



MECC

2026 MICHIGAN
ENVIRONMENTAL
COMPLIANCE
CONFERENCE
JUNE 9-10
LANSING CENTER

ENVIRONMENTAL COMPLIANCE – PERMITS, PLANS & REPORTS

Ken Yass, PE_{WI,IL,MI,IN}, CHMM
Principal

2:15 - 3:00 pm ET

June 10, 2026 – Lansing, MI

Introduction

- Civil / Environmental Engineer
- 32 Years of Environmental Service Experience
 - 29 Years as Environmental Consultant
 - 3 Years Technical Regulatory Services Manager for a nationwide chemical manufacturer (2016 – 2019)
- Technical Expertise:
 - Environmental Compliance & Permitting
 - Environmental Health & Safety (EHS) Auditing
 - Toxic Release Inventory (TRI)
 - Spill Prevention Control and Countermeasure (SPCC) Planning
 - Environmental Due Diligence
 - Waste Management

Agenda – Part I

- **Environmental Permits**
 - Air, Stormwater, Wastewater, RCRA
- **Environmental Reports**
 - Tier II, Air Emissions Inventory, Air Permit Compliance, TRI, Hazardous Waste Generator, DMRs
- **Environmental Plans**
 - SPCC, SWPPP, LQG Contingency Plan, Slug Discharge



Environmental Permits

Air Permits

Facilities need an air permit unless they are exempt:

- Each State has their own air permitting exemptions
- Michigan Permit to Install Exemptions
- Examples:
 - Equipment-Specific
 - Natural gas combustion units <50 MMBTU/hr heat input
 - No. 2 fuel oil combustion units <10 MMBTU/hr heat input
 - Emergency generators <10 MMBTU/hr
 - Pollutant / Emission Rate-Specific
 - e.g., potential emissions <5 TPY VOC; <10 TPY SO₂, NO_x, CO; etc.



Considerations based on pollutant:

- Particulate Matter (PM) emission sources that exhaust to the inside of a building do not emit PM to the atmosphere
- VOCs however are assumed to be emitted to the atmosphere regardless (escape via doorway, HVAC systems, etc.)

Air Permits

Air Emissions divided into 2 general categories:

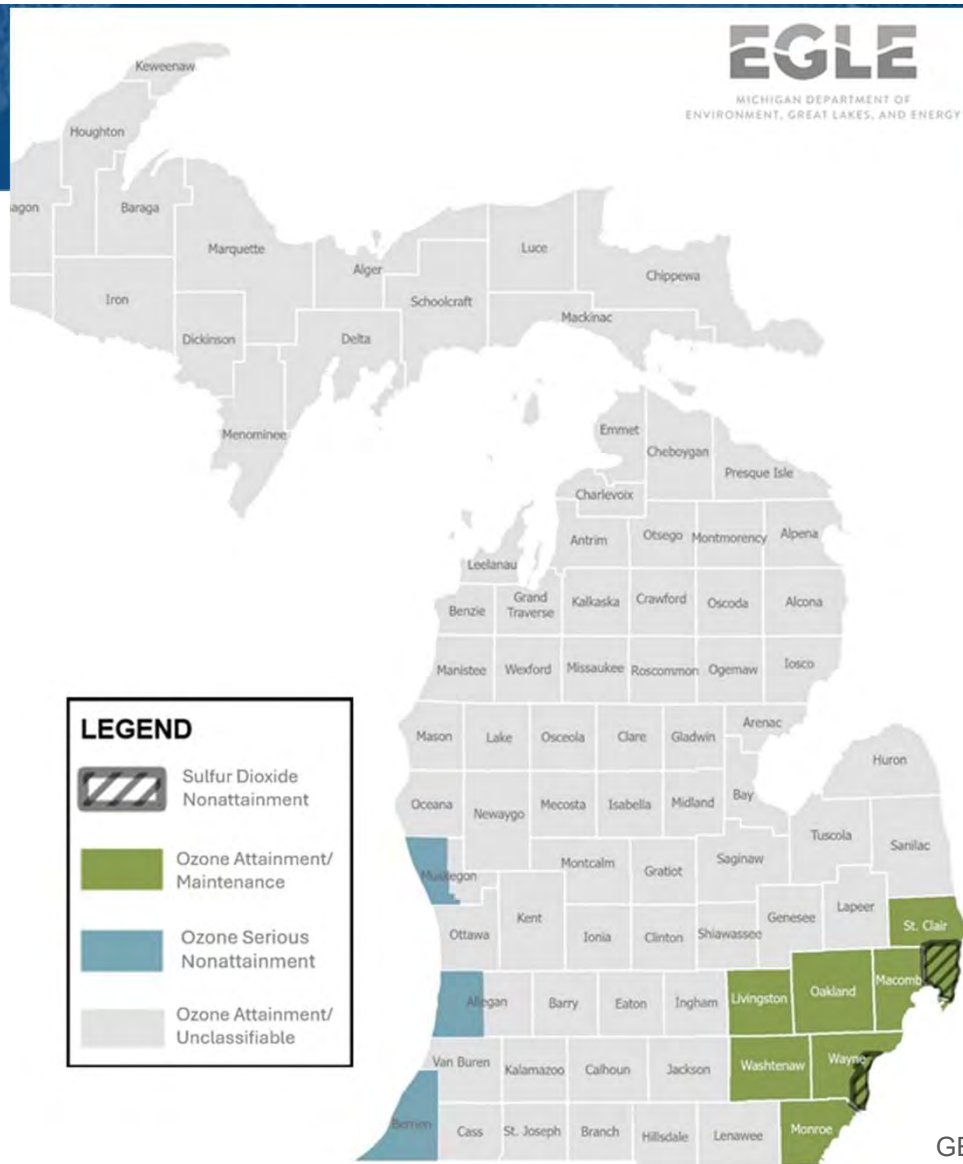
1. Criteria Pollutants

- Carbon Monoxide (CO)
- Lead (Pb)
- Nitrogen Dioxide (NO₂)
- Ozone (O₃)
 - VOCs and NO_x contribute to O₃ concentrations
- Particulate Matter (PM), including PM_{2.5} and PM₁₀
- Sulfur Dioxide (SO₂)

