

**Geosyntec**  
consultants

engineers | scientists | innovators



Ken W. Yass,  
P.E.<sub>WI,IL,MI</sub>, CHMM



September 13, 2022  
9:50 – 10:25 am

# Building Environmental Programs to Outlast the Great Resignation

## Midwest Environmental Compliance Conference Kansas City



## Ken Yass, P.E.-WI,IL,MI, CHMM

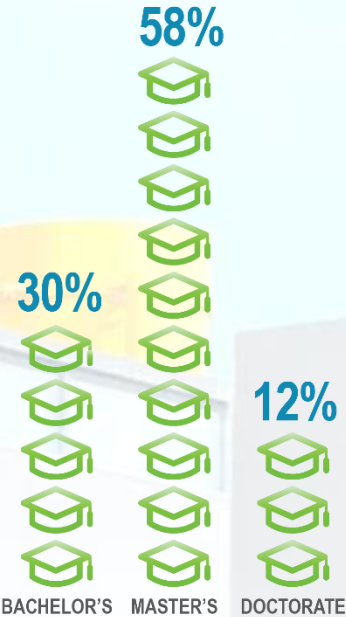
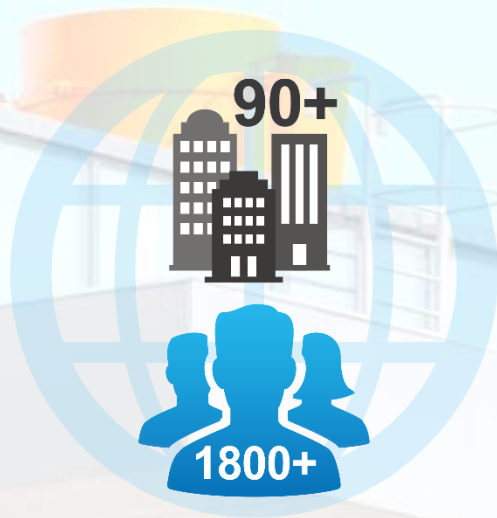
- Civil/Environmental Engineer
- 25+ Years of Environmental Consulting
- 3 Years Hydrite Chemical Corporate Environmental
- Principal at Geosyntec Consultants (2019)
- Specializing in Environmental Compliance Programs and Environmental Due Diligence

**GEOSYNTEC CONSULTANTS – MILWAUKEE OFFICE**

309 N. Water Street, Third Ward Milwaukee  
Milwaukee, WI

- **The Great Resignation**
  - What are the impacts, and what can we expect going forward?
- **Environmental Program vs Environmental Person**
- **Essential Elements of an Environmental Program**

We are a consulting and engineering firm that works with private and public sector clients to address new ventures and complex problems involving our environment, natural resources, geotechnical and civil infrastructure.



**SAFETY**  
EMR 0.77 Industry Average 1.0

## Geosyntec Office Locations

39  
year history

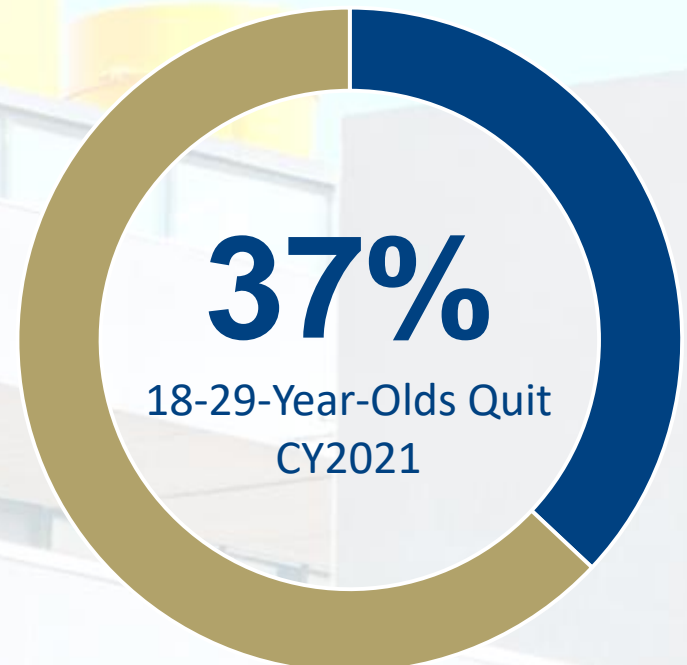
90+  
global offices

1,800+  
employees



- **Workers who voluntarily quit their jobs**
  - Hit a high of 3.0% in Nov-20
  - Holding steady at 2.8% since then
  - Historical average has been 2.3%
    - That 0.5% difference equates to ~785,000 workers
- **Baby Boomers** (born Post-WWII to 1964)
  - Boomers are ~25% of current workers
  - 10,000 Boomers/day turn 65, many retire at 65
  - ‘The Great Retirement’
- **48% of American workers are actively job searching or watching for opportunities** (Gallup, Jul-22)

