

Inspection and Compliance for Industrial Storm Water Permit Holders: What You Need to Know

Webinar presented by
Ohio EPA, Office of Compliance Assistance and Pollution
Prevention
March 26, 2014

Presenter: Harry Kallipolitis

Division of Surface Water, Central District Office

(614) 728-3844

Harry.kallipolitis@epa.ohio.gov



What we'll cover today:

- Who needs an Industrial Storm Water permit
- MSGP OHR000005 basic requirements
- What inspectors look for during inspections
- Examples of good/bad management practices



Multi-Sector General Storm Water Permit (MSGP) - OHR000005

- 5th generation
 - www.epa.ohio.gov/dsw/permits/GP_industrialstormwater.aspx
- Mostly consistent with federal MSGP
 - Clearer industry specific requirements
 - Existing federal guidance
- OHR000005 allows coverage to more facilities
- Effluent limits for discharges currently covered by individual NPDES permits
- Benchmark monitoring
- Monitoring data to be submitted to Ohio EPA



Conditional Exclusion for No Exposure

- Meet definition of No Exposure:

“All industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff”

- Submit No Exposure Form

- Re-Certify every 5 years

- No Exposure Form and Instructions:

www.epa.ohio.gov/Portals/35/storm/IndustrialStormWater_NoExposure.pdf.



Part 8. Sector-Specific Requirements (Sector S)

29 sectors (A to Z, AA, AB, AC, AD)

- Additional Control Measures/BMPs
 - Additional SWPPP Requirements
 - Additional Inspection Requirements
 - Benchmark Monitoring Requirements
-
- All of the additional requirements per sector found at:

(www.epa.ohio.gov/dsw/permits/GP_industrialstormwater.aspx) Click on “Final Permit” Tab



Part 5. SWPPP

(Storm Water Pollution Prevention Plan)

- SWPPP must be developed prior to submittal of NOI (*NOI = Notice of Intent*)
- Renewal applicants provided 180 days to update
- Guidance Document For Developing SWPPP:
www.epa.gov/npdes/pubs/industrial_swppp_guide.pdf
- SWPPP TEMPLATE:
www.epa.ohio.gov/portals/35/permits/IndustrialStormWater_SampleSWP3Template.doc



Part 5. SWPPP

Key Components

- Storm Water Pollution Prevention Team
- Site Description
- Potential Pollutant Sources
- Description of Control Measures
- Schedules and Procedures
- Signature Requirements



Part 5. SWPPP

Site Description

- Narrative of the nature of Industrial Activities
- General location map
- Site map including:
 - ✓ Storm water flow directions and receiving waters
 - ✓ Location of all pollutant sources
 - ✓ Identification of existing BMPs
 - ✓ Location of storm water outfall and associated watershed
 - ✓ monitoring locations



Part 5. SWPPP

Schedules and Procedures

- Good Housekeeping
- Prevention maintenance
- Spill prevention and response
- Monitoring requirements
- Self-inspections (routine, quarterly, comprehensive)



Part 5. SWPPP

Signature and Other Requirements

- Must be signed by authorized representative
- Required SWPPP modifications
- SWPPP availability
- Additional Documents
 - ✓ NOI
 - ✓ Permit
 - ✓ Spill records
 - ✓ Employee training
 - ✓ Maintenance repairs
 - ✓ Inspection reports



Part 2. Control Measures/BMPs

Best Management Practices (BMP's) must be identified in SWPPP

- Minimize Exposure
- Good Housekeeping
- Maintenance
- Spill Prevention and Response Procedures
- Erosion and Sediment Controls



Part 2. Control Measures/BMPs

(must be identified in SWPPP)

- Management of Runoff
- Salt Storage Piles
- Employee Training
- Non-Storm Water Discharges
- Waste, Garbage and Floatable Debris
- Dust Generation and Vehicle Tracking of Industrial Materials



Part 3. Corrective Actions

Types of Triggering Conditions

- Permit Violations
 - Unauthorized release or discharge
 - Violation of numeric effluent limit
 - An inspection finds that control measures not properly operated and maintained

- Indication of Potential Problems
 - Significant change in facility operation changes the quantity or nature of pollutants discharged
 - Exceedance of benchmarks



