

Environmental Compliance at Ready Mixed Concrete Plants in Ohio



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Seminar Outline

1. Storm Water and Process Water
2. Air Emissions
3. Oil Products
4. Hazardous and Universal Wastes
5. EPCRA and TRI

The 4 “Rs” of Environmental Compliance

1. Rules
2. Requirements
3. Recordkeeping
4. Reporting

Part 1 – Storm Water and Process Water



Ohio EPA Industrial Storm Water Program “The Rules”

- In 1990 the U.S. EPA published regulations requiring initial permit applications for industrial storm water discharges (storm water NPDES permits) including group applications.
- General Permit No. OHR000005 dated January 1, 2012 was based on the U.S. EPA Industrial Storm Water Multi-Sector General Permit and added requirements for quarterly visual assessments and benchmark monitoring.
- The current General Permit No. OHR000006 is dated May 8, 2017 and expires May 31, 2022. This general permit is very similar to OHR000005.
- The Ohio EPA should start work on the permit renewal in early 2022 and the renewal will likely be based on the current U.S. EPA Multi-Sector.

Industrial SW General NPDES Permit “The Requirements”

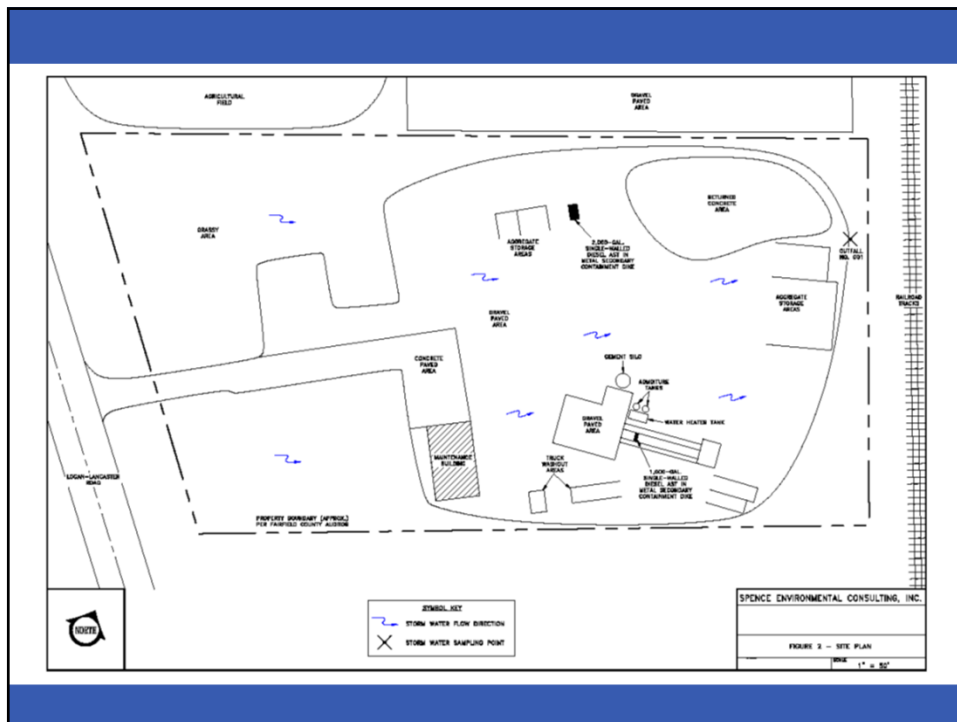
- Written Storm Water Pollution Prevention Plan (SWPPP)
- Best Management Practices (BMPs)
- Employee Training
- Inspections
- Monitoring and Recordkeeping
- Reporting
- Corrective Actions

Storm Water Pollution Prevention Plan (SWPPP)

- Storm Water Pollution Prevention Team
- Site Plan
- Summary of Potential Pollutant Sources
- Employee Training
- Control Measures / Best Management Practices (BMPs)
- Certification of No Non-Storm Water Discharges (i.e., Process Water)
- Routine Facility Inspections (Weekly, Monthly, Quarterly)
- Storm Water Quarterly Visual Assessments
- Benchmark Monitoring
- Annual Reports
- Corrective Actions

Site Plan

- The site plan needs to include the following information.
 - ✓ Property boundaries, significant structures and impervious surfaces and property size in acres.
 - ✓ Potential pollutant sources including the RMC plant, storage piles, storage tanks, maintenance areas, washout areas, etc.
 - ✓ Directions of storm water flow including sheet flow, ditches, pipes, and swales and the location of all storm water outfalls.
 - ✓ Receiving waters in the immediate vicinity of your facility.
 - ✓ Locations of significant spills or leaks.
 - ✓ Each outfall should be assigned a identification code (e.g., Outfall No. 001, No. 002, etc.) and approximate outline of the areas draining to each outfall.
 - ✓ Storm water BMPs including sediment traps, pits or ponds.



Potential Pollutant Sources

- RMC plant including truck loading area (sediment).
- Storage piles including sand, gravel and returned concrete (sediment).
- Paved areas including sediment and leaks from loaders, trucks and other equipment (sediment and oil products).
- Fuel tanks and equipment maintenance areas (petroleum products).
- Areas where leaks of oil or hazardous pollutants have occurred.
- Truck washout and truck body washing areas (elevated pH, sediment and petroleum products). These areas need to be contained and the water recycled to prevent discharges.

Employee Training

- Train employees annually who work in areas where industrial materials or activities are exposed to storm water, or are responsible for implementing the SWPPP including pollution prevention team members.
- Training shall cover the specific control measures, monitoring, inspection, reporting, and documentation requirements.
- Makes sure the annual training is documented in the SWPPP including the training date, topics covered, employee names, employee job descriptions and employee signatures.

Best Management Practices (BMPs)

- Minimize impervious areas at your facility and infiltrate runoff onsite if possible.
- Slow the flow of storm water using vegetated swales.
- Conserve and restore natural property buffers (vegetated areas along plant boundaries).
- Clean paved and unpaved areas on a routine basis to remove sediment. This may include pavement sweeping or vacuuming and the scraping and placement of new stone in unpaved areas.

Best Management Practices (BMPs)

- Ensure proper operation of dust collectors including good capture of dust during truck loading.
- Promptly clean up spills of petroleum products and other hazardous substances including admixtures using dry methods (e.g., absorbent pads and booms).
- Install and maintain sediment traps, basins and ponds at outfalls to remove sediment in storm water runoff.
- Prevent non-storm water discharges including process water from truck washout and truck body washing through the use and maintenance of washout systems.

BMPs – Sector Specific Requirements (Good Housekeeping Requirements)

- With good housekeeping, prevent or minimize the discharge of spilled cement, aggregate (including sand or gravel), kiln dust, fly ash, settled dust, or other significant material in storm water from paved portions of the site that are exposed to storm water.
- Consider sweeping regularly or using other equivalent measures to minimize the presence of these materials. Indicate in your SWPPP the frequency of sweeping or equivalent measures. Determine the frequency based on the amount of industrial activity occurring in the area and the frequency of precipitation.
- You shall also prevent the exposure of fine granular solids (cement, fly ash, kiln dust, etc.) to storm water, where practicable, by storing these materials in enclosed silos, hoppers, or buildings, or under other covering.

BMPs – Sector Specific Requirements

- **Drainage Area Site Map:** Document in the SWPPP the locations of the following, as applicable: bag house or other dust control device; recycle/sedimentation pond, clarifier, or other device used for the treatment of process wastewater; and the areas that drain to the treatment device.
- **8.E.3.2 Certification:** For facilities producing ready-mix concrete, concrete block, brick, or similar products, include in the non-storm water discharge certification a description of measures that ensure that process waste waters resulting from washing trucks, mixers, transport buckets, forms, or other equipment are discharged in accordance with NPDES requirements or are recycled.



Storm Water Pond for Sediment Removal (Settling).



Vegetated Swale at Around Perimeter of Property.



Grass Covered Areas by Paved Drive.



Clean Pavement in Truck Parking Area.



Clean Pavement and Well Maintained Storage Areas.



Catch basin adjacent to plant receiving water from adjacent washout basin. What can be done?



Cement fines in drainage ditch adjacent to plant.



Where is the storm water from this area going?

