related cleaning. Would the kerosene used to fuel the steam cleaner be reportable?

ANSWER: In this instance, because kerosene is a characteristic (ignitable) substance, it would be necessary for the business to calculate and report amounts used for purposes directly related to the manufacturing process.

36. **QUESTION:** At the beginning of the year, we have on hand 1,000 pounds of a cleanser containing 10 percent ammonia (a reportable substance). Our best engineering judgment indicates that we use 30 percent of the cleanser on cleaning related to manufacturing, and the other on janitorial or cosmetic cleaning. All of the cleanser that we use is ultimately washed down the drain and into the sanitary sewer system. During the year, we purchase an additional 1,000 pounds of the same cleanser. At the end of the year, we have 500 pounds of cleanser still on hand. What inputs and outputs of ammonia should we report?

ANSWER: Report only the ammonia used for manufacturing-related purposes.

Inputs would be:

Category 1 (inventory at the facility at the beginning of the accounting period): 30 pounds (1,000 pounds x 10% ammonia x 30% used for manufacturing).

Category 4 (quantity brought to the facility): 30 pounds (same calculation).

Total inputs: 60 pounds

Outputs would be:

Category 6 (quantity discharged into publicly treated sewage): 45 pounds (given that 75 percent of the input is used during the reporting period).

Category 11 (inventory at the facility at the end of the accounting period): 15 pounds (500 pounds x 10% x 30%).

Total outputs: 60 pounds

E. MISCELLANEOUS

37. **QUESTION:** Is natural gas a reportable substance?

ANSWER: Natural gas is exempt from the reporting requirement. Apart from the difficulties in measuring natural gas used in manufacturing processes, as opposed to non-manufacturing processes in the facility, virtually all natural gas is chemically altered in combustion, and the by-products are not reportable.

38. **QUESTION:** SARA Title III exempts a variety of products from reporting. 29 CFR 1910.1200 (b) (5) (iii) HAZCOM rules for MSDSs exempts “any food, food additive, color additive, cosmetic, or medical or veterinary device or product, including materials intended for use as ingredients in such products (e.g. flavors and fragrances).” If I use substances for which there is no MSDS requirement, am I required to track and report these materials?

ANSWER: The Toxics Board has determined that substances are reportable if the manufacturer has evidence indicating that they are reportable, and are not reportable if the manufacturer has no such evidence. MSDSs are one, but not necessarily the only, source of such evidence. Manufacturers are not required to seek such evidence beyond information that is readily available to them. However, the absence of an MSDS does not in itself automatically exempt a substance from reportability (see Characteristic Substances section on page 12 for additional information).

39. **QUESTION:** EPA has exemption rules for de minimus quantities, often established for anything less than 1% by weight of the total amount. Many paints, adhesives, inks, and other formulations have trace amounts of listed chemicals. Can we follow current, established EPA guidelines to ease the burden upon businesses in tracking quantities at these de minimus levels?

ANSWER: No, because even concentrations of less than 1% can represent large quantities of reportable chemicals if the quantity of the mixture is great enough. Aside from the reporting thresholds themselves, there are de minimus exemptions only for contaminants which: a) belong to a SARA 313 chemical category and represent less than 1 percent of the total weight of a purchased material; or b) have no CAS number listed on an MSDS.

40. **QUESTION:** The instructions indicate that waste aerosol cans are not reportable. Does this refer to cans with contents still inside? Also, please clarify whether the contents of waste aerosol cans are ever reportable in manufacturing processes.

ANSWER: The contents of all aerosol cans are reportable under the same conditions as any other substance. The exemption refers only to the cans themselves.

41. **QUESTION:** Is ethanol produced by breweries reportable?

ANSWER: No. Ethanol is not a listed hazardous substance, and would be reportable only by virtue of its characteristic of ignitability. However, ignitable liquids are defined in 40 CFR 261.21 as “a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and (having) a flash point less than 140 degrees Fahrenheit...”

42. **QUESTION:** In regard to reporting isopropyl alcohol, explain “qualified: Only if it is being manufactured by the strong process.”

ANSWER: This is a technical term applicable only to the manufacturing process of the chemical. However, isopropyl alcohol used in manufacturing is reportable as a characteristic substance if it meets all other reporting requirements.

43. **QUESTION:** Our company has a pH balancing system and the quantity of chemicals eliminated through treatment at the facility is unknown. How should we report?

ANSWER: Businesses are not required to take extra steps -- additional measurements, research, purchase of new equipment, etc. -- to gather information not already available to them. Instead, when specific information is not available, businesses are expected to use the priority system M>C>E>O described in the Tracking Instructions. You may wish to make inquiries of your trade association for helpful information, if that will make your estimation work easier. As a last resort, the best engineering judgment of the business is acceptable. However, businesses are expected in all cases to document their methodology for arriving at the figures they report, and to make that information available to an auditor upon request. Businesses are expected to follow any suggestions the auditor may make for using information already available to them to arrive at more accurate figures.