Part 3. Corrective Actions

Deadlines

- Within 24 Hours
 - Describe problem identified
 - Document date problem identified
- Within 30 Days
 - Summarize corrective action taken or to be taken, or the basis for determining that no action is needed
 - Document date corrective action initiated, completed, or expect to be completed
- Modifications to control measures must be made before the next storm event if possible, or as soon as practicable following that storm event

Summaries of corrective actions taken must be included in the annual report

Part 4. Inspections

The MSGP requires three types of inspections at all facilities:

- Routine facility inspections (at least quarterly)
- Quarterly visual assessments (quarterly)
- Comprehensive site inspections (annually)
- **Template for ALL record keeping:**

www.epa.ohio.gov/portals/35/permits/IndustrialStormWater_SampleRecordkeepingTemplates.doc



Part 4. Inspections

Routine Facility-Quarterly Visual Assessments

- Evaluation of Controls and Potential Pollutants
- Once a quarter, collect a sample from each outfall for a visual assessment (within first 30 minutes of rain event)



Part 4. Inspections

Visually inspect samples for the following:

Color

Settled solids

Odor

Suspended solids

Clarity

Foam

Floating solids

Oil sheen

Other obvious indicators of storm water pollution

Template for ALL record keeping:

www.epa.ohio.gov/portals/35/permits/IndustrialStormWater_SampleRecordkeepingTemplates.doc



Part 4. Inspections

Comprehensive Site Inspections

- Conduct annually
- Include all areas of facility affected by the permit
- Must include review of any monitoring data
- Inspectors must examine:
 - Industrial materials that could contact storm water
 - Leaks or spills
 - Tracking/blowing of industrial materials or sediment controls needing replacement, maintenance or repair
- Document findings and submit report to Ohio EPA (upon request)

Template for ALL record keeping

www.epa.ohio.gov/portals/35/permits/IndustrialStormWater_SampleRecordkeepingTemplates.doc



Part 6. Monitoring

Everyone is required to do quarterly visual assessments (See Part 4).

But only certain facilities are required to perform analytical monitoring:

Monitoring Type	When does this apply to me?
Benchmark	(www.epa.ohio.gov/dsw/permits/GP_industrialstormwater.aspx) Click on “Final Permit” Tab
Effluent Limitation Guidelines	See MSGP Table 6.1
Other	Written Notice From Ohio EPA

Part 6. Monitoring

- **Benchmark Monitoring**

- An indicator of BMP & SWPPP performance
- Exceeding a benchmark is a red flag; not a violation
- Applicable to 19 of 29 Sectors
- Monitor for both primary industrial activity and any co-located activity
- Choose appropriate location (dst from industrial activities)
- Sampling Sheet flow: www.youtube.com/watch?v=AmEJUNp44aU



Part 6. Monitoring

- **Benchmark Monitoring (Cont.)**
 - Sample all representative outfalls, unless substantially identical
 - Take 4 samples over the course of first 3 years
 - At least 1 sample must represent each calendar quarter (winter, spring, summer, fall)



Part 6. Monitoring

- **Benchmark Monitoring (Cont.)**

- Year 4: Compare average to Benchmark

- Below benchmark value: Continue SWP3 implementation.

- Exceed benchmark value:

- Review BMP selection/design/implementation to determine if modifications are needed, or

- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practices. Document and notify Ohio EPA in next benchmark report*.

- Review BMPs & perform any corrective actions immediately or document why no action is required (See Part 3.2)

Effluent Limitations Guidelines

(MSGP Table 6.1)

Regulated Discharge	Sector	Frequency	Limits
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas	A	1/yr	pH
Runoff from asphalt emulsion facilities	D	1/yr	pH, TSS, O&G
Runoff from material storage piles at cement manufacturing facilities	E	1/yr	pH, TSS
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	J	1/yr	pH, TSS
Runoff from coal storage piles at steam electric generating facilities	O	1/yr	pH, TSS

Part 6. Monitoring

- **Other**
 - Ohio EPA may notify entity of additional discharge monitoring requirements.
 - Notice will state reasons, monitoring locations, parameters, frequency, sample type, and reporting requirements.