Inspections

- Routine Facility Inspections:
 - Conduct routine facility inspections of all areas of the facility where industrial materials or activities are exposed to storm water, and of all storm water control measures.
 - Perform inspections at least quarterly.
 - Perform the inspections when the facility is in operation and inspections shall be performed by qualified personnel with at least one member of your storm water pollution prevention team participating.
 - At least once each calendar year, the routine facility inspection shall be conducted during a period when a storm water discharge is occurring.

Inspections

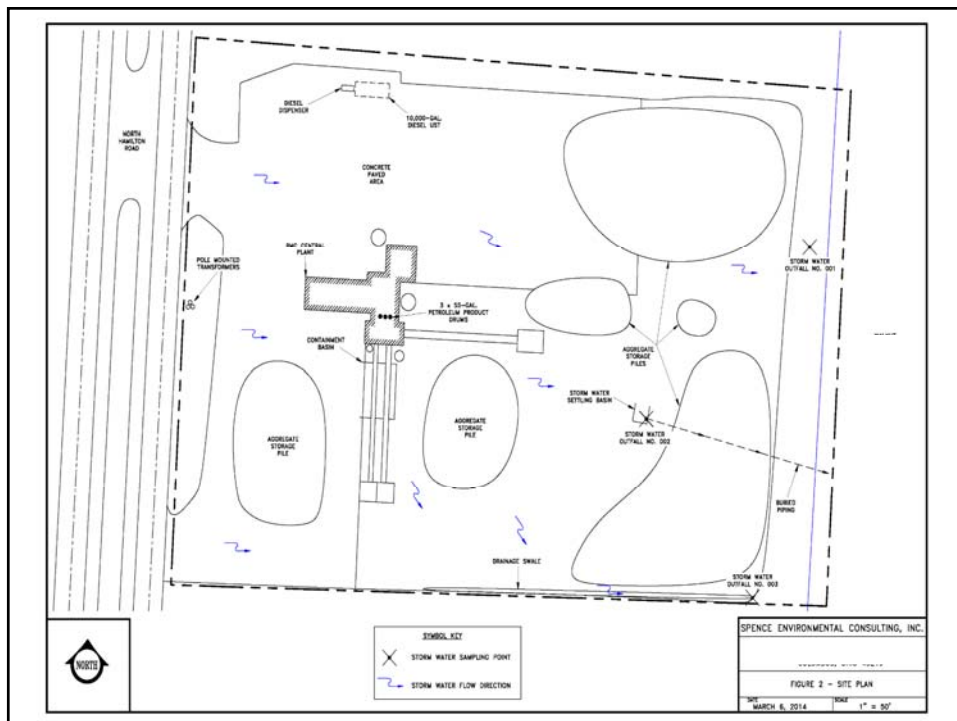
- Document each routine facility inspection and maintain this documentation onsite with your SWPPP including:
 - Inspection date and time and the name(s) and signature(s) of the inspector(s).
 - Weather information and a description of any discharges occurring at the time of the inspection.
 - Previously unidentified discharges of pollutants from the site.
 - Control measures needing maintenance or repairs and failed control measures that need replacement.
 - Incidents of noncompliance observed.
 - Additional control measures needed to comply with the permit requirements.

Storm Water Monitoring

- Quarterly Visual Assessments
- Periodic Benchmark Sampling and Analysis

Storm Water Outfalls

- Storm water sampling is performed at each storm water outfall. An outfall may include the outlet from a storm sewer or drainage ditch or in areas receiving sheet flow. The number and location of the storm water outfalls at each site will be determined during the updating of the SWPPP.
- The collection of samples from each outfall is not required if the outfalls are “substantially identical”. Substantially identical outfalls are outfalls that you believe discharge substantially identical effluents, based on the similarities of the general industrial activities and control measures, exposed materials that may significantly contribute pollutants to storm water, and runoff coefficients of their drainage areas. You may monitor the effluent of just one of the outfalls and report that the results also apply to the substantially identical outfall(s), provided that you perform visual assessments on a rotating basis. However you must sample each substantially identical outfall throughout the period of your coverage under this permit.





Storm Water Outfall from Storm Sewer



Storm Water Outfall from Small Sediment Trap



Sheet Flow from Pavement and Outfall to Drainage Swale

Quarterly Storm Water Sampling

- Collect samples in first 30 minutes of an actual discharge from a storm event.
- If it is not possible to collect the sample within the first 30 minutes of discharge, the sample shall be collected as soon as practicable after the first 30 minutes and you shall document why it was not possible to take samples within the first 30 minutes.
- In the case of snowmelt, samples shall be taken during a period with a measurable discharge from your site.
- Collected sample during storm events with at least 72 hours (3 days) from the previous discharge.
- If it is not possible to collect the sample on discharges that occur at least 72 hours (3 days) from the previous discharge, the sample shall be collected as close to this storm interval as practicable and you shall document why it was not possible to take samples from a 72 hour (3 day) storm interval.

Quarterly Visual Assessments

- Once each calendar quarter for the entire permit term, you shall collect a storm water sample from each outfall and conduct a visual assessment of each of these samples.
- The visual assessment shall be made using a clean, clear glass, or plastic container, and examined in a well-lit area.
- You shall visually inspect the sample for the following water quality characteristics:
 - Color;
 - Odor;
 - Clarity;
 - Floating solids;
 - Settled solids;
 - Suspended solids;
 - Foam;
 - Oil sheen; and
 - Other obvious indicators of storm water pollution.

Quarterly Visual Assessment Documentation

- You shall document the results of your visual assessments and maintain this documentation onsite with your SWPPP including:
 - Sample location(s)
 - Sample collection date and time, and visual assessment date and time for each sample;
 - Personnel collecting the sample and performing visual assessment, and their signatures;
 - Nature of the discharge (i.e., runoff or snowmelt);
 - Results of observations of the storm water discharge;
 - Probable sources of any observed storm water contamination,
 - If applicable, why it was not possible to take samples within the first 30 minutes and/or from a 72 hour (3 day) storm interval.

Benchmark Monitoring

- Total Suspended Solids (TSS) Analysis
- Benchmark is 100 milligrams per liter (mg/l) or 100 parts per million.
- Benchmark concentration is not an effluent limitation and the exceedance of the benchmark concentration is not a permit violation.
- However, site modifications will be required if the benchmark concentration is exceeded.
- During the first 12 quarterly monitoring periods of your permit coverage, you shall select a total of 4 quarterly monitoring periods (as identified in Part 6.1.7) and perform benchmark monitoring. Over this 3-year period, one benchmark sampling event shall be taken during each of the quarterly monitoring periods unless your facility is always inactive and unstaffed for a particular quarterly monitoring period. After collection of quarterly samples, you shall average your 4 monitoring values and compare to the benchmark concentration.

Benchmark Sample Collection and Reporting

- Each monitored outfall should be sampled using a clean sampler or by directly collecting the sample in a new clean sample container. The sample container must be properly labeled and a chain of custody record prepared for the sample. The sample containers and chain of custody record will be provided to each plant. The collected samples and the chain of custody should be shipped in a cooler with ice to the selected analytical testing laboratory. TSS should be analyzed by EPA method 160.2 or Standard Method 2540D.
- The samples should be collected at the same time as the quarterly visual assessment samples.
- All benchmark monitoring data must be submitted to Ohio EPA using Ohio EPA's online electronic discharge monitoring report (eDMR) system no later than 30 days after you have received your complete laboratory results for all monitored outfalls for the reporting period.

Data Exceeding Benchmarks

- Based on your 4 monitoring results (or their average), if the monitoring value for TSS exceeds 100 mg/l, you shall perform the following in year 4 of this permit.
 - Review the selection, design, installation and implementation of your control measures to determine if modifications are necessary to meet the control measures / best management practices (BMPs) of this permit; or
 - Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the control measures / BMP requirements of this permit.

Annual Report

- You shall complete an annual report using the Annual Reporting Form (Appendix I of the permit) provided by Ohio EPA. You are not required to submit your annual report to Ohio EPA unless specifically requested. The timeframe to complete the report is at the discretion of the permittee but the same schedule to complete shall be maintained throughout this permit term. You shall keep the completed annual reports with your SWPPP.

Conditions Requiring Corrective Action

- Construction or a change in design, operation, or maintenance at your facility significantly changes the nature of pollutants discharged in storm water from your facility, or significantly increases the quantity of pollutants discharged.
- Sampling results exceeds an applicable benchmark when compared during year 4 of this permit.
- Document discovery in SWPPP within 24 hours.
- Corrective action within 30 days & document corrective action in SWPPP.