NAAQS – National Ambient Air Quality Standards

- The Clean Air Act requires USEPA to develop NAAQS for all 6 criteria pollutants
- States must have State Implementation Plans (SIPs) to meet the NAAQSs over time
- USEPA designates Non-Attainment Areas ([Link to NAAs](#))
 - SE MI = moderate NAA for 2015 O₃ Standard (7 counties)
 - SW MI = serious NAA for 2015 O₃ (3 counties)
- Air Permitting in NAAs is more challenging and typically takes longer

Air Non-Attainment Areas in Michigan



Air Permits

2. Hazardous Air Pollutants (HAPs) – Federal and State HAPs

- Federal HAPs list is determined by USEPA; can add to or remove HAPs from the list (e.g., MEK)
- There are currently 189 federal HAPs ([Link to Federal HAPs List](#))
- Michigan has State Toxic Air Contaminates (TACs) ([Link to Michigan TACs List](#)) (>1,200 TACs)
- Federal HAP Emissions = Additional Regulations
 - NESHAPs ([National Emission Standards for Hazardous Air Pollutants](#))
 - e.g., asbestos, boilers / process heaters, chromium compounds, paint stripping, RICEs (>100 NESHAPs)
 - Major source NESHAPs (10+ TPY of any one fed HAP or 25+ TPY all fed HAPs)
 - Minor (aka Area) Source NESHAPs (<10 TPY / <25 TPY)
 - NSPSs ([New Source Performance Standards](#))
 - e.g., rubber tire mfg, glass mfg, grain elevators, RICEs (>70 NSPSs)
- Type of air operating permit often depends on the facility's potential to emit (PTE) different types of pollutants, including HAPs.

Air Permits

Actual Air Emissions:

- **Calculated actual (facility-wide) air emissions based on:**

- Actual throughput / usage quantities*
- Actual hours of operation*
- Accounting for any air pollution control device (APCD) used

*more to come on this in Part II of my presentation

Potential Air Emissions:

- **Calculated (facility-wide) air emissions based on:**

- Maximum possible throughput / usage quantities (equipment throughput capacity)
- 24/7/365 operation (unless other operational limitation applies)
- Taking into account any APCD that is or will be part of an Air Permit
- Permit will require use of the APCD (whenever the process is in operation) if the APCD control efficiency is relied upon in the Air Permit Application calculations

Industrial Stormwater Discharge Permit

Applicability:

- Certain SIC codes are required to i) have an industrial stormwater discharge permit (see graphic at right) or ii) document NEC status

No Exposure Certification (NEC) status

- Items that could negate NEC
 - Uncovered outdoor dumpsters or roll-off containers
 - Equipment, raw materials or finished products stored outside that has contaminants (e.g., oils/greases) on it,
 - Exhaust stacks that leave staining/residuals on outside of stack or nearby building
 - Staining on pavement
 - Outdoor vehicle maintenance
 - Anything that may contaminate stormwater

Other:

- Typically Permits are issued by the State – EGLE in Michigan
- Michigan has General Permits and also Site-Specific Permits
- Typically, 5-year duration
- Follow the Permit requirements (e.g., SWP3, inspections, etc.)

Industries Covered by the MSGP and SIC Codes

SIC Code	Industrial Activity Sector
24xx	A: Timber Products
26xx	B: Paper Products
28xx, 3952	C: Chemical Products
29xx	D: Asphalt/Roofing
32xx	E: Glass, Clay, Cement
33xx	F: Primary Metals
10xx	G: Metal Mining
12xx	H: Coal Mines
13xx	I: Oil and Gas
14xx	J: Mineral Mining
HZ	K: Hazardous Waste
LF	L: Landfills
5015	M: Auto Salvage Yards
5093	N: Scrap Recycling
SE	O: Steam Electric Facilities
40xx, 41xx, 42xx, 4311, 5171	P: Land Transportation
44xx	Q: Water Transportation
37xx	R: Ship/Boat Building, Repair
45xx	S: Air Transportation
TW	T: Treatment Works (WWTPs)
20xx, 21xx	U: Food Products
22xx, 23xx, 31xx	V: Textile Mills
2434, 25xx	W: Furniture and Fixtures
27xx	X: Printing, Publishing
30xx, 39xx	Y: Rubber, Misc. Plastics
3111	Z: Leather Tanning/Finishing
34xx, 39xx	AA: Fabricated Metal Products
35xx, 37xx	AB: Transportation Equip.
357x, 38xx, 36xx	AC: Electronic, photo goods

Industrial Wastewater Discharge Permit

Facilities likely need an Industrial Wastewater Discharge Permit if:

- Discharging industrial wastewater (e.g., non-contact cooling water, production rinse water, industrial process wastewater, etc.).