44. **QUESTION:** How important are you going to make output accounting? What happens to the chemical and where to account for it may amount to an uneducated guess. When the auditor does not agree, or perhaps has better knowledge, and finds fault with the output reporting, how will these errors be handled?

ANSWER: Total outputs must equal total inputs for each chemical reported. As stated above, businesses are expected to use the best methodology available to them -- without taking steps to gather information not readily available -- in calculating and reporting inputs and outputs. Best engineering judgment may be used if no better methodology is available. Persons engaged in the business are regarded as best able to determine correct input and output types and amounts. However, an auditor may suggest other methodologies that may increase accuracy.

The Toxics Board has stated that it is the intent of the Toxics Board to assist companies in their efforts to comply with the law. Companies that make an honest and conscientious effort to comply with the law and that work with the Toxics Board to continually improve the quality of their reporting are unlikely to face enforcement actions. Blatant disregard

for the law or the truth, or an unwillingness to provide adequate information as directed by the Toxics Board, however, are likely to result in enforcement actions.

45. **QUESTION:** How should nitric acid (CAS #7697-37-2) be reported? It does not exist in a pure or anhydrous form. Commercial nitric acid is produced at a concentration of 70 percent nitric acid in water.

ANSWER: The listed CAS registry number for nitric acid specifically relates to the molecular formula HNO₃. Therefore, facilities are required to count the amount of nitric acid in solutions toward thresholds and in other materials accounting calculations. If 100 pounds of 70 percent nitric acid is released, the release should be reported as 70 pounds of nitric acid.

46. **QUESTION:** Is a hazardous substance reportable if it is used solely to treat another hazardous substance prior to release?

ANSWER: Yes.

47. **QUESTION:** In a facility, non-motorized carts are used to transport unfinished products from one intermediate manufacturing process to another. The lubricants used to maintain the carts include reportable hazardous substances, and the grease is consumed at such a level that the use of the reportable substances rises above threshold quantities. Given that the carts do not leave the facility, and the grease is not chemically altered, what is the appropriate output type under which to report these?

ANSWER: Output type 10, quantity disposed on site.

48. **QUESTION:** As a byproduct, a business has outputs of a reportable substance. It sells the substance to another entity for other uses. How should this output be reported?

ANSWER: Anything sold by a facility is considered a product of that facility for purposes of this program, even if it is not the primary product of the facility. These outputs should be reported as output type 2, quantity shipped from the facility in product.

49. **QUESTION:** The MSDS for a substance used in manufacturing lists several reportable chemicals, but indicates that the percentage of each chemical in the substance is the proprietary information of the supplier. What should be reported?

ANSWER: Businesses are expected to use the best information readily available to them. It is not the policy of this program to require businesses to purchase new equipment, take additional measurements, or otherwise take extra steps to improve the quality of the information available. In a case such as this, however, an inquiry to the supplier would probably not be a major inconvenience and may be beneficial. If exact information is not forthcoming, perhaps the supplier would be willing to offer ranges which could be used (at their midpoint or another justifiable point) in estimating percentages.

If no additional information can be easily obtained, then the reporting business should make any reasonable assumptions that it can and report accordingly. For example, if four reportable chemicals are listed as the only ingredients of the substance, it may be reasonable to assume that each chemical comprises 25 percent of the substance. That percentage can then be applied to the entire quantity of the substance for purposes of reporting that chemical.

As always, it is important for a reporting company to document its methodology for determining reported quantities.

- 50. QUESTION:** Our company manufactures its product by mixing two substances, one of which includes a reportable chemical. The best information indicates that when the substances are mixed, there is a reaction that changes the reportable chemical into something else. The finished product does not contain any reportable chemicals. How should we report the reportable chemical that is in one of the substances before the reaction takes place?

ANSWER: Four output categories may be applicable:

Output category 1, chemically altered -- The amount of the original reportable chemical that undergoes the chemical reaction should be reported in this category. If the reaction produces a new reportable substance, the quantity of the new substance should be reported in input category 3 (quantity produced at the facility) and in the appropriate output category or categories.

Output category 3, shipped as waste -- If, in cleaning the equipment or the factory floor, some amount of the reportable chemical in an unreacted state is recovered and later shipped away as waste, that quantity should be reported in this category.

Output category 4, waste stored on-site on December 31 -- This category would apply to any unreacted waste waiting to be shipped away as of December 31 of the reporting year.

Output category 11, ending inventory on December 31 -- This category would apply to amounts not yet used for manufacturing as of December 31.

If there is evidence that a percentage of the reportable chemical is emitted to the air rather than undergoing the chemical reaction, then output category 5, emitted to air, may be applicable also.

- 51. QUESTION:** An aerosol product, "mold release," is sprayed onto the surface of a mold to facilitate removal of the product. The mold release contains several reportable solvents, including hexane, toluene, and xylene. How would these be reported?

ANSWER: If no data indicate that the solvents go anywhere other than to the air, then output category 5, emitted to air, is the best assumption.

