



General NPDES Permit for Storm Water Discharges associated with Industrial Activities (ILR00)

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Introduction to Storm Water

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Overview

The goal of this presentation is to provide the QC Managers with a general overview of the Illinois Storm Water program, with an emphasis on what the Illinois Environmental Protection Agency requires for General Permit Holders.



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What is Storm Water?

Storm Water:

- Rain, snow or ice melt
- Water that does not infiltrate or seep into the ground but “runs-off” of impervious surfaces or is channeled into storm sewers
- Final destination of storm water is a storm sewer, stream, creek, river, or lake.

Why is Storm Water considered a Problem:

- Surface water run-off associated with rain, snow or ice melt carries pollution.
- Pesticides, fertilizers, oil, soaps and anti-freeze can be harmful to lakes and streams in any quantity.
- Sediment from construction, bare soils (erosion), pet wastes, grass clippings and leaves can also cause harm in rivers and lakes in sufficient quantities.



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Background / Applicability

Clean Water Act - Section 402 (p) – National Pollutant Discharge Elimination System (NPDES) Permit Program.

- Establishes requirements for obtaining an NPDES Permit.

Federal Regulations

- 40 Code of Federal Regulations (CFR) Part 122.26 – Storm Water discharges – Subject to NPDES Permit Requirements. Initially published in November 1990.
- “Regulates storm water associated with industrial activities”.
- “Defines those industries primarily affected by Standard Industrial Classification (SIC) Code”.

State Requirements – <https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/pages/industrial.aspx>

Among the SIC Codes specifically identified as subject to the rule:

Asphalt Paving and Roofing Materials – SIC Codes 2951 and 2952



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Background / Applicability

Even if a facility is subject to the storm water requirements by virtue of their SIC Code, they may not have to obtain an NPDES Permit under this statute if they can demonstrate that there is **NO** contact with;

“material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product”.

This is called the “NO EXPOSURE CERTIFICATION” - This Certification functions like a permit and is typically good for the same time period (5 years).

Most of the HMA facilities that I've visited would not be able to claim this exemption because of exposed aggregate or rap stockpiles.



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Storm Water Reporting and Monitoring Requirements

Requirements mandated under the General Permit

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Notice of Intent (NOI) Forms

Application for coverage under the General Permit - Simple two page form. Identification of owner/operator of the Site, Facility location, area of site exposed to storm water and information relating to discharge (nearest receiving water body, impairments, and any quantitative analytical data available for the discharge).

(<https://www2.Illinois.gov/epa/documents/epa-forms/water/storm-water/notice-intent-industrial.pdf>)

When to Submit:

1. To Renew coverage under the General Permit.
2. Ownership change of the covered property.
3. Modification of Facility Information



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Storm Water Pollution Prevention Plan (SWPPP)

1. Must be submitted with the original Notice of Intent (NOI) in order for permit to be issued.
2. The SWPPP must be revised when: (Section H)
 - The Agency (IEPA) reviews and determines that additional provisions (BMPs) are necessary.
 - Unauthorized release or discharge or failure of the plan to address conditions at the facility (i.e. sheen present in discharge)
 - Change in construction, operation, or maintenance which may affect the discharge of concentrations or quantity of pollutants to waters of the US.
 - Storm water plan requirements are altered or changed by the State.
3. Must be reviewed at least annually and amended as necessary to stay current.



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Quarterly Visual Inspections of Storm Water Discharges.

Visual observation of Facility discharge during a “Storm Water Event”

(A storm water event is defined as “a storm event equal or greater than 0.25 inch in 24 hours at least 72 hours following the last Storm event)

- Visual observation made within 1 hour of an actual discharge
- Must assess; 1) color, 2) odor, 3) clarity, 4) floatable solids, 5) suspended solids, 6) foam, 7) sheen and any other observable indications of water pollution.
- Assessment must be conducted once per quarter and be documented with date, time and identity of person making the assessment.
- Visual observations are to be made available to the Agency or general public upon written request.



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Benchmark Quarterly Monitoring Requirements

Implemented in the latest General Permit is a requirement that Facilities covered under certain SIC Codes must sample facility discharges for “Benchmark” parameters associated with their operations.

The Benchmark monitoring is to be “used to determine the overall effectiveness of specific control measures and to assist Permittee’s to determine the overall effectiveness of specific control measures.

Not discharge limitations....however, if benchmark concentrations are exceeded, corrective action is required.



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Benchmark Quarterly Monitoring Requirements

Asphalt Paving and Roofing Materials – SIC Code 2951 and 2951

Benchmarks are established under Attachment 1 – Subpart D of the General Permit.

Benchmark – Total Suspended Solids – 100 mg/L

Benchmark is for four (4) consecutive quarters where average concentration obtained over the time period does not exceed 100 mg/L

Once Benchmark has been met and information submitted to the IEPA, no further sampling is required under this iteration of the General Permit.