Part 7. Reporting & Recordkeeping

- Reporting Monitoring Data to Ohio EPA
 - eDMR (www.epa.state.oh.us/dsw/edmr/eDMR.aspx)
- Annual Report
 - Not required to submit – Maintain onsite
 - www.epa.ohio.gov/portals/35/permits/IndustrialStormWater_SampleRecordkeepingTemplates.doc
- Recordkeeping
 - Maintain for 3 years beyond coverage under this permit expires or is terminated



General Best Management Practices (BMP)

- Applicable to most Sectors
- Evaluation of Common Problems
- Good and Bad Examples



Improper Waste Storage



Proper Waste Management



Improper Barrel Storage



Proper Barrel Storage



Improper Tank Storage

(no secondary containment)



Proper Tank Storage



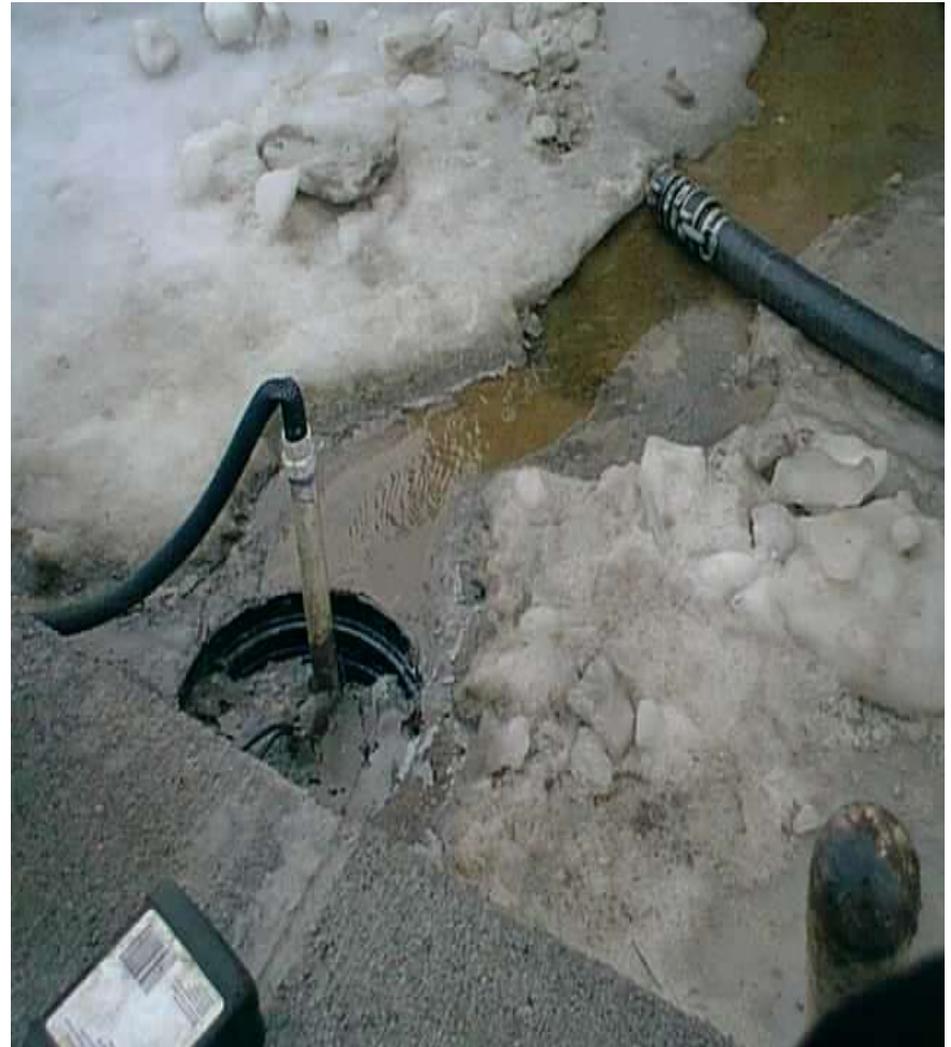
Contained Unloading Pad



Containment for Rail Unloading



Ensure Proper Dewatering of Containment Areas



Uncontrolled Washing Activities



Illicit Discharge of Wash Water



Collection of Wash Water



Sector A

http://www.epa.ohio.gov/dsw/permits/GP_industrialstormwater.aspx

Click on “Final Permit” Tab followed by “Sector A”

8.A.3 Additional Control Measures/Best Management Practices (BMPs).

8.A.3.1 *Good Housekeeping.* (See also Part 2.1.2.2) In areas where storage, loading and unloading, and material handling occur, perform good housekeeping to limit the discharge of wood debris, minimize the leachate generated from decaying wood materials, and minimize the generation of dust.

8.A.4 Additional SWPPP Requirements.