Permit can be issued by the Publicly Owned Treatment Works (POTW) or the State:

POTW issued Permit	State issued Permit
Discharges to the sanitary sewer system	Discharges to a surface water body (e.g., river, pond, or lake)

Hazardous Waste / RCRA Permit

Needed if:

Treating a hazardous waste or operating as a treatment, storage and disposal facility (TSDF)

• Examples:

- Treating a hazardous waste wastewater to remove metals to be able to discharge to the sewer
- Mixing a hazardous waste with a solidification agent (to pass TCLP test)
- Incineration or oxidation

[RCRA does have exemptions, such as treating a wastewater that is hazardous only due to pH – facilities can conduct pH adjustment without a RCRA Permit (RCRA's ENU exemption)]





Environmental Plans

Spill Prevention Control and Countermeasure Plans

Applicable if:

- Maximum on-site storage quantity of oil is 1,320 gallons aboveground oil storage or more, or
- Completely buried oil storage quantity is 42,000 gallons or more

Purpose:

- Prevent oil spill from reaching a navigable waterway
- Requires that secondary containment be in place to protect waterways

General Requirements:

- Professional Engineer (PE) need to prepare SPCC Plans and PE stamp it in most cases
- Inspections must be performed
- Plans must be updated at least every 5 years and when there are changes to the facility (e.g., change in oil storage quantity)

Spill Prevention Control and Countermeasure Plans

“Oil”: Defined very broadly under SPCC

- Includes gasoline, diesel fuel, kerosene, lube oils, waste oils, vegetable oils, waxes, some chemicals (e.g., hexane, mineral spirits, naphtha, etc.)

Must Consider

- Oil containing equipment (e.g., equipment with at least 55 gallons of lube oil in them)
- Only oil storage containers or oil containing equipment with capacity greater than 55 gallons



Stormwater Pollution Prevention Plan (SWPPP)

Applicability:

- Facilities with an industrial stormwater permit

Purpose:

- Prevent stormwater contamination

General Requirements: (requirements of the SWPPP are outlined in the industrial stormwater permit)

- List all potential industrial stormwater contaminant sources,
- Identify Best Management Practices (BMPs) which are designed to minimize stormwater contamination, and,
- Perform inspections including dry weather inspections, wet weather inspections, annual comprehensive site compliance inspections, etc.



Hazardous Waste Contingency Plan

Applicability:

- LQGs of hazardous waste (e.g., generate >2,200 lb of non-acute or >2.2 lb of acute hazardous waste in any calendar month)

Purpose:

- Provide emergency protocol guidance for facility personnel and local emergency responders in the event of a hazardous waste spill / release

General Requirements:

- Locations where hazardous wastes are generated and stored on-site
- Types of wastes and hazards associated with those wastes that are on-site
- Evacuation routes, spill cleanup equipment and procedures, etc.
- Provide contacts for emergency response and spill reporting
- Quick Reference Guide - which serves as an executive summary of the Plan - and provide Guide to local emergency responders (e.g., fire and police depts, nearest ER, LEPC)
- Update the plan and Guide as waste types / quantities / containment changes

Slug Discharge Control Plan

Applicability:

- Required by many POTWs for facilities that discharge industrial wastewaters to the sanitary sewer

Purpose:

- Prevent a “slug” of untreated wastewater (or chemicals) to the sanitary sewer



Permits, Plans & Reports - Key Takeaways:

- Know which Permits, Reports and Plans your facility is subject to
- Know the due dates of Reports and keep copies of submitted Reports
- Get the Permit and Follow your Permit's requirements
- Follow the operations and procedures outlined in your Plans
- Update your Permits and Plans (& Reports) as your facility changes
- Keep all records for at least the required amount of time (e.g., 5 years)
- Have an organized file structure*
- Develop a compliance calendar to meet all deadlines*

***More to come on this in Part II of my presentation**



Environmental Reports

Tier II Annual Reporting

Due date: Annually on March 1st

Required if the facility's maximum on-site storage on-site of:

- EHS at or above TPQ or 500 lb., whichever is lower
 - EHS = Extremely Hazardous Substance per SARA 302 ([List of Lists](#))
- Non-EHS stored on-site at or above 10,000 lb.
 - For which the Safety Data Sheet (SDS) shows any globally harmonized system (GHS)



Tier II Annual Reporting – List of Lists

US EPA: List of Lists

EPA 550-B-24-001

Name	CAS Number/ 313 Category Codes	Comptox	CAA 112(r)(7) TQ	CERCLA HS RQ	CWA 311(j)(5) HS TQ	EPCRA 302 EHS TPQ	EPCRA 304 EHS RQ	EPCRA 313 TRI	RCRA Code
Chlorobenzene	108-90-7	DTXSID4020298		100	100,000			313	U037
Chlorobenzilate	510-15-6	DTXSID9020299		10				313	U038
2-Chloro- <i>N</i> -(2-chloroethyl)- <i>N</i> -methylethanamine	51-75-2	DTXSID2020975				10	10	X	
<i>p</i> -Chloro- <i>m</i> -cresol	59-50-7	DTXSID4021717		5,000					U039
2,4-D chlorocrotyl ester	2971-38-2	DTXSID6041345		100	100,000			313	
Chlorodibromomethane	124-48-1	DTXSID1020300		100					
1-Chloro-1,1-difluoroethane	75-68-3	DTXSID9023960						313	
Chlorodifluoromethane	75-45-6	DTXSID6020301						313	
Chloroethane	75-00-3	DTXSID1020302	10,000	100				313	
Chloroethanol	107-07-3	DTXSID1021877				500	500		
Chloroethyl chloroformate	627-11-2	DTXSID2060832				1,000	1,000		
2-Chloroethyl vinyl ether	110-75-8	DTXSID0051570		1,000					U042
Chloroform	67-66-3	DTXSID1020306	20,000	10	10,000	10,000	10	313	U044
Chloromethane	74-87-3	DTXSID0021541	10,000	100				313	U045

Tier II Annual Reporting

- Enter info into the state specific reporting system (e.g., Tier II Manager in Michigan).
- Most reporting systems notify the LEPC and fire department, but not all do
 - See screenshot below
 - If not, then mail Tier II Report to the LEPC and fire Dept

Some states charge fees based on quantities reported,
other states do not.