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Routine Facility Inspections

Routine Inspections of the Facility subject to storm water contact and identified in the SWPPP. (These are the routine inspections that the Facility conducts and are included in the SWPPP)

- Conducted at least Quarterly (Monthly or weekly if necessary)
- Must be conducted by a qualified person (“one who possesses the knowledge and skills to assess conditions and activities that could impact storm water quality”)
- Must be conducted at least once during a storm water event
- Must be documented and a report maintained with the SWPPP.
- Must identify conditions of non-compliance, failure of equipment, etc. and actions taken to remedy.



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Annual Facility Inspection and REPORT

Once each year, a permitted facility must submit an electronic copy of the Annual Inspection Report to the IEPA. The Annual Inspection Report is a single page form that can be found on the IEPA Website at”

<https://www2.illinois.gov/epa/Documents/epa-forms/water/storm-water/annual-facility-inspection-general.pdf>.

It includes blanks for identification of the Facility Owner, Site Information, Receiving water information and a certification statement to be signed by the owner/operator.



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Annual Facility Inspection and REPORT (cont)

In signing the Annual Facility Inspection Report form the owner/operator is “certifying” that:

- Any information relating to spills or releases that occurred and may have resulted in pollutants being discharged via storm water runoff are included in the report
- All significant changes to the Facility or activities conducted at the Facility have been included as updates to the SWPPP, and
- Information from Quarterly Visual Inspections and Benchmark Monitoring are included.



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Annual Facility Inspection and REPORT (cont)

Annual Facility Inspection should include a formal or systematic review of the SWPPP to include:

- Review and update of Facility Site Map(s) or Site Plan(s) to ensure changes are incorporated as they occur.
- Incorporate latest inspection reports, training documentation and/or changes to personnel and/or contact information
- Checklist to document the specific items in your inspection that were reviewed and follow up on any kind of action taken to address items that were found in the inspection

Although not specifically required, we recommend that a “checklist” of the items reviewed as part of the Annual Inspection be prepared, completed and included in the Facility documentation as an “anchor document”.



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General Storm Water Plan Requirements

Pollution Prevention Team (PPT) - Plan Oversight and Administration

- Selected Company Official and/or designated representatives.
- Collectively provides direction and structure to the storm water management plan.
- PPT Personnel are knowledgeable of the Facility and are best suited to:
 - Define and prioritize goals for storm water management
 - Identify potential pollutant sources and recommend ways to eliminate by implementing process changes, substitution of raw materials or alteration of storage locations.
 - Periodically review program effectiveness
 - Track changes in operations and altering plan if necessary
 - Conduct or oversee the performance of routine inspections
 - Develop and implement employee training relative to storm water
 - Implement plan requirements



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General Storm Water Plan Requirements

Proper Material Management and Handling Practices

- Identification of storm water discharge structures, buildings, material loading and unloading areas, paved surfaces and areas used for storage or manufacturing that are exposed to storm water.
- Narrative description of industrial activities at the Site.
- List of pollutants with reasonable potential to be present in storm water.
- Estimate of size of facility in acres and percentage of facility that is impervious due to paved surfaces or buildings.
- A Site Map showing:
 - Facility features (buildings, paved areas, storm water structures, etc.)
- Narrative description of non-stormwater discharges (if any)



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General Storm Water Plan Requirements

Preventative Maintenance – Best Management Practices (BMPs)

- Procedures and frequencies for inspection and maintenance of storm water conveyance system devices such as catch basins, oil/water separators, etc.
- Inspections and/or testing of plant equipment or systems that, if they failed could result in discharges to the storm water conveyance system.

Examples would include weekly/monthly maintenance inspections of the heavy equipment (front end loaders, tandems), storm water discharge locations or sample collection points and the vegetative cover (i.e. grass) on non-paved areas around the site. Inspection sheets or checklists used would be required to be included in the SWPPP.



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General Storm Water Plan Requirements

Good Housekeeping - BMPs

- Periodic sweeping of paved surfaces at the asphalt plant and/or equipment storage yards.
- Use of water suppression to minimize particulate emissions from loading or unloading activities.
- Regular visual inspections and cleaning of load/unload areas, maintenance of facility equipment and maintenance of clear and plain labeling on chemical containers and tanks.

Other Measures that could be implemented might include:

- Pick up and disposal of garbage and general refuse in dumpsters and maintenance of dumpster lids in the closed position.
- Storage of scrap steel, metal drums and metal parts in covered roll off containers.
- Clean up spills immediately to prevent material constituents from being “tracked” out of the building onto exposed surfaces.