Conditions Requiring Corrective Action

- Unauthorized release or discharge (e.g., spill, leak, or discharge of non-storm water;
- You become aware, or Ohio EPA determines, that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
- An inspection or evaluation of your facility by an Ohio EPA official or local MS4 operator determines that modifications to the control measures are necessary;
- You find in your routine facility inspection or quarterly visual assessment that your control measures are not being properly operated and maintained.

Industrial SW General NPDES Permit “Recordkeeping”

1. Annual Training Records
2. Routine Facility Inspections (At least quarterly)
3. Quarterly Visual Assessments
4. Benchmark Monitoring Data (At least 1 from each calendar quarter)
5. Annual Reports
6. Corrective Action Records.

Maintain all Records for at least 3 Years after the date the permit expires.

Additional MSQP Documentation
 INSERT FACILITY PERMIT TRAINING NUMBER

INSERT FACILITY NAME

B. Employee training

Instructions:

- Keep records of employee training, including the date of the training (see Part 2.1.2.9 of the 2008 MSQP).
- For in-person training, consider using the tables below to document your employee trainings. For computer-based or other types of training, keep similar records on who was trained and the type of training conducted.

Training Date: Insert Date of Training	
Training Description: Insert Description of Training	
Trainer: Insert Trainer(s) names	
Employee(s) trained	Employee signature
Insert Name	
Insert Name	
Insert Name	
Insert Name	
Insert Name	

Training Date: Insert Date of Training	
Training Description: Insert Description of Training	
Trainer: Insert Trainer(s) names	
Employee(s) trained	Employee signature
Insert Name	
Insert Name	
Insert Name	
Insert Name	
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Training Date: Insert Date of Training	
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Employee(s) trained	Employee signature
Insert Name	
Insert Name	
Insert Name	
Insert Name	
Insert Name	

EPA Additional MSQP Documentation Template, January 13, 2009
2

SWPPP/SPCC Quarterly Facility Inspection Checklist

Inspector Name: _____ Date / Time: _____ Weather Conditions: _____

Area	Inspection Items	OK ✓	Comments / Action Items
Ready Mixed Concrete Plant	Inspect plant and grounds for accumulation of cement and sediment from air emissions. Also inspect central dust collectors for proper operation and capture of fugitive emissions during loading operations.		
Two Single-Walled 6,000-Gallon On-Road Diesel Fuel Aboveground Storage Tank (AST)	Inspect storage tanks, product lines, and dispenser for signs of leaks, spills, and for damaged or leaking piping. Check secondary containment for signs of liquid in the diked areas. Note: If liquid is present in the dike, the tank should be taken out of service and inspected by a certified tank inspector.		
Double-Walled 2,000-Gallon Off-Road Diesel Fuel AST	Inspect storage tank, product lines, and dispenser for signs of leaks, spills, and for damaged or leaking piping. Check interstices monitor for signs of liquid in the interstices. Note: If liquid is present in the interstices, the tank should be taken out of service and inspected by a certified tank inspector.		
330-Gallon ASTs and 55-Gallon Drums containing Petroleum Product	Inspect ASTs drums for signs of leaks or spills and damaged or leaking storage vessels and containment areas. Remove and properly dispose of any accumulated liquids.		
Admixture Storage Tanks	Inspect admixture storage tanks for damaged or leaking tanks or piping and worn or malfunctioning valves.		
Acid Wash Chemical Storage Tanks	Inspect acid wash chemical storage tanks for damaged or leaking tanks or piping and worn or malfunctioning valves. Check secondary containment areas and remove and properly dispose of accumulated liquid.		
Sand and Aggregate Storage Piles	Inspect storage piles for sediment impacts to storm water runoff and housekeeping.		
Truck Washout/Washdown Area	Inspect washout and washdown areas to verify all wash water is being contained and recycled. Also check containment system for solids and remove the solids as needed.		
Access Drives and Truck Parking Areas	Inspect drives and parking areas for sediment and oil staining from leakage from equipment. Clean the pavement as needed.		
Storm Water Drainage Swales And Outfall No. 001	Inspect the storm water drainage swales and outlet (Outfall No. 001) for accumulation of cement and sediment and remove the sediment as needed.		
Sediment and Erosion Controls	Inspect grass covered areas for bare ground and make sure these areas are either seeded or covered with gravel.		
Electrical Transformers	Inspect transformer and surrounding area for condition and signs of leakage.		
Spill Kits / Absorbent Materials	Check supply of spill pads and absorbent materials and replenish as needed.		

SEC, Inc.


Quarterly Storm Water Visual Assessment and Benchmark Monitoring Chain Of Custody Form

Year and Quarter: _____ Sampler Name and Title: _____

Quarterly Sampling Data - Sample Each Monitored Outfall each Quarter Qtr. 1 - Jan. 1 to Mar. 31, Qtr. 2 - April 1 to June 30, Qtr. 3 - July 1 to Sept. 30, Qtr. 4 - Oct. 1 to Dec. 31			
Sample Collection Data:	Outfall No. 001		
Sample Time and Date			
Nature of Discharge (Runoff or Snowmelt)			
If applicable, why was it not possible to take samples within the first 30 minutes and/or 72 hour (3 day) storm interval.			
Probable sources of any observed storm water contamination.			
Any corrective action required as a result of a quarterly visual assessment			
Quarterly Visual Assessment Data:			
Color (No or Describe)			
Odor (No or Describe)			
Clarity (Clear or Describe)			
Floating Solids (No or Describe)			
Settled Solids (No or Describe)			
Suspended Solids (No or Describe)			
Foam (Yes or No)			
Oil Sheen (Yes or No)			
Other obvious indicators of Pollution (Describe)			
Benchmark (BM) Samples for TSS Analysis (Yes/No)			
Sampler Signature:		BM Samples Relinquished Time and Date:	
BM Samples Accepted by Signature:		BM Samples Accepted Time and Date:	

Notes: _____

SEC, Inc.

	Ohio Environmental Protection Agency 50 WEST TOWN STREET, SUITE 700, COLUMBUS, OHIO 43215 ANNUAL REPORT FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY UNDER THE NPDES MULTI-SECTOR GENERAL PERMIT
A. Permit Information	
Ohio EPA Facility Permit #: <input type="text" value="13811111111111111111"/>	
B. Facility Information	
1. Facility Name: <input type="text" value="XX"/>	
2. Facility Phone: <input type="text" value="XXXXXXXXXX"/> Ext. <input type="text" value="XXXX"/>	
3. Facility Mailing Address:	
Street: <input type="text" value="XX"/>	
City: <input type="text" value="XXXXXXXXXXXXXXXXXXXX"/> State: <input type="text" value="XX"/> ZIP Code: <input type="text" value="XXXXXX"/>	
County: <input type="text" value="XXXXXXXXXXXX"/>	
4. Point of Contact:	
First Name: <input type="text" value="XXXXXXXXXX"/> Middle Initial: <input type="text" value="X"/> Last Name: <input type="text" value="XXXXXXXXXXXXXXXXXXXX"/>	
C. General Findings	

1. Provide a summary of your past year's routine facility inspection documentation (see Part 4.1 of the permit).

Storm Water Discharges Associated With Industrial Activity

2. Provide a summary of your past year's quarterly visual assessment documentation (see Part 4.2 of the permit).

3. For any four-sample (minimum) average benchmark monitoring exceedance, if after reviewing the selection, design, installation, and implementation of your control measures, and considering whether any modifications are necessary to meet the effluent limits in the permit, you determine that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice, provide your rationale for why you believe no further reductions are achievable (see Part 6.2.1.2 of the permit). Enter "N/A" if not applicable.

4. Provide a summary of your past year's corrective action documentation (see Part 3.4 of the permit). (Note: If corrective action is not yet completed at the time of submission of this annual report, you must describe the status of any outstanding corrective action(s).) Also describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the permit.

D. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my knowledge and belief, true, accurate, and complete, I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name: Middle Initial: Last Name:

Title:

Signature: Date:

E-mail:

Storm Water Discharges Associated With Industrial Activity

Ohio EPA eDMR System “Reporting”

- All benchmark monitoring data shall be submitted to Ohio EPA using Ohio EPA's online electronic discharge monitoring report (eDMR) system (<https://ebiz.epa.ohio.gov/login.jsp>) no later than 30 days (email date or postmark date) after you have received your complete laboratory results for all monitored outfalls.
- If you cannot access eDMR, paper reporting forms shall be submitted by the same deadline to the appropriate Ohio EPA District Office.
- For additional information, visit the following Ohio EPA website address: <http://epa.ohio.gov/dsw/edmr/eDMR.aspx>.
- The Electronic Discharge Monitoring Report Submission System (eDMR) data reporting system is entirely web-based and accessible via Internet Explorer through any internet connection.
- The eDMR web site includes training and registration information including a user's guide.

Part 2 – Process Water



Process Water

- Sources of process water generated at ready mixed concrete plants include:
 - ✓ Truck mixer washout water.
 - ✓ Truck body wash water.
 - ✓ Overfilling or discharge of concrete truck water tanks.
 - ✓ Excess water generated during the operation of the batch plant or other sources.
- The discharge of process water or other water not directly resulting from rain or snow melt is not permitted under the Ohio EPA industrial storm water general permit.

Process Water

- There are four alternatives for the management of process water:
 - ✓ Contain and reuse the water for truck washout, truck washing, batch water and potentially for dust control.
 - ✓ Obtain a wastewater NPDES permit and discharge the water to surface water after treatment for pH (6.5 to 9.0) and suspended solids (30 mg/L average with 45 mg/L maximum).
 - ✓ Discharge to a sanitary sewer system under a pretreatment permit which may include treatment for pH and suspended solids.
 - ✓ Contain water on-site in quarry lake or other impoundment with no outlet.

Process Water Recycling

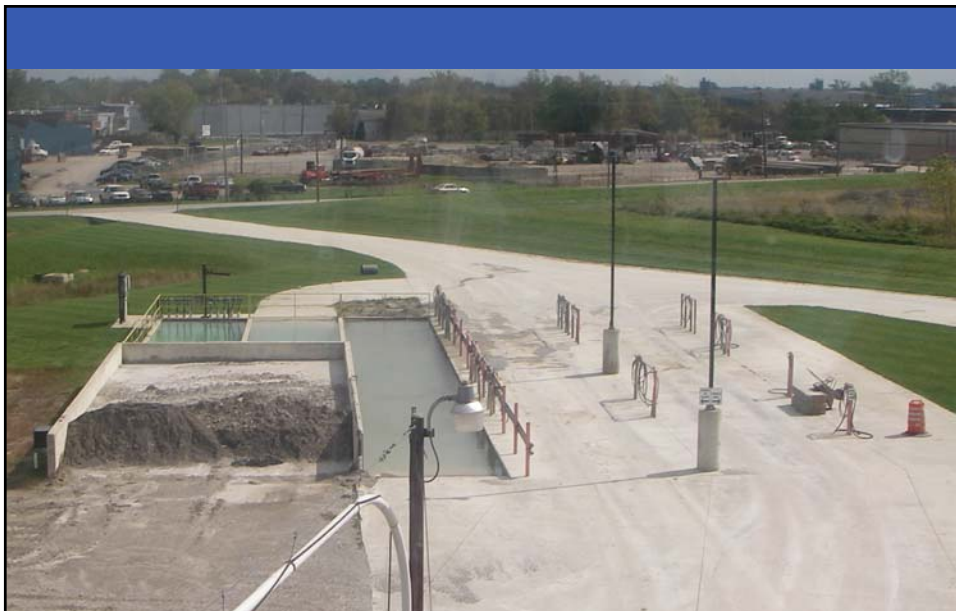
- Process water recycling is a four step process.
 1. Collect process water from truck washout, truck body washing and other sources in pits or pond.
 2. Provide detention to allow the solids to settle.
 3. Pump settled (clear) water for reuse for truck washout, truck body washing or use as batch water.
 4. Remove solids from pits or pond on routine basis for recycling with returned concrete.



Washout Recycling System.



Washout Recycling System.



Truck Body Washdown Recycling System.



Holding Tanks for Reuse of Process Water in Batch Plant.

Part 2 – Air Emissions



Air Permits “The Rules”

- Air permits are required by the Ohio EPA Ohio for sources of air emissions with a potential to emit exceeding the “de-minimus” threshold of 10 lbs./day of air pollutants including particulate matter.
- Some sources of air emissions have permanent exemptions.
 - Boilers less than 10 million Btu.
 - Storage tanks less than 19,800 gallons.
 - Small solvent parts washers.
 - Non-road engines used to propel equipment or stationary at a single location for less than 12 consecutive months or two years if used seasonally.

Permits to Install and Operate (PTIO)

- Ready mixed concrete (RMC) plants, storage piles and roadways generate air emissions (particulate matter) in excess of the “de-minimus” threshold and these sources at ready mixed concrete plants are typically not exempt or are eligible for a permit-by-rule.
- These sources also do not typically exceed the “major source” threshold of 100 tons/year for particulate matter.
- Therefore “minor source” (state only) air permits are required at RMC Plants in Ohio.
- The Ohio EPA “minor source” air permits include a Permit to Install and Operate (PTIO) prior to installation or modification of the source.
- PTIOs must be renewed throughout the life of the source on a 10-year cycle.

Permit-by-Rule

- Emergency electrical generators, emergency water pumps, or emergency air compressors powered by emergency engines greater than fifty horsepower operating at any one facility for no more than five hundred hours per rolling twelve-month period and where such engine burns gasoline, natural gas, distillate oil, or liquid petroleum gas.
- Boilers greater than ten million British thermal units per hour and less than or equal to one hundred million British thermal units per hour.
- Auto body refinishing including painting provided painting is performed in a paint booth and paint type, usage rates, paint booth operation and other criteria are met.

General Air Permits

- The Ohio EPA Division of Air Pollution Control (DAPC) has developed model general permits (GPTIOs) for select sources in Ohio including:
 - ✓ GP 4.1: Truck Mix RMC Batch Plants (<250,000 Cu. Yds./Yr.)
 - ✓ GP 4.2: Central Mix RMC Batch Plants (< 300,000 Cu. Yds./ Yr.)
 - ✓ GP 5.1: Paved and Unpaved Roadways (<125,000 VMT/Yr.)
 - ✓ GP 5.2: Paved and Unpaved Roadways (<320,000 VMT/Yr.)
 - ✓ GP 7.1: Storage Piles (<15 Acres)
 - ✓ GP 7.2: Storage Piles (<6 Acres)
 - ✓ GP 7.3: Storage Piles (<15 Acres with no Tons/Yr. PE Limits)

RMC Plant General Air Permits “The Requirements”

- The Model General Permits GP4.1 (Truck Batch) and GP4.2 (Central Batch) divide the plant into the following operations.
 - ✓ Transfer of Sand and Aggregate
 - ✓ Cement, Slag and Fly Ash Silos
 - ✓ Weigh Hopper Loading
 - ✓ Truck Loading
 - ✓ Central Mix Drum Loading (Central Mix Plants)

RMC Plant Air Permit Requirements

- Transfer of Sand and Aggregate:
 - ✓ Visible Particulate Emissions shall not exceed 10 percent opacity as a 3-minute average. Except for one minute during any 60-minute period.
 - ✓ Maintain minimum drop heights.
 - ✓ Sand and aggregate shall have an inherent moisture content sufficient to minimize or eliminate visible emissions of fugitive dust.

What is Opacity?

- Opacity is the amount of light which is blocked by a medium, like smoke or a tinted window.
- Opacity is a measurement and is usually stated as a percentage. An opacity of 0% means that all light passes through, and an opacity of 100% means that no light can pass through.
- Opacity provides an indication of the concentration of pollutants being emitted. The more particles which are emitted, the more light will be blocked, and, as a result, a higher opacity percentage is achieved.

100%	80%	60%	45%	30%	20%	10%

RMC Plant Air Permit Requirements

- Cement, Slag and Fly Ash Silos:
 - ✓ Cement and cement supplement shall be transferred pneumatically to the silos. The transfer system shall be adequately enclosed so as to eliminate visible emissions of fugitive dust. Any visible emissions from the delivery vehicle shall be cause for the immediate halt of the unloading process until the situation is corrected.
 - ✓ Each cement and cement supplement silo vent shall be adequately enclosed and vented to a fabric filter. The enclosure shall be sufficient to eliminate visible emissions at the point of capture.
 - ✓ Each fabric filter shall achieve an outlet emission rate of not greater than 0.030 grains of particulate matter per dry standard cubic foot of exhaust gases or no visible emissions from the outlet(s).