- **Not just older employees**
  - 37% of 18- to 29-year olds likely to look for a new job w/in 6 months (Pew, Jul-22)
- **Reasons for leaving**
  - Greater flexibility (e.g., work from home options, childcare, etc.)
  - Higher compensation
  - Opportunities for advancement
  - Re-evaluating life priorities
- **Intense competition for workers**



- **Who has time for turnover?**
  - Interim reassignment of roles
  - Loss of institutional knowledge and need to reinvent
  - Recruiting, hiring, onboarding
- **Has turnover impacted you?**
- **Post-pandemic landscape**
  - Turnover rates are anticipated to remain high
    - For the reasons on the last slide
  - Businesses need to respond accordingly
    - It's risky to take a passive approach in retention of even your most loyal employees
    - Don't wait for dissatisfied worker to surprise you with a notice
    - Demonstrate your interest in providing your employees with the opportunities for career growth that they desire





- **Reliance on a *Person* rather than a *Program***
  - Creates stress on that person – stress leads to burnout
  - Creates risk for the business - not a sustainable model
  - Documented program outlives employee turnover, creates training tool for the next person

Environmental  
Program  
vs.  
Environmental  
Person



Essential Elements of  
an Environmental  
Program



Inventory  
Environmental  
Compliance  
Obligations



Maintain an  
Environmental  
Compliance  
Calendar



Establish an  
Environmental  
Filing System



Define the  
Roles and  
Responsibilities for  
Environmental  
Management



Develop  
Environmental  
Standard  
Operating  
Procedures



Offer a  
Robust Training  
Program

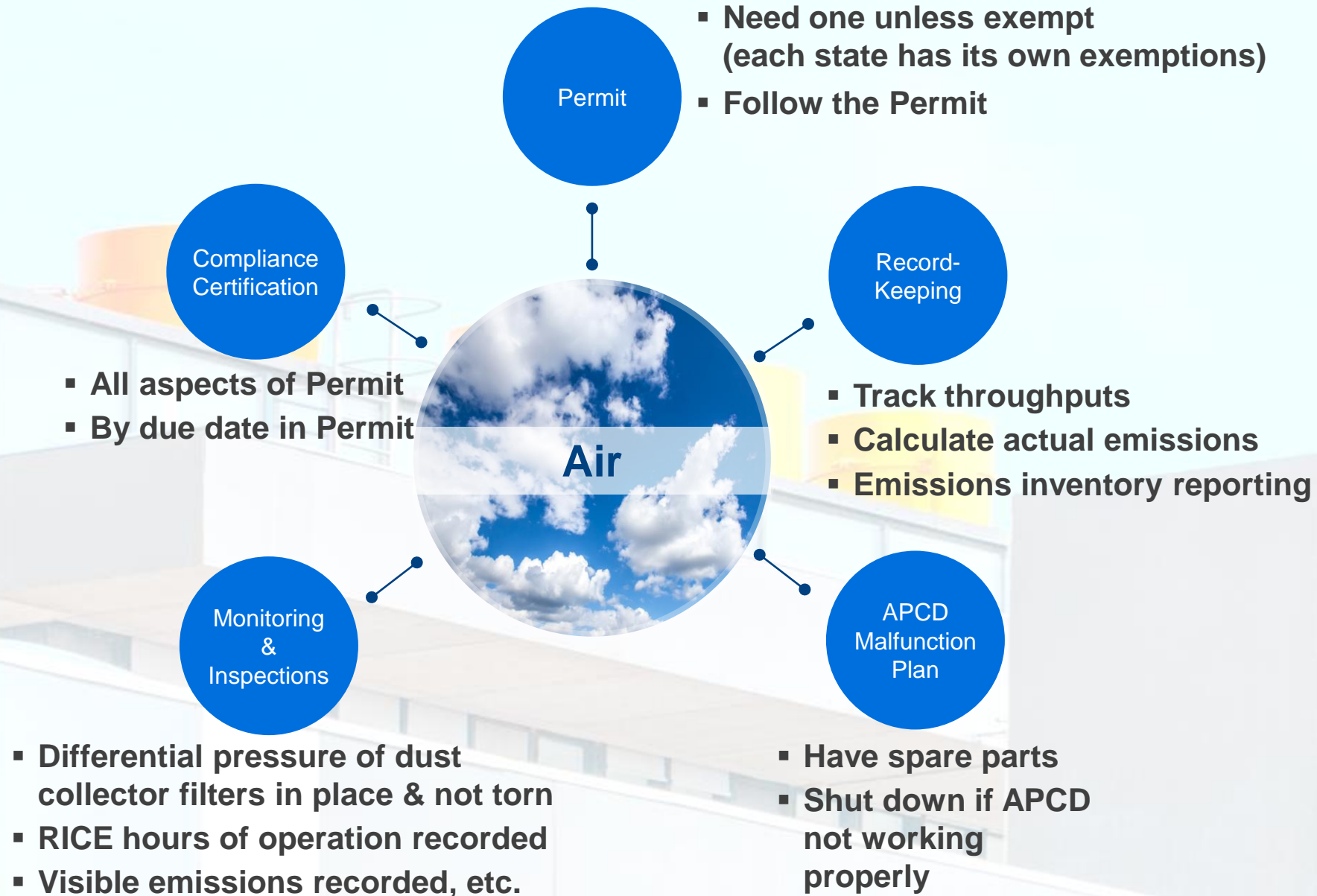


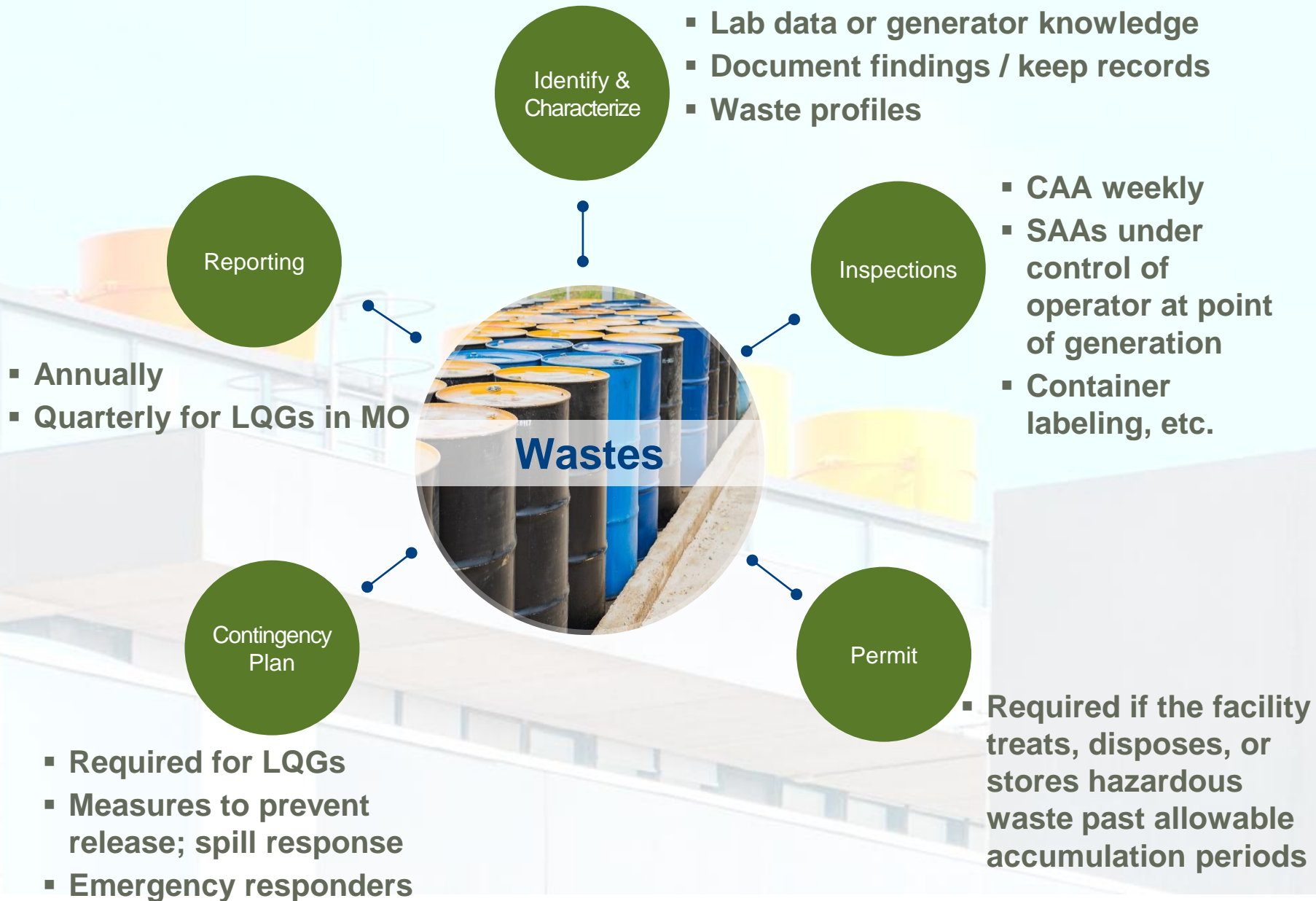
Monitor for  
Changes  
(Internal &  
External)