Fire Departments and LEPCs in the following counties can receive your Tier Two report online:

Allegan, Alpena, Antrim, Arenac, Bay, Benzie, Branch, Calhoun, Chippewa, Clinton, Crawford, Delta, Eaton, Emmet, Genesee, Gogebic, Grand Traverse, Gratiot, Hillsdale, Ingham, Ionia, Iosco, Isabella, Kalamazoo, Kalkaska, Kent, Lapeer, Macomb, Marquette, Mecosta, Midland, Missaukee, Monroe, Montcalm, Oakland, Oceana, Oscoda, Otsego, Ottawa, Presque Isle, Romulus, Saginaw, Shiawassee, St. Clair, St. Joseph, Van Buren, Washtenaw, Wayne, Wexford.

Tier II: GHS Hazards

Physical Hazards				
				
Explosives	Flammable Liquids	Oxidizing Liquids	Compressed Gases	Corrosive to Metals
Health Hazards				Environmental Hazards
				
Acute Toxicity	Skin Corrosion	Skin Irritation	Aspiration Hazard	Environmental Toxicity

If the SDS has any of these on it, then the product represented by the SDS is Tier II-reportable if max. on-site storage threshold exceeded

Air Emissions Inventory Report

Due date: Varies by State; examples →

State	AEI Due Date
Michigan	March 15
Illinois	May 1
North Carolina	June 30
Texas	March 31
Wisconsin	March 1

Do I need to Report?

- Determine the facility-wide calculated actual emissions for the previous calendar year
- Determine if the actual calculated emissions exceed reporting thresholds
 - *100 TPY CO, 10 TPY VOCs, 10 TPY PM2.5, NOx 40 TPY, etc. (most match permitting significance thresholds)*
- Sources with an Opt-Out Permit or ROP

Other Information:

- Reporting fees: depends on the state (e.g., in WI ~\$53/ton + Facility Charge – up to \$45,000)
- Submit report via the state-specific on-line reporting system – MiEnviro Portal in Michigan



Air Permit Summary of Monitoring and Compliance Certification

Applicability:

- Companies with compliance reports required by a Permit to Install, ROP, or regulation must submit these reports through MiEnviro Portal

Due Date:

- Listed in the facility's Air Operation Permit

Due Date:

- Provide documentation that the facility has complied with all aspects of the air permit for the reporting period (typically for the previous calendar year)
 - And disclose any non-compliances
- Must be certified by the Responsible Corporate Official



Hazardous Waste Generator Report

State-by-state considerations:

- Biennial (every other year) in Michigan for TSDFs and LQGs
 - Was due 3/1/26 for CY2025
- State-specific online reporting system and fees
- Is based on hazardous waste generator status:
 - **Some states:** both Large Quantity Generators (LQGs) and Small Quantity Generators (SQGs)

Fees are typically lower for waste that is recycled.

VSQG	SQG	LQG
• Generate <220 lb/month of non-acute hazardous waste • Does not generate acute hazardous waste • Most states do not require VSQGs to Report	• Generate >220 lb/month and <2,200 lb/month of non-acute hazardous waste • Generate <2.2 lb/month of acute hazardous waste • Must ship waste within 180 days	• Generate >2,200 lb/month of non-acute hazardous waste • Generate >2.2 lb/month of acute hazardous waste • Must ship waste within 90 days



Toxic Release Inventory (TRI) Annual Reporting

Applies to facilities that...

1. Have 10 or more full-time employee equivalents ($\geq 20,000$ hr/yr)
2. Are in a TRI-covered industry sector

TRI-Covered Industries NAICS

- 113 Logging
- 211 Oil and Gas Extraction
- 212 Mining
- 221 Electric Utilities
- 31 - 33 Manufacturing
- 424 Merchant Wholesalers, Nondurable Goods
- 425 Wholesale Electronic Markets and Agents Brokers
- 488 Support Activities for Transportation
- 512 Motion Picture and Sound Recording Industries
- 5131 Newspaper, Periodical, Book, and Directory Publishers
- 516 Broadcasting and Content Providers
- 541 Professional, Scientific, and Technical Services
- 562 Waste Management and Remediation Services
- 811 Repair and Maintenance

Note: For many of these NAICS codes, there are reporting exceptions

3. Facilities that manufacture, process, or otherwise use a chemical at quantities that meet or exceed the chemical threshold

TRI Annual Reporting

TRI Annual Reporting

- USEPA List of Lists or TRI reporting instructions contains the TRI chemicals and compounds
- Generally, for non-Persistent Bioaccumulative Toxins (non-PBTs), reporting thresholds are
 - 25,000 lb/yr of a TRI-listed chemical manufactured or processed
 - 10,000 lb/yr of a TRI-listed chemical 'otherwise used'
- PBT thresholds are lower (e.g., lead 100 lb/yr, Hg 10 lb/yr, dioxin 0.1 grams/yr, *etc.*)
- Reports are due to the State and USEPA by July 1st for the previous calendar year
 - On-line reporting (CDX TRIMe-Web)
 - CDX auto-submits to both USEPA and the State
 - Need CDX credentials to prepare and to submit / Certify TRI Reports



