TOXIC CHEMICAL RELEASE INVENTORY (TRI) REPORTING – COMMON ERRORS AND EASY IMPROVEMENTS

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DEATH, TAXES, AND TRI REPORTING?

Things as certain as death and taxes, can be more firmly believ’d.
FOOD SECTOR QUICK FACTS

1,585 Facilities Reporting to TRI

127 million pounds Releases

1.45 billion pounds Waste Managed

Top 3 Chemicals Released

Nitrate compounds, n-hexane, and ammonia

167 Source Reduction Activities
UNDERSTANDING THE REQUIREMENTS OF EPCRA

Tier II and TRI / Form R Reporting – Are these the same?
EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA)

SARA Title III, Section 311/312
- Tier II Inventory Form or Report
- Hazardous Chemical Inventory
- Community Right-to-Know
- Report Hazardous Chemicals Stored

SARA Title III, Section 313
- Toxic Chemical Release Inventory
- TRI Report
- Form A or Form R
- Report Toxic Chemicals Released
TRI REPORTING
Manufacture, process, otherwise use
MUST YOU REPORT?

✓ Is the facility SIC Code covered by Section 313 reporting?
✓ Does the facility employ 10+ full time employees or equivalent?
✓ Does the facility manufacture, process, or otherwise use Section 313 chemicals?
✓ Does the facility exceed any applicable thresholds of Section 313 chemicals?

<table>
<thead>
<tr>
<th>SIC Code</th>
<th>NAICS Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>311611</td>
<td>Meat products</td>
</tr>
<tr>
<td>2013</td>
<td>311612</td>
<td>Sausages and other prepared meat products</td>
</tr>
<tr>
<td>2015</td>
<td>311615 311999</td>
<td>Poultry slaughtering and processing</td>
</tr>
<tr>
<td>2021</td>
<td>311512</td>
<td>Creamery butter</td>
</tr>
<tr>
<td>2022</td>
<td>311513</td>
<td>Natural, processed, and imitation cheese</td>
</tr>
<tr>
<td>2023</td>
<td>311514</td>
<td>Dry, condensed, and evaporated dairy products</td>
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<tr>
<td>2024</td>
<td>31152</td>
<td>Ice cream and frozen desserts</td>
</tr>
<tr>
<td>2026</td>
<td>311511</td>
<td>Fluid milk</td>
</tr>
<tr>
<td>2032</td>
<td>311422 311999</td>
<td>Canned specialties</td>
</tr>
</tbody>
</table>
TOXIC CHEMICALS FOUND IN FOOD SECTOR

- Water Treatment
- Refrigerant Uses
- Food Ingredients
- Reactants
- Catalysts
- Fumigants

- Extraction/Carrier Solvents
- Cleaning/Disinfectant
- Pesticides/Herbicides
- Byproducts
- Can Making/Coating
# TOP 3 TRI CHEMICALS RELEASED

<table>
<thead>
<tr>
<th>Subsector</th>
<th><strong>Top Chemicals Released</strong> <em>(Based on Quantity)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Food</td>
<td>Nitrate Compounds, Ammonia, Acetaldehyde</td>
</tr>
<tr>
<td>Grain/Oilseed Milling</td>
<td>N-Hexane, Hydrochloric Acid, Barium Compounds</td>
</tr>
<tr>
<td>Sugar &amp; Confectionery</td>
<td>Ammonia, Methanol, Nitrate Compounds</td>
</tr>
<tr>
<td>Fruit &amp; Vegetable</td>
<td>Nitrate Compounds, Nitric Acid, Ammonia</td>
</tr>
<tr>
<td>Dairy</td>
<td>Nitrate Compounds, Toluene, Ammonia</td>
</tr>
<tr>
<td>Meats</td>
<td>Nitrate Compounds, Ammonia, Sodium Nitrite</td>
</tr>
<tr>
<td>Seafood</td>
<td>Ammonia, Nitrate Compounds, Chlorodifluoromethane</td>
</tr>
<tr>
<td>Bakeries &amp; Tortilla</td>
<td>Ammonia, Sulfuryl Fluoride, Sulfuric Acid</td>
</tr>
<tr>
<td>Other Food</td>
<td>Nitrate Compounds, Methanol, Hydrochloric Acid</td>
</tr>
</tbody>
</table>