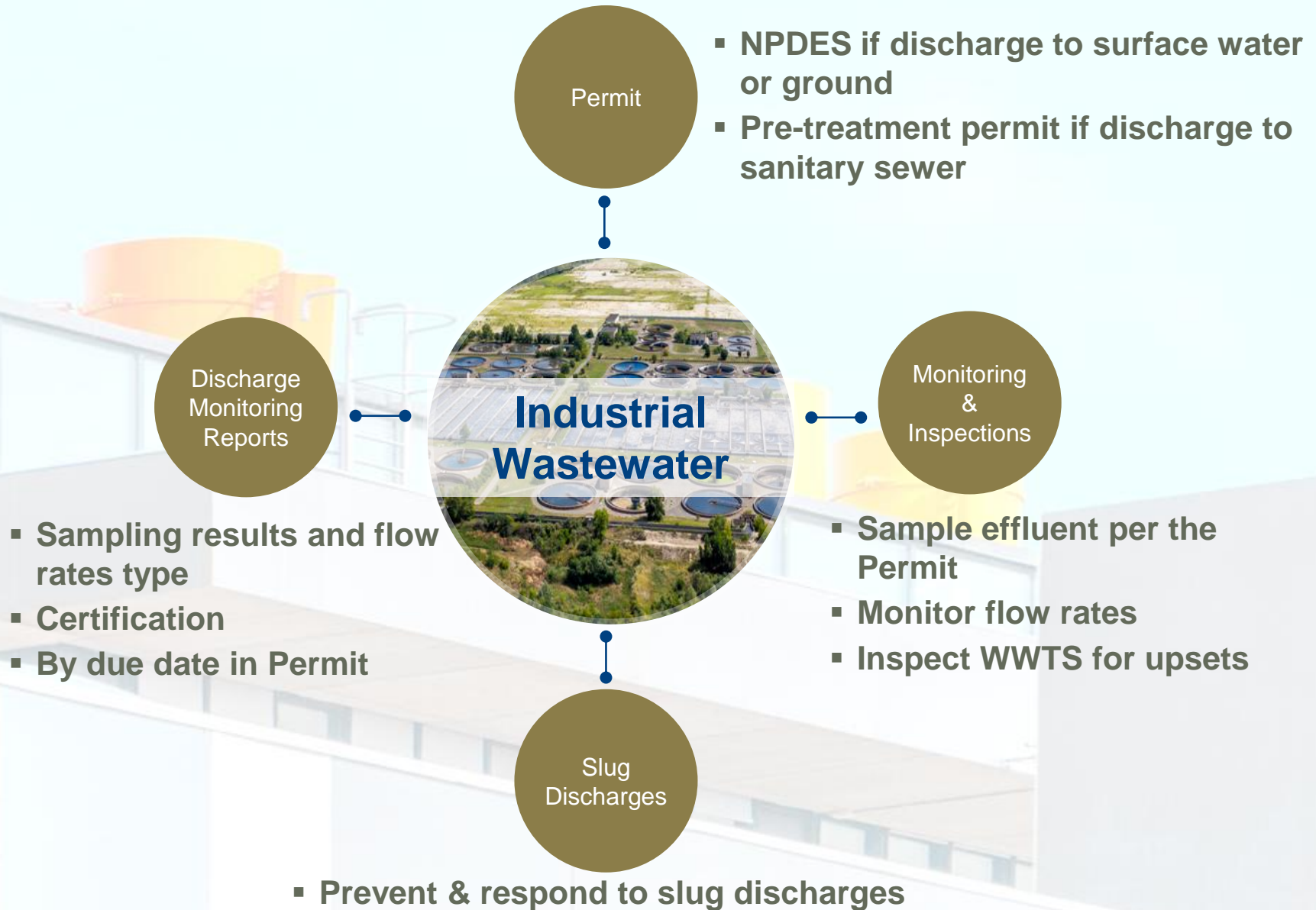


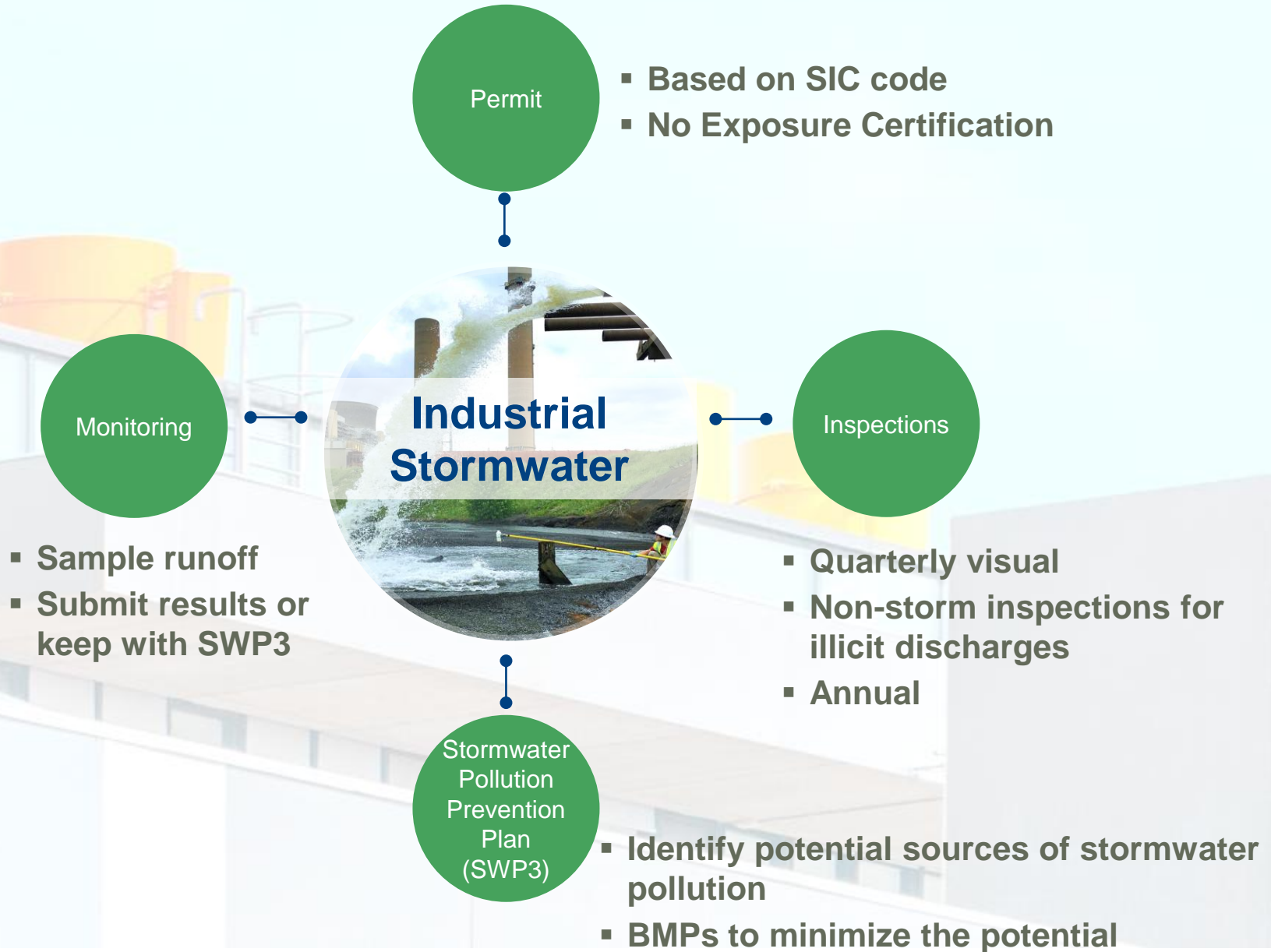
## Inventory your facility's environmental requirements