8.A.4.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in your SWPPP where any of the following may be exposed to precipitation or surface runoff: processing areas, treatment chemical storage areas, treated wood and residue storage areas, wet decking areas, dry decking areas, untreated wood and residue storage areas, and treatment equipment storage areas.

8.A.4.2 *Inventory of Exposed Materials.* (See also Part 5.1.3.2) Where such information exists, if your facility has used chlorophenolic, creosote, or chromium-copper-arsenic formulations for wood surface protection or preserving, document in your SWPPP the following: areas where contaminated soils, treatment equipment, and stored materials still remain and the management practices employed to minimize the contact of these materials with storm water runoff.

8.A.4.3 *Description of Storm Water Management Controls.* (See also Part 5.1.4) Document measures implemented to address the following activities and sources: log, lumber, and wood product storage areas; residue storage areas; loading and unloading areas; material handling areas; chemical storage areas; and equipment and vehicle maintenance, storage, and repair areas. If

Table 8.A-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector A1. General Sawmills and Planing Mills (SIC 2421)	Chemical Oxygen Demand (COD)	120.0 mg/L
	Total Suspended Solids (TSS)	100 mg/L
	Total Zinc ¹	Hardness Dependent
Subsector A2. Wood Preserving (SIC 2491)	Total Arsenic	0.34 mg/L
	Total Copper ¹	Hardness Dependent
Subsector A3. Log Storage and Handling (SIC 2411)	Total Suspended Solids (TSS)	100 mg/L
Subsector A4. Hardwood Dimension and Flooring Mills; Special Products Sawmills, not elsewhere classified; Millwork, Veneer, Plywood, and Structural Wood; Wood Pallets and Skids; Wood Containers, not elsewhere classified; Wood Buildings and Mobile Homes; Reconstituted Wood Products; and Wood Products Facilities not elsewhere classified (SIC 2426, 2429, 2431-2439 (except 2434), 2441, 2448, 2449, 2451, 2452, 2493, and 2499)	Chemical Oxygen Demand (COD)	120.0 mg/L
	Total Suspended Solids (TSS)	100.0 mg/L

Sector A (Bad Practices)



Sector A (Good Housekeeping)

Universal Veneer
Photo By: Harry Kallipolitis
Licking River Watershed
11/14/2012



11/14/2012 10:31



012

Sector A (BMP's)



Sector B – Paper & Allied Products

General Permit No.: OHR000005

Page 40 of 141

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart B – Sector B – Paper and Allied Products.

You shall comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.B.1 Covered Storm Water Discharges.

The requirements in Subpart B apply to storm water discharges associated with industrial activity from Paper and Allied Products Manufacturing facilities, as identified by the SIC Codes specified under Sector B in Table D-1 of Appendix D of the permit.

8.B.2 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Table 8.B-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector B1. Paperboard Mills (SIC Code 2631)	Chemical Oxygen Demand (COD)	120 mg/L

Sector B





Sector B (BMP's)



Sector C (Composting SIC 2875)

- Benchmark Monitoring

Table 8.C-1.		
Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector C1. Agricultural Chemicals (SIC 2873-2879, except 2874)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Lead ¹	Hardness Dependent
	Total Zinc ¹	Hardness Dependent
	Phosphorus	2.0 mg/L
Subsector C2. Industrial Inorganic Chemicals (SIC 2812-2819)	Total Aluminum	0.75 mg/ L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
Subsector C3. Soaps, Detergents, Cosmetics, and Perfumes (SIC 2841-2844)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Zinc ¹	Hardness Dependent
Subsector C4. Plastics, Synthetics, and Resins (SIC 2821-2824)	Total Zinc ¹	Hardness Dependent

Sector C (Composting)



Sector C - Concerns



Sector C (BMP's)



Sector E2: Concrete Ready Mix

8.E.2 Additional Control Measures/Best Management Practices (BMPs).

8.E.2.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2) 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.

8.E.3 Additional SWPPP Requirements.

8.E.3.1 *Drainage Area Site Map.* (See also Part 5.1.2) 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.* (See also Part 5.1.3.4) 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.

Subsector E2. Concrete and Gypsum Product Manufacturers (SIC 3271-3275)	Total Suspended Solids (TSS)	100 mg/L
--	---	-----------------

Sector E (Bad Practices)



Sector E (Good Practices)



Sector M (Auto Salvage)

8.M.2 Additional Control Measures/Best Management Practices (BMPs).

