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3 **FESHM 8043: TOXIC RELEASE INVENTORY (TRI)**
4 **REPORTING PROGRAM**
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Revision History

Author	Description of Change	Revision Date
Amy Pavnica	<ul style="list-style-type: none">• Changed title of link within document• Modified responsibilities of the D/S/P Managers• Modified responsibilities of Chief Safety Officer• Modified responsibilities of the ESH&Q Section	November 2018
Dave Hockin	<ul style="list-style-type: none">• Added statement of applicability to Fermilab Leased Spaces.• Minor editorial changes.	February 2018
Sylvia Wilson	<ul style="list-style-type: none">• Applied the new FESHM template.• Revised Division/Section Heads/Project Managers (D/S/C) to Division/Section Heads or Project Managers (D/S/P).• Replaced Environmental Protection Officer in the Responsibilities section to Division Safety Officer.• Minor editorial changes.	December 2015

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1.0 INTRODUCTION

Owners/operators of facilities that release toxic chemicals into the environment must submit a Toxic Release Inventory (TRI) “Form R” to the U.S. Environmental Protection Agency (EPA) and the Illinois Environmental Protection Agency (IEPA) according to Section 313 of the Emergency Planning and Community Right to Know Act (EPCRA). As a federal facility, Fermilab is obligated to prepare and submit a TRI “Form R” when, in a calendar year, any listed toxic chemical is “manufactured, processed or otherwise used” above its regulatory defined threshold. A TRI “Form R” is submitted for each chemical that exceeds the threshold. The Form R documents the release of a chemical into the environment. Releases include:

- transfers to offsite landfills or other treatment facilities
- discharges to municipal sewer systems
- emissions to the air (including fugitive emissions)
- direct discharges to surface water
- placement into on-site landfills or other forms of impoundments.

Section 313 allows owners or operators to rely on readily available data and reasonable estimates to determine the amount of chemical released.

Some uses of chemicals do not need to be factored into the threshold calculations due to regulatory defined exemptions. The categories of exemptions are:

- *De minimis*
- Article
- Laboratory activities
- “Otherwise Use” Exemptions
 - Motor vehicle maintenance
 - Routine janitorial or facility grounds maintenance
 - Structural components
 - Personal use
 - Air or water intake

EPA published [guidance documents](#) to help determine the applicability of these exemptions.

Divisions/Sections or Project Managers should consult with the ESH&Q Section concerning the application of exemptions to avoid civil penalties for violations of the Section 313 reporting requirements.

This chapter only applies to the Fermilab site. Leased spaces will follow the rules and regulations set forth by the partnering institute and/or state, local or federal codes and standards.

2.0 DEFINITIONS

Article means a manufactured item: (1) which is formed to a specific shape or design during manufacture; (2) which has end use functions dependent in whole or in part upon its shape or design

68 during end use; and (3) which does not release a toxic chemical under normal conditions of
69 processing or use of that item at the facility or establishments.

70
71 *De minimis* is the concentration of a toxic chemical in a mixture of chemicals which is below 1% of
72 the mixture, or 0.1% of the mixture in the case of a toxic chemical which is a carcinogen as defined in
73 29 CFR 1910.1200(d)(4).

74
75 *Disposal* means any underground injection, placement in landfills/surface impoundments, land
76 treatment, or other intentional land disposal.

77 *Establishment* means an economic unit, generally at a single physical location, where business is
78 conducted or where services or industrial operations are performed.

79 *Facility* means all buildings, equipment, structures, and other stationary items which are located on a
80 single site or on contiguous or adjacent sites and which are owned or operated by the same person
81 (or by any person which controls, is controlled by, or under common control with such person). A
82 facility may contain more than one establishment.

83 *Import* means to cause a chemical to be imported into the customs territory of the United States. For
84 purposes of this definition, *to cause* means to intend that the chemical be imported and to control the
85 identity of the imported chemical and the amount to be imported.

86 *Laboratory* (for purposes of the regulatory defined ‘Laboratory Activity Exemption’) means those
87 activities under the supervision of a ‘technically qualified person’ as defined in 40 CFR Section
88 720.3 Subpart ee. This may apply to a laboratory on site such as the radiation counting laboratory
89 but does not apply to the overall Fermilab complex.

90 *Manufacture* means to produce, prepare, import, or compound a toxic chemical. Manufacture also
91 applies to a toxic chemical that is produced coincidentally during the manufacture, processing, use,
92 or disposal of another chemical or mixture of chemicals, including a toxic chemical that is separated
93 from that other chemical or mixture of chemicals as a byproduct, and a toxic chemical that remains
94 in that other chemical or mixture of chemicals as an impurity.

95 *Mixture* means any combination of two or more chemicals, if the combination is not, in whole or in
96 part, the result of a chemical reaction. However, if the combination was produced by a chemical
97 reaction but could have been produced without a chemical reaction, it is also treated as a mixture. A
98 mixture also includes any combination which consists of a chemical and associated impurities.

99 *Otherwise use* means any use of a toxic chemical, including a toxic chemical contained in a mixture
100 or other trade name product or waste, that is not covered by the terms “manufacture” or “process.”
101 Otherwise use of a toxic chemical does not include disposal, stabilization (without subsequent
102 distribution in commerce), or treatment for destruction unless:

103 (1) The toxic chemical that was disposed, stabilized, or treated for destruction was received
104 from off-site for the purposes of further waste management; or

105 (2) The toxic chemical that was disposed, stabilized, or treated for destruction was
106 manufactured as a result of waste management activities on materials received from off-site
107 for the purposes of further waste management activities. Relabeling or redistributing of the
108 toxic chemical where no repackaging of the toxic chemical occurs does not constitute
109 otherwise use or processing of the toxic chemical.