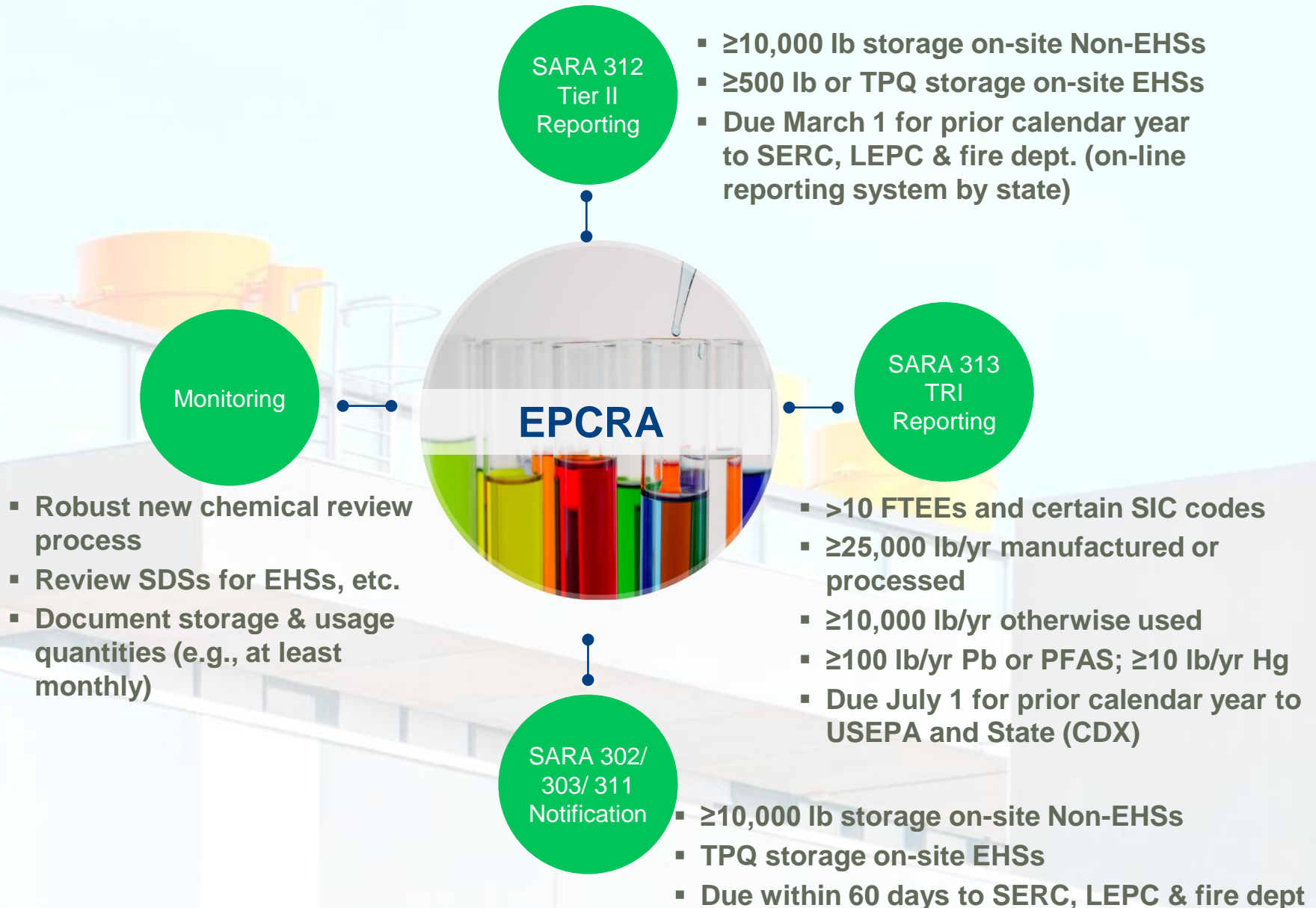












- **Risk Management Program (RMP)**
  - Store an RMP-listed chemical  $\geq$  threshold planning quantity
  - Measures in place to prevent a release of listed chemical
  - RMPeSubmit (USEPA CDX)
    - [RMP-Listed Chemicals and Thresholds](#)
- **Not Environmental, but consider also**
  - Process Safety Management (PSM)
    - PSM list of chemicals
    - Written Procedures (e.g., MOC)
  - DHS Chemical Facility Anti-Terrorism Standards (CFATS)
    - CFATS list of chemicals and thresholds
    - Top Screen, Tier Letter, SSP, or ASP
    - Periodic inspections



## What if you don't know?

1. Does my facility have an air permit?

Has my facility submitted annual air emissions inventory reports in the past?

2. Does my facility have a wastewater discharge permit?

3. Does my facility have an industrial stormwater discharge permit?

4. Does my facility have any registered/regulated above or underground storage tanks?


5. Has my facility submitted SARA Tier 2 and TRI reports in the past?

6. Has my facility submitted info to USEPA indicating that we are subject to RMP?



Several websites are publicly available.  
You can snoop on your own facility 'anonymously'.  
*[Alternately, others can snoop on your facility anonymously.]*

# Has my facility submitted SARA 313 TRI reports in the past?


United States Environmental Protection Agency  
LEARN THE ISSUES | LAWS & REGULATIONS | ABOUT EPA

## TRI Explorer

You are here: [EPA Home](#) » [TRI](#) » [TRI Explorer](#) » [Release Reports – Release Facility Report](#)

### Release Reports

Fact Sheets
Release Reports
Waste Transfer Reports
Waste Quantity Reports

Chemical
Facility
Federal Facility
Trends
Geography
Industry

### Release Facility Report ?

This site uses pop-up windows. [Click here to learn how to allow pop-ups from this site](#) Go To New Report

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**Year of Data** ?

2018 v

**Geographic Location** ?

All of United States v

**Chemical** ?

All chemicals v

**Industry** ?

All Industries v

**Data Set** ?

The default is Data Source: 2018 Updated Dataset (released April 2020)

Select 2018 National Analysis Dataset (released November 12, 2019)

Select 2017 Updated Dataset (released April 2019)

Generate Report

**Report columns to include** ?

TRIF ID

Number of Form Rs

Number of Form As (starting 1995)

Longitude/Latitude

**Total On-site Disposal or Other Releases**

Details

On-Site Disposal to Class I Wells, RCRA Subtitle C Landfills, and Other On-Site Landfills

Other On-Site Disposal or Other Releases

**Total Off-site Disposal or Other Releases**

Details

Off-Site Disposal to Underground Injection Wells, RCRA Subtitle C Landfills, and Other Landfills

Other Off-Site Disposal or Other Releases

**Total On-and Off-site Disposal or Other Releases**

[TRI Explorer | US EPA](#)

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- **Now that compliance obligations have been inventoried, map out:**
  - What you need to do to demonstrate compliance?
  - Who is best suited to complete each task, and who is the backup?
  - By When does each task need to be completed?
- **Range of sophistication to match the facility's obligations**
- **Three potential options to**
  - Spreadsheet
  - Outlook or Teams
  - Software Solution