- 8.M.2.1 *Spill and Leak Prevention Procedures.* (See also Part 2.1.2.4) Drain vehicles intended to be dismantled of all fluids upon arrival at the site (or as soon thereafter as feasible), or employ some other equivalent means to prevent spills and leaks.
- 8.M.2.2 *Employee Training.* (See also Part 2.1.2.9) If applicable to your facility, address the following areas (at a minimum) in your employee training program: proper handling (collection, storage, and disposal) of oil, used mineral spirits, anti-freeze, mercury switches, and solvents.
- 8.M.2.3 *Management of Runoff.* (See also Part 2.1.2.6) Consider the following management practices: berms or drainage ditches on the property line (to help prevent run-on from neighboring properties); berms for uncovered outdoor storage of oily parts, engine blocks, and above-ground liquid storage; installation of detention ponds; and installation of filtering devices and oil and water separators.

M.3 Additional SWPPP Requirements.

- 8.M.3.1 *Drainage Area Site Map.* (See also Part 5.1.2) Identify locations used for dismantling, storage, and maintenance of used motor vehicle parts. Also identify where any of the following may be exposed to precipitation or surface runoff: dismantling areas, parts (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers) storage areas, and liquid storage tanks and drums for fuel and other fluids.
- 8.M.3.2 *Potential Pollutant Sources.* (See also Part 5.1.3) Assess the potential for the following to contribute pollutants to storm water discharges: vehicle storage areas, dismantling areas, parts storage areas (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers), and fueling stations.
- 8.M.4 **Additional Inspection Requirements.** (See also Part 4.1) Immediately (or as soon thereafter as feasible) inspect vehicles arriving at the site for leaks. Inspect quarterly for signs of leakage all equipment containing oily parts, hydraulic fluids, any other types of fluids, or mercury switches. Also, inspect quarterly for signs of leakage all vessels and areas where hazardous materials and general automotive fluids are stored, including, but not limited to, mercury switches, brake fluid, transmission fluid, radiator water, and antifreeze.

Parameter	Benchmark Monitoring Concentration
Total Suspended Solids (TSS)	100 mg/L
Total Aluminum	0.75 mg/L
Total Lead ¹	Hardness Dependent

Water Hardness Range	Lead (mg/L)
0-25 mg/L	0.021
25-50 mg/L	0.035
50-75 mg/L	0.067
75-100 mg/L	0.103
100-125 mg/L	0.142
125-150 mg/L	0.184
150-175 mg/L	0.227
175-200 mg/L	0.272
200-225 mg/L	0.320
225-250 mg/L	0.368
250-275 mg/L	0.418
275-300 mg/L	0.470
300-325 mg/L	0.522
325-350 mg/L	0.576
350-375 mg/L	0.631
375-400 mg/L	0.687
400+ mg/L	0.715

Sector M (Bad Practices)



Sector M (Bad Practices)



Sector M (Good Practices)



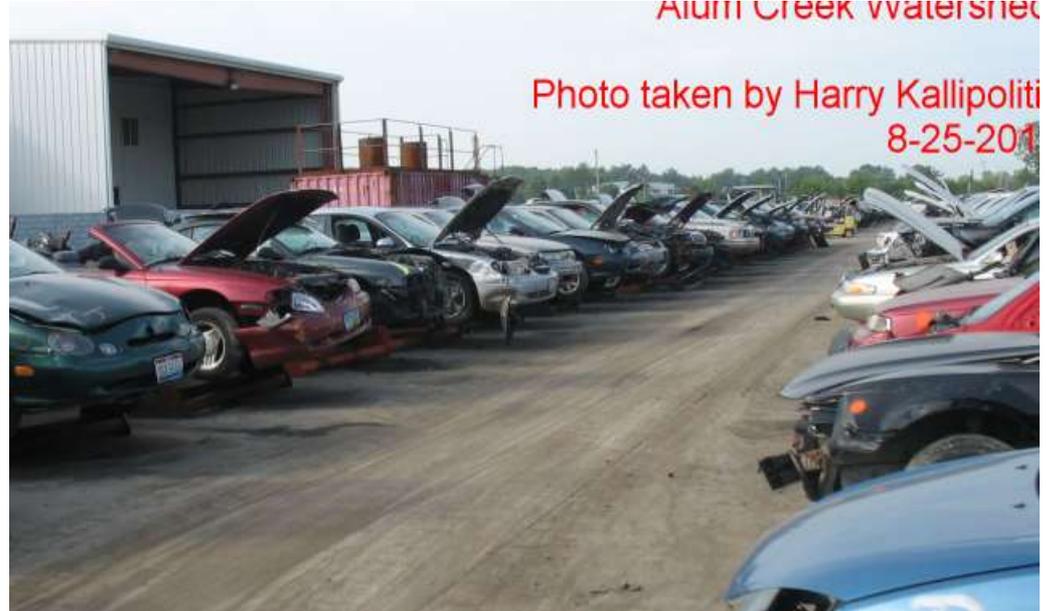
Sector M (Good Practices)