RMC Plant Air Permit Requirements

- Weigh Hopper Loading:
 - ✓ The weigh hopper shall be sufficiently enclosed so as to minimize or eliminate at all times visible emissions or fugitive dust.
 - ✓ The transfer materials to the concrete batch batching weight hoppers shall be enclosed and vented to a fabric filter. The enclosure shall be sufficient so as to minimize or eliminate at all times visible emissions of fugitive dust at the point of capture.
 - ✓ Each fabric filter shall achieve an outlet emission rate of not greater than 0.030 grains of particulate matter per dry standard cubic foot of exhaust gases or no visible emissions from the outlet(s).

RMC Plant Air Permit Requirements

- Truck Loading (Truck Mix Plant):
 - ✓ Visible Particulate Emissions shall not exceed 10 percent opacity as a 3-minute average. Except for one minute during any 60-minute period.
 - ✓ A fabric filter dust collection system shall be used to control fugitive dust emissions from the truck mix loading process. The system shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point of capture.
 - ✓ Each fabric filter shall achieve an outlet emission rate of not greater than 0.030 grains of particulate matter per dry standard cubic foot of exhaust gases or no visible emissions from the outlet(s).

RMC Plant Air Permit Requirements

- Central Mixer (Central Mix Plant):
 - ✓ Shall be adequately enclosed and vented to a fabric filter. The enclosure shall be sufficient to eliminate visible emissions at the point of capture.
 - ✓ Each fabric filter shall achieve an outlet emission rate of not greater than 0.030 grains of particulate matter per dry standard cubic foot of exhaust gases or no visible emissions from the outlet(s).

RMC Plant Air Permit Production Limits

- Truck Mix:
 - ✓ The maximum hourly production rate shall not exceed 200 cubic yards of concrete (400 tons) per hour.
 - ✓ The maximum annual production shall not exceed 250,000 cubic yards of concrete (500,000 tons) per year.
- Central Mix:
 - ✓ The maximum hourly production rate shall not exceed 300 cubic yards of concrete (600 tons) per hour.
 - ✓ The maximum annual production rate shall not exceed 300,000 cubic yards of concrete (600,000 tons) per year.

RMC Plant Air Permit Monitoring

- **Fabric Filters:** Weekly checks when the emissions unit is in operation for any visible particulate emissions from fabric filters.
- **Fugitive Emissions:** Weekly checks when the emissions unit is in operation for any visible particulate emissions from sand and aggregate transfer point and truck loading.

RMC Plant Air Permit “Recordkeeping”

- **Fabric Filters:** The presence of absence of visible particulate emissions shall be notes in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log.
 - ✓ The total duration of a visible emissions incident.
 - ✓ Any corrective action taken to eliminate visible emissions.
- **Fugitive Emissions:** Visible particulate emissions from sand and aggregate transfer points and truck loading. If visible particulate emissions are observed, the permittee shall also note the following in the operations log.
 - ✓ Whether the emissions are representative of normal operations.
 - ✓ If not representative of normal operations, the cause of the visible emissions.
 - ✓ The total duration of an visible emissions incident.
 - ✓ Any corrective action taken to eliminate visible emissions.

WEEKLY AIR EMISSIONS MONITORING FORM
READY MIXED CONCRETE PLANT
ABC CONCRETE COMPANY, COLUMBUS, OHIO

Date: _____ Observers Name: _____

Inspection Item	Inspection Result	Total Duration of Visible Emissions and Any Corrective Action Taken
Cement Silo #1 Baghouse (Visible Emissions)	Yes / No	
Slag Silo #2 Baghouse (Visible Emissions)	Yes / No	
Fly Ash Silo #3 Baghouse (Visible Emissions)	Yes / No	
Cement Weigh Hopper Baghouse (Visible Emissions)	Yes / No	
Truck Loading Dust Collector (Visible Emissions)	Yes / No	

Inspection Item	Inspection Result	Normal Operations	Total Duration of Visible Emissions and Any Corrective Action Taken
Agg. Bin Loading (Visible Emissions)	Yes / No	Yes / No	
Agg. Batcher (Scale) Loading (Visible Emissions)	Yes / No	Yes / No	
Truck Loading (Visible Emissions)	Yes / No	Yes / No	

Notes:

- No visible emissions from fabric filter systems (silo and weigh hopper baghouses and truck loading dust collector).
- Maximum 10 percent opacity as a 3-minute average for bin, batcher and truck loading.
- Submit Annual PER to Ohio EPA as required by the Permit.

RMC Plant Air Permit “Reporting”

- Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit.



Division of Air Pollution Control
Annual Permit Evaluation Report (PER)

EU ID: P001
EU Description: 74 TPH Concrete Batch Plant

Facility ID: _____

Please provide date below if not present.	
Completion of initial installation date:	09/06/1995
Begin installation/modification date:	09/06/1995
Commence operation after installation or latest modification date:	09/06/1995

Were there any deviations or exceedances from the following PTIO requirements?

- A. Operational restrictions or emission limitations? Yes ___ No ___
- B. Monitoring, record keeping, or reporting requirements? Yes ___ No ___
- C. If "Yes" for A or B above, then submit the appropriate information as specified in the Detailed Emissions Unit Form Instructions #1 and #2 above. If any visible emission incident occurred during the reporting period, then submit the appropriate information as specified in #3.
- D. In the applicable PTIO, are there additional reporting requirements for this EU that need to be met in this PER? If "yes", please include the information in the "Additional Information and Corrections" section of this PER. Yes ___ No ___

Roadways

“The Requirements”

- Paved: No visible Particulate Emissions except for 6 minute during any 60-minute period.
- Unpaved: No visible Particulate Emissions except for 13 minutes during any 60-minute period.
- Periodic application of asphalt, oil, water or other suitable dust suppression chemicals on gravel roads and parking lots.
- Promptly remove earth and/or other material from paved streets onto which such material has been deposited.
- Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times.
- Prepare and implement Work Practices Plan.
- If required, compliance with the visible PE limitations determined in accordance with Test Method 22.

Work Practices Plan

- The permittee shall develop and implement a site-specific work practices plan designed to minimize or eliminate fugitive dust from the permittees paved and unpaved roadways and parking areas.
- The work practices plan shall identify the following:
 - Each roadway segment and storage pile area.
 - Frequency of inspections to determine if control measures are needed.
 - Identification of record keeping form to track inspections and treatment of roadways.
- Submit Work Practices Plan within 30 days of permit issuance and begin using the Work Practices Plan within 30 days of Ohio EPA approval. Templates are available on Ohio EPA website.

Roadways “Recordkeeping”

- Daily inspection records will include the following:
 - ✓ Roadway segments to be inspected for visible emissions of fugitive dust.
 - ✓ The date of each inspection and name of the inspecting employee.
 - ✓ The results of the inspection (visible emissions of fugitive dust were or were not sufficiently minimized or eliminated).
 - ✓ If additional measures to minimize or eliminate visible emissions of fugitive dust were determined unnecessary, a description of why additional measures were not needed.
 - ✓ If additional measures were determined necessary, a description of the additional measures utilized to minimize or eliminate visible emissions of fugitive dust, and the date these additional measures were implemented or applied.
 - ✓ The name of the individual or company contracted to implement additional measures to minimize or eliminate visible emissions of fugitive dust, or the name of an individual or company representative that can verify that such measures were taken.

Daily Record Keeping Paved Roadways (Roadway Segment A)

Month: _____ Year: _____

Day	Inspection Conducted		Inspector Initials	Inspection Results		Treatment Type		Reason Why No Treatment Needed			
	Yes	No		Treatment Needed	No Treatment Needed	Water	Chemical Application	No Dust Observed	Roadway Wet	Snow Covered	Moisture Content Sufficient
1											
2											
3											
4											
5											
6											
7											
8											
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30											
31											

For Days where the facility was not operated, indicated DNO for Did Not Operate.

Roadways “Reporting”

- Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit.

The image shows a form titled "PER Detailed EU Form" from the Ohio Environmental Protection Agency, Division of Air Pollution Control. The form is for EU ID: F001, which is for "Paved and Unpaved Roadways". It includes a section for dates: "Completion of initial installation date: 06/08/1995", "Begin installation/modification date: 06/08/1995", and "Commence operation after installation or latest modification date: 06/08/1995". There are also sections for reporting requirements, including "Were there any deviations or exceedances from the following PTIO requirements?" and "In the applicable PTIO, are there additional reporting requirements for this EU that need to be met in this PER?".