# Environmental Program Essential Elements – Compliance Calendar

Environmental Calendar - XYZ Pigment Mfg, Oak Creek, Wisconsin - DRAFT / Work in Progress				Today's Date:	7/20/22
Area	Requirement	Due Date	Last Action Taken	Responsibility	Notes
Air	Comply with Air Permits and keep records required by the Air Permits.	on-going		XYZ	Joe Schmoe is sending daily monitoring results to Geo
	Leak testing	quarterly		XYZ	Joe Schmoe is sending 1/4-ly leak test docs to Geo
	Assess the facility's compliance with it's Air Permits & prepare the combined Summary of Monitoring Report and Compliance Certification for the previous calendar year.	by March 1st annually	CEO signed & mailed on 2/25/22 via FedEx.	Geosyntec, using data from XYZ	CEO certifies this Report / Certification.
	Determine/document actual facility air emissions for the prev. CY, and compare to reporting thresholds; prepare the annual Air Emissions Inventory Report or document exempt.	by March 1st annually		Geosyntec, using data from XYZ	WAMS system used to prepare & submit. CEO certifies this Report
	Annual differential pressure and other monitoring device calibrations.		American Instrument Corp. completed calibrations 3/8/22.	XYZ	XYZ to have AIC complete calibrations again in Mar-23.
	Complete 3 Stack Tests during CY2022.	April 19, August 16 & TBD. DNR to attend all 3 tests.	6/15: uploaded Apr-22 stack test report via WAMS.	XYZ to contract with ET&E to do the stack tests; Geosyntec to be present during the stack tests.	
Hazardous Waste	Comply w/generator requirements for haz waste generation, storage, labeling, manifesting, shipping, & weekly inspections.	on-going	Matt to do weekly CAA inspections	XYZ	Geosyntec prepared log sheet for this purpose.
	Determine/document generator status for the previous CY, prepare annual Generator's Report or doc exempt status.	by March 1st annually	2/25: Geo submitted SQG Report & CEO signed Cert page	Geosyntec using data from XYZ	WDNR Switchboard / WAMS ID.
	RCRA Training		Geo trained 2/10/22.	Geosyntec	training due next Feb-23
Wastewater	Comply w/Permit 620.08 and keep records required by Permit.	on-going		XYZ	XYZ report violations w/in 24 hrs
	Complete Water Balance	by February 1st annually	4/1/22 (do by Feb. 1 next year)	Geosyntec	CEO certifies this
	Quarterly sampling by the MMSD at XYZ's V-notch weir.	1/4-ly, scheduled via MMSD call to XYZ.	likely next sampling in July	Geosyntec	MMSD to notify Geosyntec of schedule to enable split samples
	Semiannual Hauled Waste Reports to MMSD.	by Jan 31 and by Jul 31 for the prior 6 mos	Reports submitted 1/19/22 & 6/29/22	Geosyntec, using data from XYZ	Next Report due by 1/31/23
Storm Water	Comply with WDNR Tier 1 Permit (WI-S067849-05) and keep records required by the Permit.	on-going		XYZ	
	Annual Impaired Water search & documentation.	by February 15 annually	Geo emailed doc. XYZ 1/4/22.	Geosyntec	avoid chloride discharge
	Quarterly wet weather inspections of storm water outfalls within 30 - 60 minutes of the start of rain event.	one per calendar quarter	Kris doing these inspections	XYZ	Geo trained Kris Marks & gave him log & map to use.
	Semiannual dry weather inspections	twice per calendar year		Geosyntec	
	Annual Facility Site Compliance Inspection (AFSCI)	~1 year since last one	4/19: Geo conducted the AFSCI. Has XYZ implemented recommendations?	Geosyntec	do during a dry weather insp.
	Industrial Storm Water Training	must schedule training		Geosyntec	Geo preparing training matls.
EPCRA Tier 2	Periodically check on maximum on-site storage quantities, document the maximum.	continue to track monthly maximums		XYZ	
	Monitor new chemicals brought on-site, review SDS to identify any EHSS, etc.	on-going		XYZ	
	Document max. on-site storage quantities and review SDSs for the previous CY to determine if Report required; document	by March 1st annually	2/15: Geo submitted Report & XYZ paid fee	Geosyntec, using data from XYZ	WHOPRS
EPCRA TRI	Track chemicals manufactured, processed or otherwise used. Air Permit record-keeping can likely be used for this purpose.	on-going		XYZ	
	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	6/14: TRI Reports submitted via CDX	Geosyntec, using data from XYZ	
HAZCOM	Provide HAZCOM training to XYZ employees as requested.	must schedule training		Geosyntec	Geo preparing training matls.