TRI Annual Reporting – List of Lists

US EPA: List of Lists

EPA 550-B-24-001

Name	CAS Number/ 313 Category Codes	Comptox	CAA 112(r)(7) TQ	CERCLA HS RQ	CWA 311(j)(5) HS TQ	EPCRA 302 EHS TPQ	EPCRA 304 EHS RQ	EPCRA 313 TRI	RCRA Code
Chlorobenzene	108-90-7	DTXSID4020298		100	100,000			313	U037
Chlorobenzilate	510-15-6	DTXSID9020299		10				313	U038
2-Chloro- <i>N</i> -(2-chloroethyl)- <i>N</i> -methylethanamine	51-75-2	DTXSID2020975				10	10	X	
<i>p</i> -Chloro- <i>m</i> -cresol	59-50-7	DTXSID4021717		5,000					U039
2,4-D chlorocrotyl ester	2971-38-2	DTXSID6041345		100	100,000			313	
Chlorodibromomethane	124-48-1	DTXSID1020300		100					
1-Chloro-1,1-difluoroethane	75-68-3	DTXSID9023960						313	
Chlorodifluoromethane	75-45-6	DTXSID6020301						313	
Chloroethane	75-00-3	DTXSID1020302	10,000	100				313	
Chloroethanol	107-07-3	DTXSID1021877				500	500		
Chloroethyl chloroformate	627-11-2	DTXSID2060832				1,000	1,000		
2-Chloroethyl vinyl ether	110-75-8	DTXSID0051570		1,000					U042
Chloroform	67-66-3	DTXSID1020306	20,000	10	10,000	10,000	10	313	U044
Chloromethane	74-87-3	DTXSID0021541	10,000	100				313	U045

TRI Annual Reporting

TRI *De Minimis*

- Materials that contain TRI-listed chemicals below the *de minimis* threshold are not applicable to TRI
- Typically, 0.1% or 1% for TRI-listed chemicals
- *De minimis* exemption does not apply for PBTs (*)
- Utilize SDS composition information to determine if *de minimis* exemption is met or not

CASRN	Chemical Name	<i>De minimis</i> % Limit
71751-41-2	Abamectin	1
30560-19-1	Acephate	1
75-07-0	Acetaldehyde	0.1
60-35-5	Acetamide	0.1
75-05-8	Acetonitrile	1
98-86-2	Acetophenone	1
53-96-3	2-Acetylaminofluorene	0.1
62476-59-9	Acifluorfen, sodium salt	1
107-02-8	Acrolein	0.1
79-06-1	Acrylamide	0.1
79-10-7	Acrylic acid	1
107-13-1	Acrylonitrile	0.1
15972-60-8	Alachlor	1
116-06-3	Aldicarb	1
309-00-2	Aldrin	*
28434-00-6	<i>d-trans</i> -Allethrin	1
107-18-6	Allyl alcohol	1
107-11-9	Allylamine	1
107-05-1	Allyl chloride	1
7429-90-5	Aluminum (fume or dust)	1
1344-28-1	Aluminum oxide (fibrous forms) (Alumina)	1
20859-73-8	Aluminum phosphide	1
834-12-8	Ametryn	1



Toxic Release Inventory (TRI) Annual Reporting

Per- and Polyfluoroalkyl Substances (PFAS) in TRI Reporting

- [Not all PFAS are TRI-listed PFAS]
- 206 PFAS chemicals are TRI-listed for RY2026
- TRI-listed PFAS are classified as chemicals of special concern
- EPA has consistently added additional PFAS chemicals to the TRI list in recent years
 - 7 more new PFAS compounds are on the TRI list for RY2024
 - 9 more new PFAS compound added to TRI list for CY2025
 - 1 more new PFAS compound added for CY2026
 - [EPA has proposed 16 more PFAS & 15 PFAS categories]
- TRI-listed PFAS chemicals are not eligible for:
 - de minimis exemption
 - Form A reporting
 - Range code reporting



TRI Annual Reporting

Form A Reports	Form R Reports
• Can be used for <u>non-PBTs</u> • Can be used when manufactured, processed, or otherwise used in quantities less than <u>1,000,000 lb/yr</u> • Can be used when <u>releases</u> and quantities treated on-site are less than <u>500 lb/yr</u> • Is a streamlined TRI reporting form • Does not require reporting of quantities released/treated on-site	• Must be used for PBTs • Must be used when manufactured, processed, or otherwise used >1,000,000 lb/yr throughput • Must be used when releases and quantities treated on-site are >500 lb/yr • Requires reporting of quantity released off site and where these offsite releases were sent (e.g., air, landfill, POTW, etc.) • Requires projections of future processing, otherwise using, and releasing • Requires comparison of current year to previous year (production ratio or activity ratio) • Requires description of source reduction activities

TRI Annual Reporting

Facilities which are assembly only (i.e., do not manufacture, process, or otherwise use) are typically not subject to TRI

- *[e.g., metal bending - no cutting, grinding, drilling - would generally not be subject to TRI reporting]*
- TRI reporting fines and penalties can be significant
 - \$141,000 for missing 2 reporting years
- Existing spreadsheets can be messy / difficult to decipher
- eDisclosure on CDX not uncommon but must be discovered during an internal audit
 - Typically get Notice of Determination immediately that closes out the non-compliance
- Required throughout the calendar year
 - Throughput / usage quantities
 - Current / accurate SDSs
 - For all materials used on-site



Industrial Wastewater Discharge Monitoring Reports (DMRs)

Applicability:

- Typically required of industrial wastewater-permitted facilities

Due Date:

- Listed on the facility's NPDES permit

Purpose:

- Provides a summary of monitoring and laboratory analytical sampling results for the reporting period
- Documents that permit limits (benchmark limits, numeric effluent limits, etc.) were not exceeded

Certification of the report is required

- Typically by a Responsible Official



Agenda – Part II

- **Record Keeping**
- **New Chemical Review Process**
- **Compliance Calendar**
- **A Slightly Deeper Dive on RCRA**