[epa.gov/toxics-release-inventory](epa.gov/toxics-release-inventory)
POTENTIAL SOURCES OF RELEASES

- Relief valves
- Pumps
- Tower stacks
- Volatilization from process or treatment
- Fittings
- Transfer operations
- Flanges
- Storage tanks
- Stockpile losses
- Wastewater treatment discharges

- Process discharge stream
- Container residues
- Recycling and energy recovery byproducts
- Accidental spills or releases
- Stormwater runoff
- Clean up and housekeeping practices
- Treatment sludges
- Combustion byproducts
REPORTING AMMONIA IN FOOD SECTOR

- Anhydrous ammonia and aqueous ammonia are TRI reportable chemicals
- Common to food processors
- Uses include refrigeration, water treatment, stabilizer, neutralizers, source of nitrogen
- USEPA published TRI Guidance for Reporting Aqueous Ammonia
**Question.** Are meat renderers who process animal waste byproducts (i.e., blood, feathers, bones, etc.) required to report the ammonia generated in the condensate water from the cooking of these byproducts?

**Answer:** The ammonia generated from the rendering (cooking) process is considered coincidentally manufactured and must be reported under EPCRA Section 313 if 10 percent of the amount of aqueous ammonia produced exceeds the 25,000-pound manufacturing threshold.
EXAMPLE BAKING WITH AMMONIA

• **Question.** A food processor uses ammonia in its baking processes. Is this considered manufacturing or otherwise using ammonia?

• **Answer.** Aqueous ammonia is otherwise used and subject to 10,000-pound reporting threshold. Anhydrous ammonia is counted towards 25,000 pounds manufacture threshold.
REPORTING RESOURCES

- How to Determine if Your Facility Reports Form R or Form A

- List of Lists

- Reporting Aqueous Ammonia
  [https://ofmpub.epa.gov/apex/guideme_ext/guideme_ext/guideme/file/ammonia%20tri%20guidance%20revised%20april%202018.pdf](https://ofmpub.epa.gov/apex/guideme_ext/guideme_ext/guideme/file/ammonia%20tri%20guidance%20revised%20april%202018.pdf)
COMMON REPORTING ERRORS

1) Not reporting at all
2) Not considering farm workers and part-time/seasonal workers in worker count
3) Reporting the same year after year
4) Not evaluating enough or estimating
5) Not factoring in releases
6) Overlooking non-manufacturing activities

If the total number of hours worked by ALL employees is 20,000 hours or more = 10 employee threshold.
COMMON REPORTING ERRORS

1) Not being aware of industry-specific or newly added chemicals
   https://www.epa.gov/enviro/tri-overview

2) Ignoring mixtures or not looking at all components of a product

3) Under or over reporting

4) Multi-Establishment or Covered Facilities

5) Looking at TRI as an isolated program/regulation

6) Not reporting in case of acquisition, lease

QUICK TIP
If the value of the products and services from a processing plant exceeds the value from a farming operation on same establishment, reporting may be required chemicals used on the farm.
COMMON REPORTING ERRORS

1) Relying on SDSs as sole source of information
2) Not including all chemicals in a category
3) Not including carcinogen classifications
4) Waiting to get caught
5) Including exempt activities
6) Not looking for ways to reduce toxic chemicals

QUICK TIP

Quantities of Section 313 chemicals from exempt activities do not need to be included in your threshold calculations.
POTENTIAL CHALLENGES

• Complexity of TRI Reporting
• Confusing USEPA website
• USEPA data quality checks
• USEPA does not enforce the same
• Lack of information from agencies and industry groups
• Consultants with differing approach

BUT...

TRI Reports are Due July 1 of Each Year
THE COST

• Avoid mistakes and omissions that may lead to costly civil penalties
• Most cited violations involve just a few common chemicals or a components of mixtures
• Reporting is overlooked or thought to be exempt because the threshold for reporting may be low

EPCRA Civil Penalty Per Day, Per Violation = $58,328

After 1/13/2020
IN OUR EXPERIENCE...

- It takes time and effort
- Plan for it
- Involve people
- It costs money
- Use all available resources
- Don’t re-submit previous reports