Ohio Environmental Protection Agency
Division of Air Pollution Control
Annual Permit Evaluation Report (PER)

PER Detailed EU Form

EU ID: F001
EU Description: Paved and Unpaved Roadways
Facility ID:

Please provide date below if not present.

Completion of initial installation date:	06/08/1995
Begin installation/modification date:	06/08/1995
Commence operation after installation or latest modification date:	06/08/1995

Were there any deviations or exceedances from the following PTIO requirements?

A. Operational restrictions or emission limitations? Yes ___ No ___

B. Monitoring, record keeping, or reporting requirements? Yes ___ No ___

C. If "Yes" for A or B above, then submit the appropriate information as specified in the Detailed Emissions Unit Form Instructions #1 and #2 above. If any visible emission incident occurred during the reporting period, then submit the appropriate information as specified in #3.

D. In the applicable PTIO, are there additional reporting requirements for this EU that need to be met in this PER? If "yes", please include the information in the "Additional Information and Corrections" section of this PER. Yes ___ No ___

Storage Piles “The Requirements”

- No visible Particulate Emissions except for 13 minutes during any 60-minute period.
- Maintain minimal drop heights for stackers and front-loaders and avoid dragging the front-end loader bucket along the ground.
- Use chemical stabilization/dust suppressants and/or watering /sprinkling systems at sufficient treatment frequencies to ensure compliance during load-in and load-out.
- Control measures for wind erosion from the surfaces of all storage piles including chemical stabilization, watering /sprinkling systems/hoses, covering the storage piles.
- Prepare and implement Work Practices Plan (same as roadways).
- Compliance with the visible PE limitations determined in accordance with Test Method 22.

Storage Piles “Recordkeeping”

- Daily inspections will include the following elements.
 - ✓ Storage pile or storage pile area inspected.
 - ✓ Date inspected.
 - ✓ Name of employee responsible for the inspection.
 - ✓ Result of the inspection (needs treated or does not need treated).
 - ✓ A description of why no treatment was needed.
 - ✓ Date treated.
 - ✓ Name of employee responsible for treatment of the storage pile or storage pile area.
 - ✓ Method used to treat the storage pile or storage pile area.

Daily Record Keeping Storage Piles											
Month: _____ Year: _____											
Day	Inspection Conducted		Inspector Initials	Inspection Results		Treatment Type		Reason Why No Treatment Needed			
	Yes	No		Treatment Needed	No Treatment Needed	Water	Chemical Application	No Dust Observed	Wet	Snow Covered	Moisture Content Sufficient
1											
2											
3											
4											
5											
6											
7											
8											
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For Days where the facility was not operated, indicated DNO for Did Not Operate.

Storage Piles “Reporting”

- Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit.

PER Detailed EU Form	
EU ID: F003	Facility ID:
EU Description: Sand and aggregate handling and storage	
Please provide date below if not present.	
Completion of initial installation date:	06/06/1995
Begin installation/modification date:	06/06/1995
Commence operation after installation or latest modification date:	06/06/1995
Were there any deviations or exceedances from the following PTIO requirements?	
A. Operational restrictions or emission limitations?	Yes___ No___
B. Monitoring, record keeping, or reporting requirements?	Yes___ No___
C. If "Yes" for A or B above, then submit the appropriate information as specified in the Detailed Emissions Unit Form Instructions #1 and #2 above. If any visible emission incident occurred during the reporting period, then submit the appropriate information as specified in #3.	
D. In the applicable PTIO, are there additional reporting requirements for this EU that need to be met in this PER? If "yes", please include the information in the "Additional Information and Corrections" section of this PER.	
	Yes___ No___

Relocation of a Portable Plant

- There are two options for relocating a portable concrete plant or crusher including:
 - One-time approval and
 - Pre-approval.
- The relocation process can only be used for plants with existing PTIOs that indicate the plant is portable.
- Roadway and storage pile PTIOs can also be relocated with the plant.
- The pre-approval process is used when the future location for the equipment is known and/or if the portable equipment will be relocated to the same location more than once.

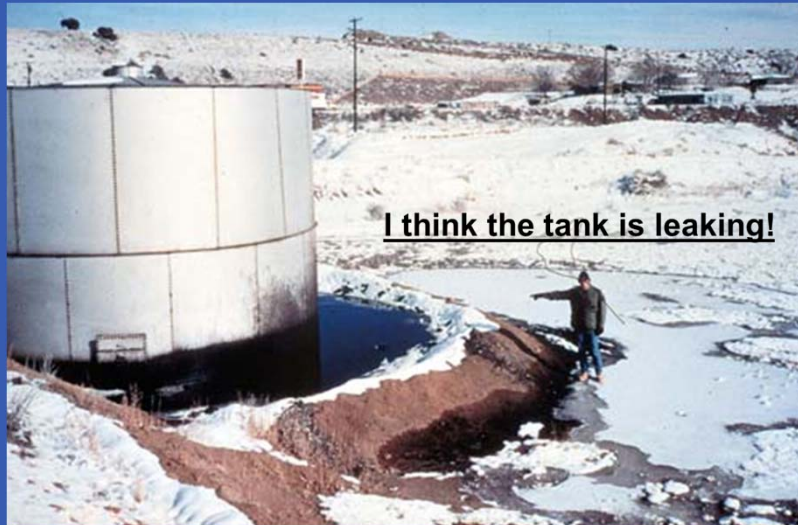
Relocation of a Portable Plant

- One time approval requires the submittal of the request for approval to relocate a portable source form at least 21 days prior to of the planned relocation. If approved the Ohio EPA will publish a notice in the local newspaper and the plant can be relocated after the 21 day period.
- The owner must submit a portable plant relocation confirmation form to the permitting field office (the office where the air permit was issued) within 21 days of relocation.
- The relocation approval for a one time relocation is also valid for up to 365 days after approval.

Relocation of a Portable Plant

- The pre-approval process is the same as the one time approval process except the pre-approved site will be approved for three years and the portable equipment can be relocated to the pre-approved site as needed for the three year period with the same approval. However the portable plant relocation form will need to be submitted to the permitting field office within 21 days of each relocation to a pre-approved site.
- See Engineering Guide #44 at <http://www.epa.state.oh.us/dapc/engineer/eguides> for further details and to obtain the notification form.

Part 3 – Oil Spill Prevention



Oil Spill Prevention, Control and Countermeasure (SPCC) “The Rules”

- The U.S. Environmental Protection Agency's Oil Pollution Prevention Rule became effective January 10, 1974. The regulation is published in Title 40, Code of Federal Regulations, Part 112 (40 CFR 112) and includes all oil products. The most recent amendments were completed in 2009.
- The purpose of the rule is to prevent the discharge of oil into navigable waters of the United States or adjoining shorelines.
- Facilities subject to the rule must prepare and implement a plan to prevent any discharge of oil into or upon navigable waters of the United States or adjoining shorelines. The plan is called a Spill Prevention, Control, and Countermeasure (SPCC) Plan.

What Facilities are Regulated by the SPCC Rule?

- A Facility is Regulated by the SPCC Rule if:
 - ✓ Greater than 1,320 gallons aboveground oil storage capacity including the capacities of all oil storage containers of 55-gallons or greater in size.
 - ✓ Greater than 42,000 gallons underground oil storage unless the underground storage tanks are regulated by the Ohio Bureau of Underground Storage Tank Regulations.
 - ✓ Anyone else selected by the U.S. EPA.

Written SPCC Plan “The Requirements”

- A SPCC Plan is required for all facilities regulated by the SPCC Rule. A SPCC Plan is a comprehensive spill prevention program that minimizes the potential for oil discharges. SPCC Plans include the following information.
 - ✓ Professional engineer certification, management approval and five-year plan review.
 - ✓ Facility diagram including facility drainage.
 - ✓ Oil spill pathways and possible flow rates.
 - ✓ Recorded facility inspections.
 - ✓ Site security measures (i.e., fencing or equal).
 - ✓ Secondary containment for all storage vessels.
 - ✓ Loading/unloading and transfer procedures.
 - ✓ Personnel training and oil discharge prevention briefings.
 - ✓ Emergency contacts and spill reporting procedures.