Record-Keeping

Throughput quantities

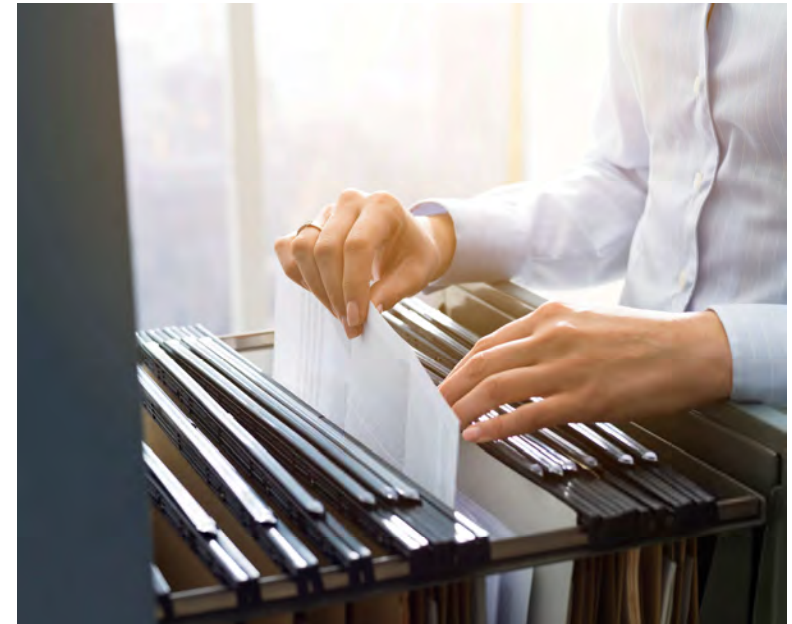
- Document quantities of:
 - Paints / coatings applied
 - Solvents used
 - Weld wire or rod used
 - All other throughput quantities (e.g., lb/month)
- This information is needed:
 - Per Air Permit record-keeping requirements
 - To enable facility-wide actual emissions / AEI calculations
 - To evaluate TRI reporting obligations

Maximum on-site storage quantities

- For Tier II reporting

Sampling Results

- As required by industrial stormwater and wastewater Permits, and air Permits (e.g., stack test reports)



New Chemical Review Process

- **So that Record-Keeping accurately reflects facility's *current* conditions**
- **Proposed New Chemical Review Process**
 - Prior to bringing new chemicals on-site:
 - Require the requestor to provide to EHS Dept:
 - SDS,
 - Projected usage rate, and,
 - Max. on-site storage quantity.
 - *(Perhaps above a certain size, e.g., 55 gallons)*
 - EHS Dept reviews SDS, etc. to determine the environmental Permit(s), Report(s) and/or Plan(s) that bringing that new chemical on-site might trigger
 - *Strive to avoid additional EHS reporting on Tier II, TRI reporting, triggering the need for an Air Permit, SPCC*
- ***Ask: Might a different chemical be considered that would not trigger any such additional environmental requirements?***
 - Document New Chemical reviews
 - *[New Chemical Reviews could be its own presentation (perhaps at fall EHS Meeting)]*

Compliance Filing System

- Sounds basic but is truly helpful (e.g., during Audits, after employee turn-over, etc.)
- What do I put where?

Folder	Sub-folder	Description
Air Emissions / Permitting	<i>Permitting</i>	Permit(s) / Permit Applications / Exemption Documentation
	<i>Correspondence with Agency</i>	e.g., Compliance Certifications, Summary of Monitoring Reports, Air Emissions Inventory Reports, Agency Inspection Reports, Emails, etc.
	<i>Record-Keeping</i>	e.g., solvent usage logs, differential pressure monitoring logs, etc.
	<i>Notices of Violation or Non-Compliance</i>	
Hazardous Waste	<i>Waste Determinations</i>	e.g., waste sampling lab reports, documented generator knowledge
	<i>Correspondence with Agency</i>	e.g., Hazardous Waste Generator Reports, Agency Inspection Reports
	<i>Record-Keeping</i>	e.g., Manifests, Waste Shipment Logs / Reports, Weekly Hazardous Waste Inspection logs, etc.
	<i>Hazardous Waste Contingency Plan</i>	[DELETE THIS ROW IF FACILITY IS NOT AN LQG]
	<i>Notices of Violation or Non-Compliance</i>	
Emergency Planning & Community Right-to-Know Act (EPCRA)	<i>Tier 2 Reporting</i>	Reporting Calculations, Reports / Exemption Documentation
	<i>TRI Reporting</i>	Reporting Calculations, Reports / Exemption Documentation
	<i>Notices of Violation or Non-Compliance</i>	
Industrial Storm Water	<i>Permitting</i>	Permit or No Exposure Certification / Permit Applications
	<i>Correspondence with Agency</i>	e.g., SWP3 Summary, Notice of Intent, Notice of Termination, Agency Inspection Reports, etc.
	<i>Record-Keeping</i>	e.g., Monthly Inspection logs, Annual Facility Site Compliance Inspection (AFSCI), lab analysis, QSE observation logs, etc.
	<i>Storm Water Pollution Prevention Plan - SWP3</i>	
	<i>Notices of Violation or Non-Compliance</i>	
Industrial Wastewater Discharges	<i>Permitting</i>	Permit(s) / Permit Applications
	<i>Correspondence with Agency</i>	e.g., Discharge Monitoring Reports, Agency Inspection Reports
	<i>Record-Keeping</i>	e.g., Wastewater Sampling Lab reports, etc.
	<i>Notices of Violation or Non-Compliance</i>	
Spills and Releases	<i>Record-Keeping</i>	e.g., release information, reports to agency(ies), changes made to prevent reoccurrence, etc.
Training Records		Training Calendars, etc.
Standard Operating Procedures		
Facility Maps - Drawings - Diagrams		
Org Charts		Description of roles/responsibilities



Compliance Calendar

- Environmental reporting due dates
 - *And info needed XX days before that due date*
- Environmental Permit renewal application due dates
 - *Typically, a Renewal Application is due 6 months prior to expiration*
- Can also be used to identify roles and responsibilities
- Is a roadmap for employees new to EHS, when turnover occurs
- Example on next slide