Watershed
by Kallipolitis



Alum Creek watershed

Photo taken by Harry Kallipolitis
8-25-2011



Sector N: Scrap Yard and Recycling

Additional Management Requirements:

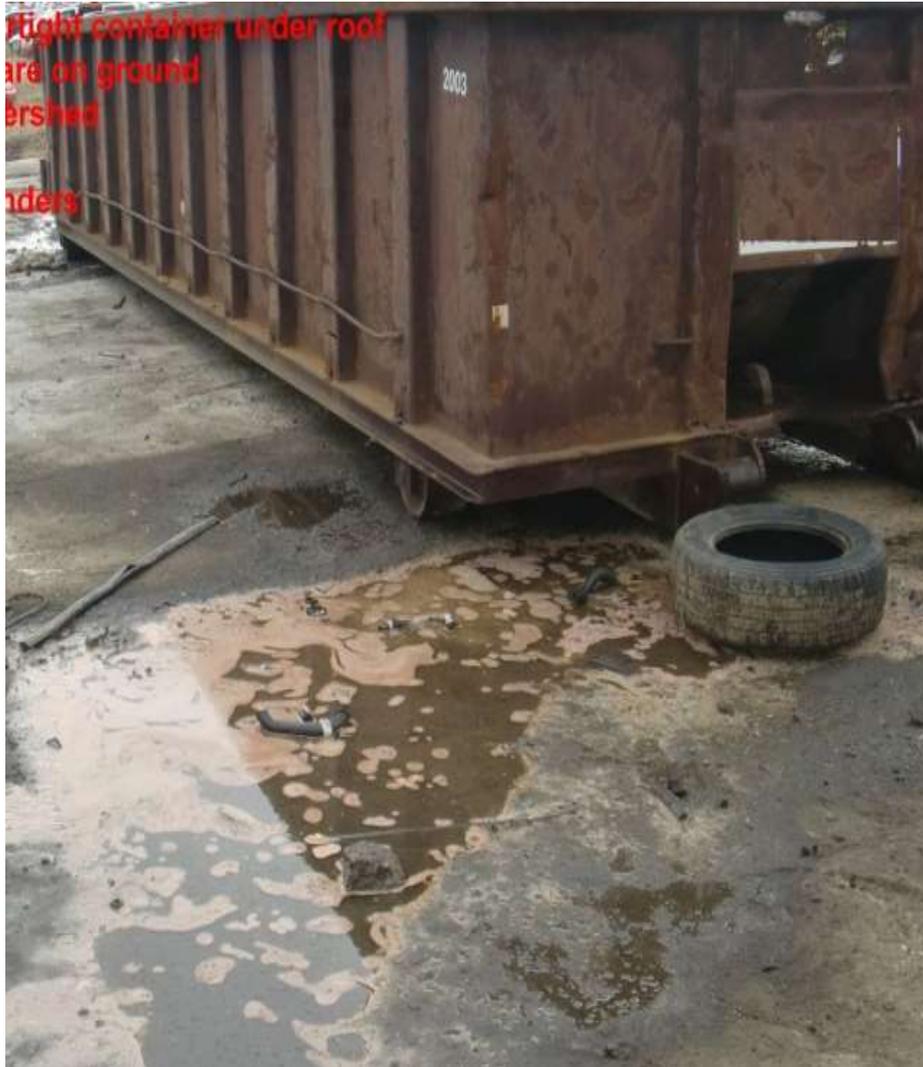
1. Conduct inspections of inbound materials
2. Minimize storm water contact with piles
3. Minimize exposure at processing areas
4. Proper battery management
5. Spill Prevention
6. Maintenance Program