SPCC Rule Amendment for Smaller Facilities (Tier 1 Qualified Facilities)

- Owners or operators of facilities with an aboveground oil storage capacity of 10,000 gallons or less may self-certify their SPCC Plans in lieu of review and certification by a Professional Engineer (PE) if they meet the following criteria.
 - ✓ Have 10,000 gallons or less in aggregate aboveground oil storage capacity with no single vessel larger than 5,000 gallons.
 - ✓ Have not had a single discharge of oil to navigable waters exceeding 1,000 U.S. gallons or two discharges of oil to navigable waters each exceeding 42 U.S. gallons within any twelve-month period, in the three years prior to the SPCC Plan certification date.
 - ✓ Tier 1 SPCC Template:
<http://www.epa.gov/osweroe1/content/spcc/tier1temp.htm>

SPCC Rule Amendment for Smaller Facilities (Tier 2 Qualified Facilities)

- Owners or operators of facilities with an aboveground oil storage capacity of 10,000 gallons or less may self-certify their SPCC Plans in lieu of review and certification by a Professional Engineer (PE) if they meet the following criteria.
 - ✓ Have 10,000 gallons or less in aggregate aboveground oil storage capacity with a single vessel larger than 5,000 gallons.
 - ✓ Have not had a single discharge of oil to navigable waters exceeding 1,000 U.S. gallons or two discharges of oil to navigable waters each exceeding 42 U.S. gallons within any twelve-month period, in the three years prior to the SPCC Plan certification date.
 - ✓ Prepare a self-certified Plan in accordance with all applicable requirements of §112.7 and subparts B or C of the rule, in lieu of a PE-certified Plan.

Secondary Containment

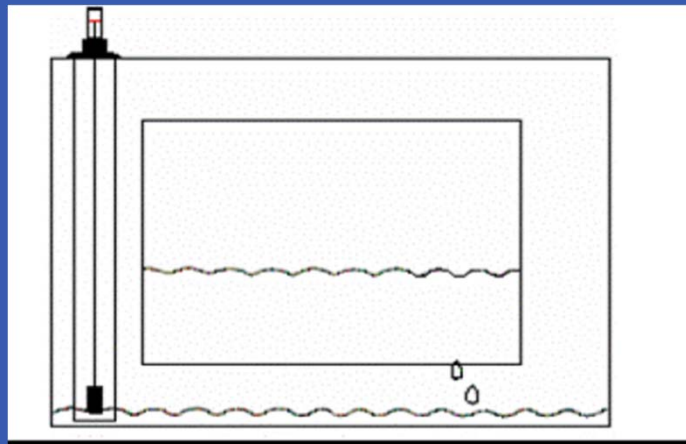
- Secondary containment is required for all bulk oil storage vessels 55-gallons in size or greater. Sufficient capacity is required in the secondary containment to contain the single largest vessel located within the secondary containment plus sufficient additional capacity for precipitation if the secondary containment is exposed to precipitation.
- Secondary containment is also required for tank loading/unloading racks.
- Secondary containment is not required for operational use of oil including vehicle fuel tanks, transformers, hydraulic equipment and other equipment where the primary purpose is not the storage of oil. However, you must have provisions to contain a spill and prevent migration from your property.



Double-Walled Storage Tank



Leak Gauge for Double-Walled Tanks



Leak Gauge for Double-Walled Tanks



Secondary Containment for Polyethylene Totes



Oil Storage Tanks and 55-Gallon Drums with Secondary Containment.



Drum Overpacks for Outside Drum Storage.



Drums on Spill Pallets.



Spill Kit for Aboveground Storage Tank Dispenser Area



Exterior cleaning and repainting needed. Also has flexible fuel line with no anti-siphon valve (a leak may drain the tank).



Secondary containment needs some attention?



Oil storage tanks without secondary containment and poor housekeeping.



Secondary Containment?



Liquid in containment pallet should be removed on a regular basis.

SPCC Plan Implementation

- Verify all storage vessels of 55-gallons in size or greater have proper secondary containment.
- Verify all storage vessels are in good condition with no exterior corrosion.
- Verify the site has adequate security measures.
- Verify spill containment and cleanup supplies are available on-site (absorbent pads and booms) and you have identified a local oil spill response contractor that can respond quickly to larger spills.
- Perform annual employee training on the contents of the plan and what to do in the event of a spill.
- Perform routine inspections (i.e., weekly, monthly or quarterly).
- Perform routine review of SPCC Plan and verify the plan is accurate and up to date.

SPCC Plan “Recordkeeping”

- **Annual Employee Training Records:** Annual training on the contents of the SPCC Plan and what to do in the event of a spill. This training can be performed in conjunction with annual storm water pollution prevention training.
- **Routine Facility Inspections Records:** These inspections can be performed in conjunction with storm water pollution prevention inspections.

Monthly SPCC Inspection Checklist

Inspector: _____

Date: _____

Area	Inspection Items	OK ✓	Comments / Action Items
10,000-Gallon On-Road Diesel Double-Walled AST, 1,000-Gallon Off-Road Diesel Double-Walled AST, and 500-Gallon Off-Road Diesel Double-Walled AST	<ul style="list-style-type: none"> Inspect external shell of the storage tanks, product piping and dispensers for signs of corrosion, damage, leaks or spills. Inspect interstice monitors for liquid. If liquid is present in an interstice, the tank should be taken out of service and should be inspected by a certified AST inspector. Inspect tank foundations and supports for signs of instability or excessive settlement. Inspect the tank fill and discharge pipes for signs of poor connection that could cause a discharge, and tank vent for obstructions and proper operation. Verifying the proper functioning of overfill prevention systems. 		
Poly Oil ASTs with Containment Dikes and Steel 55-Gallon Oil Drums with Spill Pallets	<ul style="list-style-type: none"> Inspect polyethylene and steel drums for signs of damage, spills or leaks. Inspect containment dikes and pallets for accumulated oil and clean as needed. Inspect maintenance building floors for oil spills and clean as needed. 		
Trucks, Equipment, Access Drives and Parking Areas	<ul style="list-style-type: none"> Inspect trucks and equipment for signs of leaks. Inspect access drives and parking areas for signs of leaks or spills. 		
Drainage Ditches and Detention Pond	<ul style="list-style-type: none"> Inspect drainage ditches and detention pond for signs of oil or oil sheen. 		
Pad Mounted Transformer	<ul style="list-style-type: none"> Inspect transformer for signs of damage and leaks. 		
Spill Kit	<ul style="list-style-type: none"> Check supply of absorbent booms, spill pads and other absorbent materials and replenish as needed. 		

- Retain the completed checklists for 36 months.

SPCC Plan “Reporting”

- If either of the following occurs, submit the SPCC Plan to the U.S. EPA Region 5 Regional Administrator (RA) and the Ohio Environmental Protection Agency (OEPA):
 - ✓ The facility discharges more than 1,000 gallons of oil into or upon the navigable waters of the U.S. or adjoining shorelines in a single spill event; or
 - ✓ The facility discharges oil in quantity greater than 42 gallons in each of two spill events within any 12-month period.

Reportable Spills

- The Reportable Quantity (RQ) for the discharge of oil into or upon navigable waters is an amount which causes a visible film or sheen upon the surface of the water or is an amount of 25 gallons or more, excluding navigable waters.
- An oil spill exceeding an RQ that leaves the property boundaries must be reported to the Ohio EPA Emergency Response Section, Local Emergency Planning District and the jurisdictional fire department with 30 minutes of the first knowledge of the release. The National Response Center (NRC) must also be contacted for RQ involving CERCLA hazardous substances or oil to navigable waters as soon as possible.

Spill Response Actions

- STOP AND CONTAIN THE SPILL IMMEDIATELY using absorbent materials or pads from the spill kit and berm the spill with sand.
- IGNITION SOURCES OFF including facility power and other ignition sources.
- ALERT EMPLOYEES and obtain their assistance in stopping and containing the spill.
- IMMEDIATELY NOTIFY THE SPILL RESPONSE COORDINATOR as listed in your SPCC Plan.
- CHECK DRAINAGE SYSTEMS for spilled products and determine if and how far the spill has migrated and notify any affected neighbors.
- CONTACT THE LOCAL FIRE DEPARTMENT (Call 911) if there is a potential for fire, off-site migration or injury.
- EXTINGUISH FIRE with the correct type of extinguisher if the fire is small and can SAFELY be extinguished.