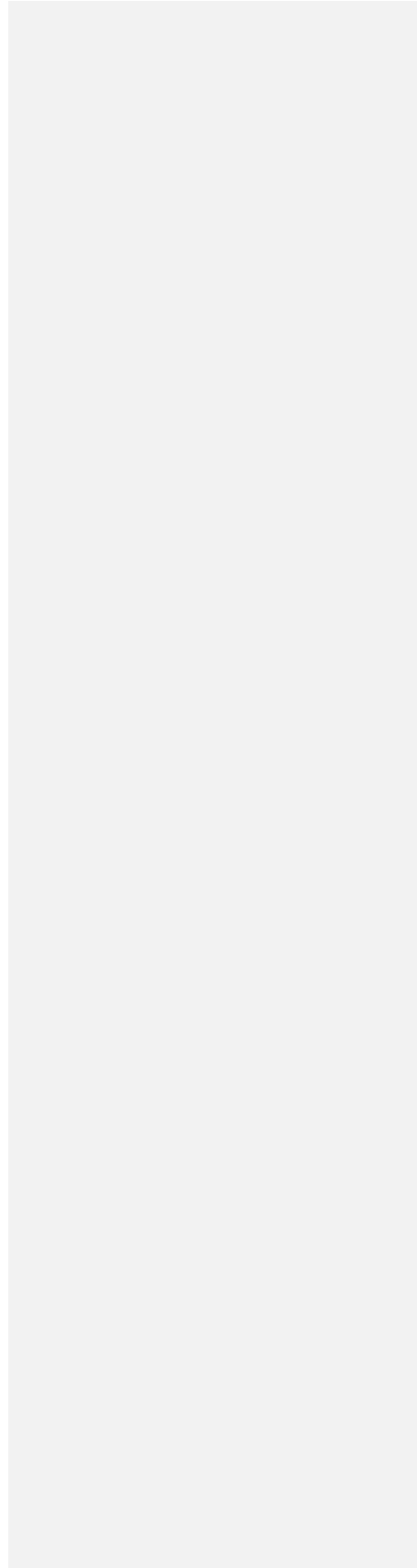
However, if the company is aware that measurable quantities of the mold release are cleaned off the molds and shipped away as waste, or that measurable quantities become part of the product, then these output categories would also be appropriate.

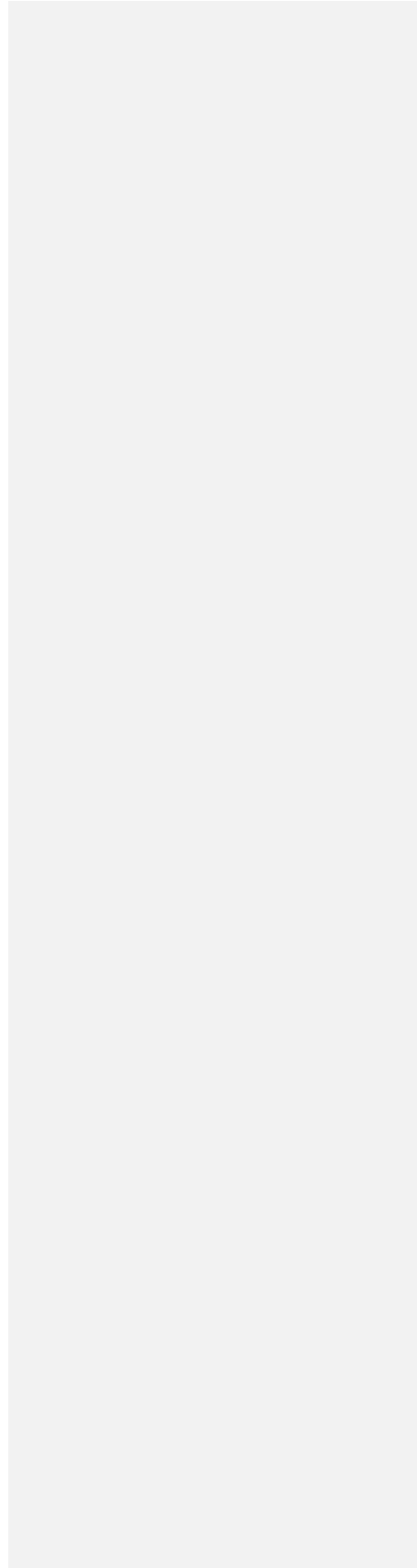
52. **QUESTION:** Acetylene, a characteristic ignitable substance, is used to operate an atomic absorption machine which is used to analyze process waters and wastewaters. The acetylene is burned as an open flame in the machine. How do I report the output?

ANSWER: The acetylene is **chemically altered** (output category 1) during operation in that it chemically changes to something that is no longer an ignitable material.

53. **QUESTION:** Isopropyl alcohol (IPA) is used in a facility as a cleaning solution. It is listed as a reportable substance. Typically the application is by use of a spray bottle, followed by wiping with a rag or paper towel. How should I report the output?

ANSWER: **Emitted to air** (output category 5) may be the best assumption in this case, unless the company's best engineering judgment is that all or some percentage of the IPA remains on the rags or paper towels when they are disposed of, in which case transferred away as waste (output category 3) would be used.





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