Parameter	Benchmark Monitoring Concentration
Chemical Oxygen Demand (COD)	120 mg/L
Total Suspended Solids (TSS)	100 mg/L
Total Recoverable Aluminum	0.75 mg/L
Total Recoverable Copper ¹	Hardness Dependent
Total Recoverable Lead ¹	Hardness Dependent
Total Recoverable Zinc ¹	Hardness Dependent

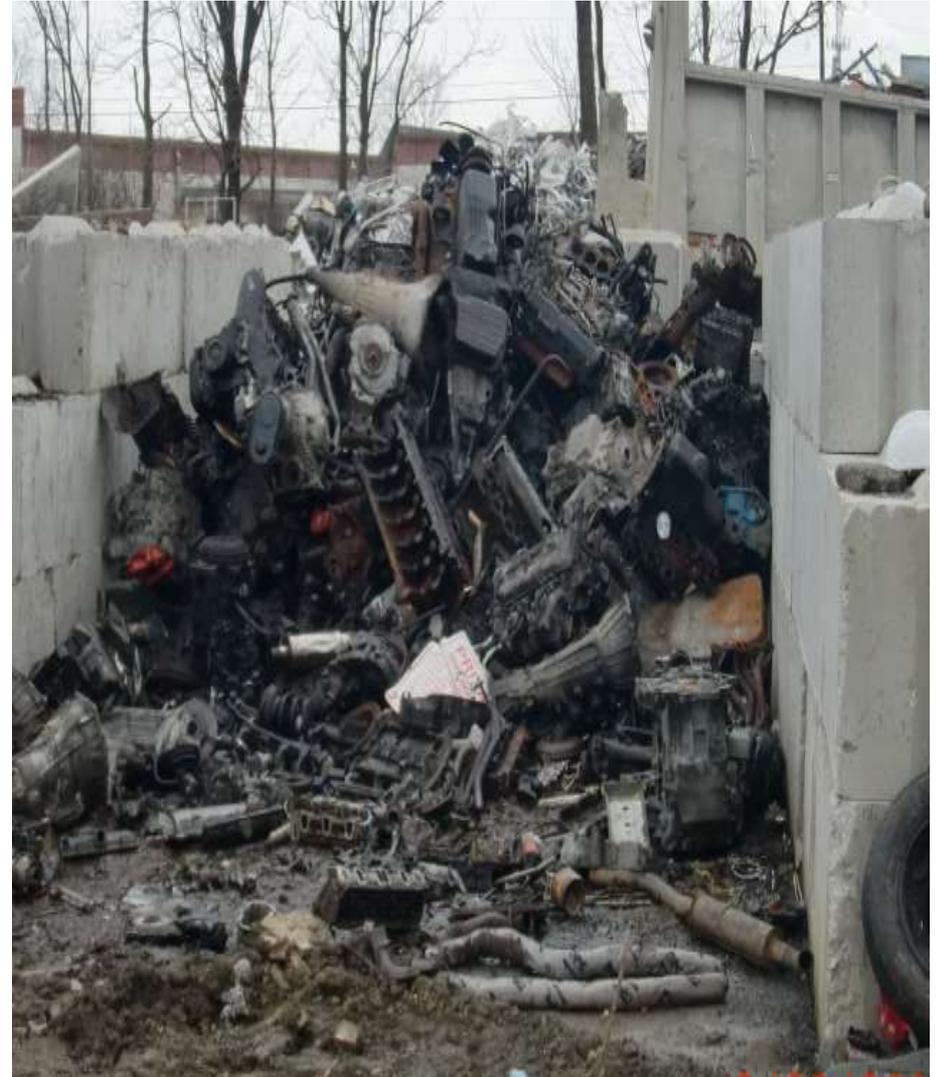
Sector N (Bad Practices)



Sector N (Bad Practices)



Sector N (Better)



Sector N (Under Roof)



Sector N

(Centralized Collection/Treatment)



Resource Information

- Permit, Guidance and Reference Material:
www.epa.ohio.gov/dsw/permits/GP_industrialstormwater.aspx
- Ohio EPA, Storm Water Contacts:
www.epa.ohio.gov/dsw/storm/index.aspx
- Summary of Monitoring Requirements per Sector:
www.epa.ohio.gov/portals/35/permits/IndustrialStormWater_Final_GP_moncomp_dec11.pdf
- Office of Compliance Assistance & Pollution Prevention:
www.epa.ohio.gov/ocapp/ComplianceAssistanceandPollutionPrevention.aspx



Questions?