Compliance Calendar Example

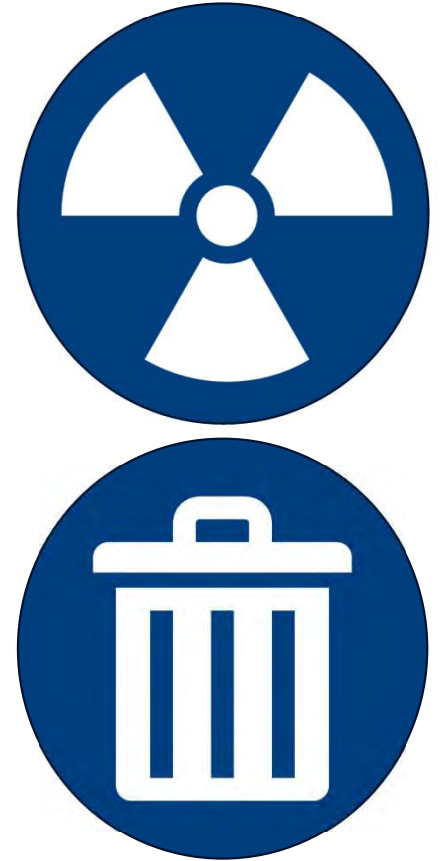
Environmental Tracking Calendar - [Facility Name][Facility Address, City & State]			DRAFT / Work in Progress			4/6/24
Area	Requirement	Due Date	Last Action Taken	Role	Notes	
Air	Comply with Air Permits and keep records required by the Air Permits.	on-going	actions occur daily	Facility EHS and/or Maintenance Staff		
	Keep records: throughput quantities; air pollution control device control efficiencies and inspections, etc.	on-going	actions occur at least monthly	Facility EHS Staff	keep in designated file	
	Assess the facility's compliance with its Air Permits and prepare the combined Summary of Monitoring Report and Compliance Certification for the previous calendar year.	by due date listed on Air Operation Permit	most-recent Report submitted 2/28/24	Facility EHS Staff and/or consultant		
	Determine/document actual facility-wide air emissions for the last calendar year & compare to the Air Emissions Inventory (AEI) reporting thresholds and Permit maximums; prepare the required annual AEI Report or document exempt status.	March 1st for previous calendar year	most-recent Report submitted 2/19/24, by the 3/1/24 due date	Facility EHS Staff and/or consultant	keep back-up calcs & records in designated file	
Hazardous Waste	Comply with hazardous waste generator requirements for the generation, storage, labeling and shipment of hazardous wastes, including manifesting and weekly inspections.	on-going	actions occur daily; EHS inspects CAA weekly	Facility EHS and/or Maintenance Staff	all containers closed, labeled, etc.	
	Keep records: copies of manifests, weekly inspections, etc.	on-going	actions occur at least weekly	Facility EHS Staff	keep in designated file	
	Determine/document generator status for the previous calendar year, and prepare the annual Hazardous Waste Generator's Report for submittal to the State.	March 1st for previous calendar year	most-recent Report submitted 2/19/24, by the 3/1/24 due date	Facility EHS Staff and/or consultant	LQGs report; sometimes also SQGs	
	RCRA & DOT Training	~1 year since last one		Facility EHS Staff and/or consultant	for those who sign manifests	
Waste-water	Comply with Wastewater discharge Permit and keep records required by the Permit.	on-going	daily actions; Maintenance does PMs weekly	Facility EHS and/or Maintenance Staff	watch for system upsets, etc.	
	Keep records: copies of sampling results, monitoring requirements (e.g., flow rate, etc.); etc.	on-going	actions occur at least daily	Facility EHS and/or Maintenance Staff	keep in designated file	
	Discharge Monitoring Report (DMR)	by due date(s) listed in Permit	Report submitted 2/14/24, by the 2/15/24 due date	Facility EHS Staff and/or consultant	summarizes sampling & monitoring	
EPCRA Tier 2	Periodically check on maximum on-site storage quantities, document the maximum.	on-going	actions occur at least monthly	Facility EHS Staff	keep in designated file	
	Monitor new chemicals brought on-site, review the associated SDSs to identify non-EHSs to be stored >10,000 lb and any EHSs present in the new chemicals.	on-going	when new chemical approvals are requested	Facility EHS Staff	keep in designated file	
	Document maximum on-site chemical storage quantities and review SDSs for the previous calendar year to determine if Tier 2 Report required to be submitted; document evaluation.	March 1st for previous calendar year	most-recent Report submitted 2/19/24, by the 3/1/24 due date	Facility EHS Staff and/or consultant	additional reporting for EHSs required	
EPCRA TRI	Track chemicals manufactured, processed or otherwise used. Records required by the facility's Air Permit can likely be used for this purpose.	on-going	actions occur at least monthly	Facility EHS Staff	keep in designated file	
	Identify TRI-listed chemicals manufactured, processed or otherwise used via SDSs and determine if any TRI reporting thresholds were exceeded during the previous calendar year.	by July 1st annually	most-recent Report submitted 6/19/23, by the 7/1/23 due date	Facility EHS Staff and/or consultant	keep back-up calcs & records in designated file	



A Slightly Deeper Dive on RCRA

Waste Characterization

- *ALL* waste streams must be characterized as either:
 - Hazardous waste or
 - Non-hazardous waste
- Using:
 - Generator knowledge (e.g., SDSs and know that no reaction takes place) or
 - Laboratory analytical test data / reports
- Keep waste characterization data **documented** in Environmental files
- Waste characterization cannot be: 'we've always thrown that in the trash' therefore it must be a non-hazardous waste
- [Worst-case scenario is that your facility has been sending a waste – assumed to be non-hazardous – to a non-hazardous waste management facility (e.g., landfill) and to later find out it was actually a hazardous waste..]