110 *Process* means the preparation of a toxic chemical, after its manufacture, for distribution in
111 commerce:

112 (1) In the same form or physical state as, or in a different form or physical state from, that in
113 which it was received by the person so preparing such substance, or

114 (2) As part of an article containing the toxic chemical. Process also applies to the processing
115 of a toxic chemical contained in a mixture or trade name product.

116 *Release* means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting,
117 escaping, leaching, dumping, or disposing into the environment (including the abandonment or
118 discarding of barrels, containers, and other closed receptacles) of any toxic chemical.

119 *Senior management official* means an official with management responsibility for the person or
120 persons completing the report, or the manager of environmental programs for the facility or
121 establishments, or for the corporation owning or operating the facility or establishments responsible
122 for certifying similar reports under other environmental regulatory requirements.

123 *Toxic chemical* means a chemical or chemical category listed in §372.65 of 40 CFR.
124

125 **3.0 RESPONSIBILITIES**

126 **3.1 Division/Section Heads or Project Managers (D/S/P) shall:**

- 127 • Support ESH&Q with resources necessary to compile the annual TRI “Form R” Report.
128

129 **3.2 Chief Safety Officer shall:**

- 130 • Ensures the effective management of this chapter.
- 131 • Coordinates communication with DOE and regulatory agencies regarding TRI issues, including
132 submitting the annual TRI “Form R” Report.
- 133 • Ensure that each contributor to the TRI Report remains current in TRI requirements
134 and attends TRI training as necessary.
135

136 **3.3 ESH&Q Section**

- 137 • Conduct a review of operations against the EPA “[List of Lists](#)” for the previous calendar
138 year.
- 139 • Collect a list of all toxic chemicals that are found on the “[List of Lists](#)” within the previous
140 calendar year, of 1,000 lbs. or greater. However, there are sixteen TRI chemicals and four
141

142 TRI chemical categories, known as PBT, Persistent, Bio cumulative, Toxic, that have much
143 lower thresholds. These chemicals and their reporting thresholds can be found [here](#). Include
144 any of these chemicals on the list regardless of quantity.

- 145 • Consult with Divisions/Sections to assist in exemption determinations.
- 146 • Maintain Fermilab site-wide TRI chemical inventory information collected from all
147 Divisions/Sections.
- 148 • The EP Group will submit a “Form R” to the EPA/IEPA for any TRI chemical cumulatively
149 exceeding the reporting threshold for the site during the previous calendar year by July 1st.
 - 150 ○ When a “Form R” is submitted to the EPA/IEPA, the following must be retained for
151 three years from the submission date: a copy of the report, all documents and
152 materials used in determining that the report was required, and all supporting
153 documents.

154

155 **4.0 REFERENCES**

156

157 The Emergency Planning & Community Right-To-Know Act (EPCRA); 42 U.S.C. 11001 et seq.
158 (1986)

159

160 The Pollution Prevention Act (PPA); 42 U.S.C. 13101 et seq. (1990)

161

162 Title 40, Part 372, Toxic Chemical Release Reporting: Community Right to Know

163

164 United States Environmental Protection Agency. *Toxic Release Inventory (TRI) Program Guidance*
165 *Documents*. Retrieved November 23, 2015 from [http://www2.epa.gov/toxics-release-inventory-tri-](http://www2.epa.gov/toxics-release-inventory-tri-program/guidance-documents-tri-reporting#General)
166 [program/guidance-documents-tri-reporting#General](http://www2.epa.gov/toxics-release-inventory-tri-program/guidance-documents-tri-reporting#General)

167

168 United States Environmental Protection Agency. *TRI Chemical List*. Retrieved November 23, 2015
169 from <http://www2.epa.gov/toxics-release-inventory-tri-program/tri-listed-chemicals>

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171

172 5.0 TECHNICAL APPENDIX A – TRI Reporting Thresholds

173
174 Table A-1 lists the reporting thresholds for manufacture, process or otherwise use of a toxic chemical.
175 A TRI “Form R” is submitted when an activity causes the release of greater than or equal to the
176 threshold amount of a toxic chemical. For example, in 2009, Fermilab submitted a TRI “Form R”
177 because >10,000 pounds of copper (a toxic chemical) were “otherwise used.”

178 Table A-1

Activity	Reporting Threshold (pounds released)
Manufacture	25,000
Process	25,000
Otherwise Use	10,000

179
180 Certain chemicals that are known to be very harmful to the environment and human health have much
181 lower reporting thresholds. These chemicals are known as PBT, Persistent, Bio cumulative, Toxic
182 (see 40 CFR 372.28). Table A-2 illustrates some common PBT chemicals that may be processed or
183 otherwise used at Fermilab, and the associated reporting thresholds.

184
185 Table A-2

Chemical Name	Reporting Threshold (pounds released)
Lead, Lead Compounds	100
Polycyclic Aromatic Compounds	100
Mercury, Mercury Compounds	10
Polychlorinated Biphenyl	10

186
187 The U.S. EPA updates the list of toxic chemicals for TRI reporting annually. The list of toxic
188 chemicals can be found here: <http://www2.epa.gov/toxics-release-inventory-tri-program/tri-listed-chemicals> .
189
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