- **Outlook or Teams-based**

- In Outlook, enter due dates as appointments



- Include reminder pop-ups

- *Maybe 30 days in advance for annual items, a week in advance for monthly items, etc.*

- Can 'invite' person(s) responsible to complete

- Once requirement completed, edit the appointment to be for the next due date

- In Teams, use the Planner app to assign tasks to team members

- Include reminder pop-ups

- Assigned tasks need to be closed out

- **Cost: Low**



- **Software Solution**

- Intelex, Dakota, Cority

- **Cost: Medium to high**

- (still have to take the time to populate the program)



## BEST PRACTICE

Don't schedule too many 'reminders'!  
*lest they get ignored.*

## System Folders and Index

Folder	Sub-folder	Description
Air Quality	SOP	Air Quality Standard Operating Procedure
	Permits & Applications	Permit(s) / Permit Applications / Exemption Documentation
	Record-Keeping	e.g., solvent usage logs, differential pressure monitoring logs, training records, etc.
	Correspondence with Agency	e.g., Compliance Certifications, Summary of Monitoring Reports, Air Emissions Inventory Reports, Agency Inspection Reports, Emails, Notices of Violation or Non-Compliance relating to Air, etc.
Industrial Wastewater	SOP	Industrial Wastewater Standard Operating Procedure
	Permits & Applications	Permit(s) / Permit Applications
	Record-Keeping	e.g., Wastewater Sampling Lab reports, training records, etc.
	Correspondence with Agency	e.g., Discharge Monitoring Reports, Agency Inspection Reports, Notices of Violation or Non-Compliance
	TTO and/or Slug Control Plan	Total Toxic Organics Plan and/or Slug Discharge Control Plan
Hazardous Waste	SOP	Wastes Standard Operating Procedure
	Waste Determinations	e.g., waste sampling lab reports, documented generator knowledge
	Record-Keeping	e.g., Manifests, Waste Shipment Logs / Reports, Weekly Hazardous Waste Inspection logs, training records, etc.
	Correspondence with Agency	e.g., Hazardous Waste Generator Reports, Agency Inspection Reports, Notices of Violation or Non-Compliance
	Contingency Plan	
Chemical Inventory - EPCRA	SOP	EPCRA Standard Operating Procedure
	Record-Keeping	e.g., Tier II and TRI Reporting Calculations, Submitted Reports or Exemption Documentation, etc.
	Correspondence with Agency	e.g., Notices of Violation or Non-Compliance
Industrial Storm Water	SOP	Industrial Stormwater Standard Operating Procedure
	Permits & Applications	Permit or No Exposure Certification / Permit Applications
	Record-Keeping	e.g., Monthly Inspection logs, Annual Facility Site Compliance Inspection (AFSCI), lab analysis, Training records, etc.
	Correspondence with Agency	e.g., SWP3 Summary, Notice of Intent, Notice of Termination, Agency Inspection Reports, Notices of Violation or Non-Compliance, etc.
	Storm Water Pollution Prevention Plan - SWP3	
Spills and Releases	Record-Keeping	e.g., release information, reports to agency(ies), changes made to prevent reoccurrence, etc.
	Correspondence with Agency	e.g., Notices of Violation or Non-Compliance, etc.
Facility Maps, Drawings, Diagrams		
Org Charts		Description of roles/responsibilities



- **Environmental SOPs addressing requirements (or to document how to maintain exempt status)**
  - Air permitting / air emissions
  - Hazardous waste management
  - Wastewater discharges/permits
  - Industrial stormwater discharges
  - Spill prevention
  - EPCRA
- **If applicable, or document how to maintain exempt status**
  - Risk management planning
  - Process safety management
  - DHS CFATS
- **Roles and responsibilities**
  - Who is responsible for what; who reviews?
  - Very important to know who is ultimately responsible, clearly, in writing
  - Clearly state in SOPs and Compliance Calendar



- **SOPs can be simple or detailed**
  - Simple for less complex facilities
  - More detailed for an environmental permit that is critical for the facility's continued operation
  - *Want SOPs to be useable*
- **Review and update**
  - By SOP owner
  - On a pre-determined & defined frequency
  - Regulatory changes, change in operations, etc.
- **Reference cards and signage**
  - Typically, at the point of use



- **TRAIN Employees**
  - On contents of the SOPs
  - Make it interesting, engaging
- **Hands On** training tends to ‘stick’ better
- **Quiz** trainees to ensure they ‘get it’
- **Record** who took the training when
- **Continuously** review and improve the training materials



- **Internal**

- Environmental must be involved with upcoming facility projects, product changes, etc.
- Planned process change:
  - Air emissions
  - Wastewater discharges
  - Chemicals used / stored on-site
- Consider implementing a formal Management of Change (MOC) process

- **External**

- Regulations
- Permits
  - Renewals, general permit tweaks



- **Don't have to have a formal MOC**
  - Like what is required for Process Safety Management (PSM)
  - But must actively look for facility and regulation changes that impact you
- **Should have written guidelines to:**
  - Memorialize the facility's process
  - Use to train those new to EHS Role (or retrain employees)



- **Worst case scenario**

- One person responsible, no mentoring for succession or redundancy, little oversight by management, no documented program
- He / she leaves (or God forbid, gets injured / is unable to work)
- No written program leads to:
  - What do we do now?
  - How do we train the next person? Where do we start??
  - Non-compliances (fines / penalties)
  - Drain on (already thin) resources..
  - Ability to continue to operate may come into question..



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