Spill Response Actions

- If the fire cannot be extinguished:
 - ✓ EVACUATE all persons;
 - ✓ CALL 911 or local fire department emergency number;
 - ✓ VERIFY THAT ALL PERSONNEL ARE PRESENT and away from the fire;
 - ✓ MAINTAIN SAFE DISTANCE; and
 - ✓ AWAIT FIRE FIGHTING FORCES.
- RESTRICT SITE ACCESS and turn away all traffic not related to the Spill Response.
- Properly dispose of all waste products generated from spill clean-up.
- The Spill Response Coordinator will make appropriate contacts.
- The Spill Response Coordinator will coordinate all required reporting under applicable federal, state and municipal laws.

Part 4 – Waste Management

HAZARDOUS WASTE	
FEDERAL LAW PROHIBITS IMPROPER DISPOSAL IF FOUND CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY	
GENERATOR INFORMATION	
NAME _____	
ADDRESS _____ PHONE _____	
CITY _____ STATE _____ ZIP _____	
EPA / MANIFEST ID NO. / DOCUMENT NO. _____	
ACCUMULATION START DATE _____ WASTE NO. _____	

DO NOT PROPERLY SHIP, STORE, AND USE (DO NOT) WITH PROPER	
HANDLE WITH CARE!	

RCRA - Hazardous Waste Management

- In general, RMC companies generate the following waste products that may be classified as hazardous wastes.
 - ✓ Spent paint and solvents from painting operations
 - ✓ Spent parts-washer solvents
 - ✓ Waste gasoline and diesel fuel
 - ✓ Used motor oil
 - ✓ Used shop rags
 - ✓ Lead-acid batteries
 - ✓ Used fluorescent lamps
- RCRA regulations are designed to encourage recycling.

Spent Paints, Paint Filters and Parts-Washer Solvents

- Spent solvent-based paints and thinners generated by from painting operations are hazardous wastes (ignitable waste) unless they are recycled on-site via distillation.
- Waste paint filters should be tested for heavy metals to determine if they need to be managed as a hazardous waste.
- Spent parts-washer solvent is a hazardous waste (ignitable waste).
- Hazardous waste management includes obtaining an Ohio EPA Generator ID, properly storing the waste at the site for a limited period of time, and removal by a licensed hazardous waste transporter for recycling or disposal at a licensed hazardous waste treatment, storage and disposal facility.

Waste Oil Products

- Waste gasoline, diesel fuel and used oil are not typically managed as hazardous wastes as long as they are properly recycled. Recycling may include transporting the waste to an oil recycler or the reuse of used oil in an oil burner (furnace).
- Used oil can be used as fuel in a used oil furnace provided all oil is generated at your business and from household do-it-yourselfers, the furnace is rated at 0.5 million BTUs or less, and all combustion gasses are vented to the outside. Otherwise other requirements may apply.
- Make sure all waste oil products are stored in suitable containers that are properly labeled "USED OIL".

Used Shop Rags

- Paint thinners and some of solvent degreasers are flammable and therefore the used shop rags containing these materials may be classified as a hazardous waste for ignitability. Examples include brake cleaner, acetone, xylenes, and other paint thinners and degreasers.
- The new rules exclude used solvent rags and wipes from potential regulation as a hazardous waste provided the used solvent rags and wipes are properly managed.
- Ohio EPA guidance document can be found at <https://www.epa.state.oh.us/Portals/32/pdf/Solvent%20Contaminated%20Rags%20and%20Wipes.pdf>.

Universal Wastes

- Universal Waste (UW) is a hazardous waste that is managed separate from the hazardous waste program. The following are the four categories of UW that may be managed under the universal waste rule (UWR) in Ohio:
- Lamps including incandescent, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium and metal halide lamps. Lamps can exhibit the toxicity characteristic for some heavy metals (i.e., mercury, lead, cadmium). Lamps must not be broken or crushed.
- Hazardous Waste Pesticides that are either suspended and/or recalled under Section 6 of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), suspended or cancelled as part of a voluntary recall by the registrant or collected in waste pesticide programs.

Universal Wastes

- Mercury-Containing Equipment (MCE) including device or part of a device (excluding batteries and lamps) that contains elemental mercury including thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches, such as light switches in automobiles.
- Discarded Batteries including hazardous waste batteries such as nickel-cadmium batteries and spent lead-acid batteries.
- UW may be stored by the generator for up to one year and UW must be stored in a suitable and properly labeled container (i.e., "Waste Lamps") with the original date of generation. UW must be transported by a UW transporter to a UW recycler.

Floor Drains in Maintenance Shops

- Per OAC 3745-34-11(C), the operation of and injection into a motor vehicle waste disposal well is prohibited. This includes the discharge of liquids from a floor drain in a maintenance shop into a sanitary leach field system.
- Motor vehicle waste disposal wells are prohibited and must be closed in accordance with paragraph OAC 3745-34-11(O). This includes prior notification including a closure plan, removal of contaminated soil and sludge, permanent plugging and certification of the closure.

Part 5 – EPCRA and TRI



SARA Title III “The Rule”

- The Emergency Planning and Community Right-to-Know Act (EPCRA) was passed by Congress in 1986. EPCRA was included as Title III of the Superfund Amendments and Reauthorization Act (SARA) and is sometimes referred to as SARA Title III. The State Emergency Response Commission (SERC) is responsible for administering this program in Ohio.
- EPCRA provides for the collection and availability of information regarding the use, storage, production, and release of hazardous chemicals to the public and emergency responders in your communities.
- The current SERC Manual with the filing information can be obtained at the following web site address.
https://www.epa.ohio.gov/Portals/27/serc/SERC_Manual.pdf

SARA Title III “Reporting”

- The owner or operator of a facility must submit annual reports under SARA Title known as “Tier II Reports” when all of the following conditions are met.
 - ✓ The facility is subject to the OSHA Hazard Communication Standard.
 - ✓ The facility stores or uses a hazardous chemical(s) in quantities of 10,000 pounds or more, or
 - ✓ The facility stores or uses one or more extremely hazardous substances in quantities of 500 pounds or more.
- Hazardous Chemicals at RMC plants in excess of 10,000 pounds may include Portland cement, slag, fly ash, diesel fuel and sand.

SARA Title III “Reporting”

- Reporting Procedures:
 - ✓ Complete filing packages are due March 1, of each and every year, for the previous inventory calendar year. Companies can file either in hard copy as in the past using the forms in this manual or by using U.S. EPA's "Tier 2 Submit" software.
 - ✓ A complete report includes 1) the Facility Identification form(s), 2) Emergency and Hazardous Chemical Inventory form(s), 3) a Facility Map, and 4) Filing Fees for a calendar year.

SARA Title III, Section 313 (Toxic Release Inventory)

- Started in 1988, the Toxics Release Inventory (TRI) contains information on releases transfers, waste management and pollution prevention activities of approximately 650 chemicals and chemical categories from manufacturing facilities throughout the United States.
- Facilities must complete and submit a Toxic Chemical Release Inventory Form (Form R) by July 1 of each year for the preceding year for each of the TRI chemicals that are manufactured or otherwise used above the applicable threshold quantities.

SARA Title III, Section 313 (Toxic Release Inventory)

- TRI reporting must be completed if a facility manufactures or uses greater than 25,000 pounds (in general) of a TRI chemical at greater than 1% concentration.
- What would trigger TRI reporting requirements for RMC Plants in Ohio?
 - ✓ Admixtures containing nitrates (non-chloride admixtures) or other Section 313 regulated chemicals per the MSDS.
 - ✓ Portland cement, slag or fly ash if lead or mercury are listed in the product MSDS sheets (the reporting threshold for lead is 100 pounds and mercury is 5 pounds).

SARA Title III, Section 313 (Toxic Release Inventory)

- In general, a RMC plant located in a cold climate producing over 100,000 cubic yards per year may need to submit Form R reports.
- The calculation to determine if TRI reporting is necessary for admixtures containing nitrates is presented below.
 - ✓ $\text{Admixture density (lbs./gal.)} \times \text{nitrate \%} \times \text{gal./year} = \text{total pounds}$. If total pounds used exceeds 25,000 pounds the Form R reporting is required.
- Additional information and the Form R reporting forms are available at <https://www.epa.ohio.gov/dapc/tri/tri>.