USEPA ID

All SQGs and LQGs, and VSQGs that manifest, must have a USEPA ID

- To get USEPA ID, must complete USEPA Form 8700-12
- IDs are both location / address-specific and company / generator-specific
 - (If buy a facility that has a USEPA ID, must update Form 8700-12 even if address isn't changing)
- Can do on RCRA Info or via hard copy (using form 8700-12, at right)

OMB# 2050-0024; Expires 01/31/2017

SEND COMPLETED FORM TO: The Appropriate State or Regional Office,		United States Environmental Protection Agency RCRA SUBTITLE C SITE IDENTIFICATION FORM	
1. Reason for Submittal MARK ALL BOX(ES) THAT APPLY	Reason for Submittal: ☐ To provide an Initial Notification (first time submitting site identification information / to obtain an EPA ID number for this location) ☐ To provide a Subsequent Notification (to update site identification information for this location) ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application ☐ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment # _____) ☐ As a component of the Hazardous Waste Report (If marked, see sub-bullet below) ☐ Site was a TSD facility and/or generator of >1,000 kg of hazardous waste, >1 kg of acute hazardous waste, or >100 kg of acute hazardous waste spill cleanup in one or more months of the report year (or State equivalent LQG regulations)		
2. Site EPA ID Number	EPA ID Number: []		
3. Site Name	Name: _____		
4. Site Location Information	Street Address: _____ City, Town, or Village: _____ State: _____ Country: _____ Zip Code: _____		
5. Site Land Type	☐ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other		
6. NAICS Code(s) for the Site (at least 5-digit codes)	A. [] B. [] C. [] D. []		
7. Site Mailing Address	Street or P.O. Box: _____ City, Town, or Village: _____ State: _____ Country: _____ Zip Code: _____		
8. Site Contact Person	First Name: _____ MI: _____ Last: _____ Title: _____ Street or P.O. Box: _____ City, Town or Village: _____ State: _____ Country: _____ Zip Code: _____ Email: _____ Phone: _____ Ext.: _____ Fax: _____		
9. Legal Owner and Operator of the Site	A. Name of Site's Legal Owner: Owner Type: ☐ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other Street or P.O. Box: _____ City, Town, or Village: _____ State: _____ Country: _____ Zip Code: _____ Phone: _____ B. Name of Site's Operator: Operator Type: ☐ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other Date Became Operator: _____		

EPA Form 8700-12, 8700-13 A/B, 8700-23

Page 1 of 1

Characteristic vs Listed

Characteristic

Characteristically Hazardous Waste:

- Waste has a *characteristic* that makes it a hazardous waste
- **4 categories:**
 1. Flashpoint $<140^{\circ}\text{F}$ $\Rightarrow$ characteristically ignitable hazardous waste (D001)
 2. pH 2 or less or pH 12.5 or higher $\Rightarrow$ characteristically corrosive waste (D002)
 3. Reacts violently with water $\Rightarrow$ characteristically reactive (D003)
 4. Toxicity characteristic:
 - Chromium content in the waste is 5.0 mg/L or more via TCLP (D007)
 - Vinyl chloride in the waste is 0.2 mg/L or more (D043)
 - [39 different toxicity characteristic RCRA Codes (39 different chemicals)]



Characteristic vs Listed

Listed

- **Listed Hazardous Waste:** waste that contains specific waste chemicals
 - F001: spent PCE, TCE, methylene chloride, etc.
 - F003: spent xylene, acetone, ethylbenzene, MIBK, etc.
 - There are a few hundred [Listed Hazardous Wastes](#)
- *Never mix a listed hazardous waste* with something else – entire mixture becomes a hazardous waste ('the mixture rule')
 - [The same is not the case for a characteristically hazardous waste]



Storage

Container Marking / Labeling

- “Hazardous Waste,”
- Description of the waste (e.g., DOT shipping label or shipping name), and,
- Indication of the hazards, such as:
 - Characteristic: ignitable, corrosive, reactive, toxic,
 - OSHA HAZCOM pictogram, or,
 - NFPA label
- Accumulation Start Date must be on container when full / moved into the CAA
 - (aka 90-day storage area at an LQG, or 180-day storage area at an SQG)
- Compatible container, undamaged; keep it covered (bungs in place, drum ring secured)
- Designate Central Accumulation Area (CAA) (can be more than 1 CAA at a facility)



SQGs and LQGs

Satellite Accumulation Areas (SAAs) must be:

- Not more than 55 gallons of a waste in each SAA
- At / near the point of generation
- Under control of worker of the process generating the waste
- Labeled same as for containers in CAA
 - Except that accumulation start date is not required for SAA containers
- Kept covered at all times except when adding wastes

Once a SAA becomes full (up to 55 gal):

- Add (start) date of SAA container, and,
- Move container to CAA within 3 days.

Other

- **Strive to Minimize Generator Status**

- Actively manage waste generation to the extent possible/practical to minimize your generator status (e.g., VSQG instead of SQG; SQG instead of LQG)

- **Off-spec / Out-of-Date Chemicals**

- Check if supplier will take back
- Can it be legitimately used for another purpose on-site?
- If acidic, can it a pH adjusted and discharged via wastewater ([ENU RCRA Exemption](#)) (must only be hazardous due to pH)
- ***The day you call it a waste is the day it becomes a (hazardous) waste***

- **Landfills**

- Liquid hazardous waste or hazardous wastes containing free liquids may not go into a landfill
 - Wastes must pass the 'paint filter test'

- **Sewer Ban: it is illegal to flush ('sewer') pharmaceutical (or any other) hazardous wastes**

- Applies to all hazardous waste generators, regardless of generator status
- [Rx may pass through POTW treatment systems and enter surface water bodies]



Thank you!

KEN YASS
Principal



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