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General Storm Water Plan Requirements

Visual Inspections - BMPs

- Inspect storm water manholes (monthly)
- Inspect various material storage areas (monthly)
- Perform housekeeping inspection (monthly)
- Inspect storm water structure, including discharge pipes, retention pond(s), berms, sampling weirs, etc.
- Inspect fire prevention equipment (quarterly)
- Inspect storm water effluent discharge locations (quarterly – During a storm water event)
- Conduct entire facility inspection (annually)

The last two inspections (quarterly visual inspection of the effluent discharge location and the annual entire facility inspection) are mandated by the permit and need to be submitted to the IEPA annually.



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General Storm Water Plan Requirements

Visual Inspections – (Continued)

- Quarterly storm water effluent discharge inspection – During a storm water event.

Once a quarter, facility personnel are required to conduct visual observations of the storm water discharge locations following a “defined” storm water event.

- A “defined” storm water event is “ a rainfall event 0.25 inch in magnitude occurring at least 72 hours after the previous measureable (greater than 0.25 rainfall) event”.
- Visual inspection should include observations of any color, odor, clarity, floating solids, settled solids, foam, or oil sheen. Typically this involves capturing a sample in a glass or plastic container and recording observations.



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General Storm Water Plan Requirements

Visual Inspections – (Continued)

- Annual Facility Inspection – Annually from last date of previous submission.
 - Conducted annually to evaluate the effectiveness of the SWPPP provisions.
 - Confirm the accuracy of the descriptions provided for potential pollutant sources in the SWPPP
 - Assess overall compliance with terms and conditions of Storm Water permit.

The nature of this inspection is comprehensive and would include a thorough examination of the SWPPP and provisions contained in it, a review of the Site Map to ensure that it is current and a review of the inspection checklists. The IEPA requires that an electronic version of the Annual Report be filed within 60 days of the expiration of the 12-month time period from the previous filing.



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General Storm Water Plan Requirements

Spill Prevention and Response

- This Section is reserved for facilities that due to their activities have a potential to have spills. Typically, it is reserved for above ground storage tanks containing asphalt cement, gasoline or diesel fuel but can also be used to describe procedures used by the company to address spills due to punctures of drums, etc.

The amount of organic based products and chemical storage on-site typically warrants spill prevention review and response at most Asphalt Facilities. Most Facilities use secondary containment either in the form of double walled tanks or in designed spill containment structures (Dikes, berms, etc)

If conditions have changed since the last inspection, this section should be re-evaluated prior to sign off and submittal of the Annual Facility Inspection Report.



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General Storm Water Plan Requirements

Employee Training.

- Storm water pollution prevention training is conducted to instruct employees on how to recognize potential pollution contributors and to employ practicable measures to maintain the control measures/BMPs currently in place to reduce or eliminate storm water pollution.
- Training must be conducted annually and/or whenever an employee is “newly assigned” to a role with storm water responsibilities.
- Training must be documented.
- Training sign-in sheets should be kept with the SWPPP.



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General Storm Water Plan Requirements

Recordkeeping and Reporting

- All inspection sheets used for preventative maintenance and good housekeeping activities must be maintained with the SWPPP. Inspection sheets should be dated and signed by the person conducting the inspection and identify any conditions and follow-up remedies (if any were necessary)
- Inspection records should be retained at the Facility for at least 3 years following expiration of the permit.
- Quarterly and Annual Facility Inspection Reports should also be maintained with the SWPPP along with IEPA confirmation of electronic receipt of the Reports.
- The SWPPP must be reviewed and amended as necessary. Significant changes to the SWPPP should be submitted to IEPA within 30 days of discovery and correction.
- Training sign-in sheets should be kept with the SWPPP.



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General Storm Water Plan Requirements

Sediment and Erosion Control

- Sediment and erosion control is primarily addressed by doing simple things such as -maintenance of the grass covered areas along the perimeter of the building, -periodic housekeeping activities (i.e. sweeping of paved surfaces) and replacement of rip rap or silt fencing (if used).
- Regular inspections of the facility would identify any indications of erodible surfaces and would be addressed at that time.

BMPs that could be considered for sediment and erosion control might include:

- Planting grass seed on worn or bare portions of unpaved areas
- Use of portable berms or barriers around exposed containers



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Benchmark Monitoring

As a result of the 2017 amendments to the Illinois Storm Water Regulations, facilities operating under the General Permit were required to develop and implement a quantitative storm water sampling plan for certain parameters based upon the Facility's SIC Code.

For a "stand-alone asphalt plant the benchmark sampling parameter is "Total Suspended Solids" (TSS)

The established benchmark concentration value is:

- An average of 100 mg/L over four (4) consecutive quarters.

Once the facility has demonstrated compliance with this requirement, no further sampling or monitoring is required.



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Benchmark Monitoring

A Storm Water Sampling Plan should be included in the Storm Water Pollution Prevention Plan.

This plan needs to identify the location of each outfall at the facility and describe the proper procedures/protocols for collection and analysis of the identified benchmark parameter. These procedures include proper labeling of the samples, documentation, packaging and submittal to a laboratory as well as the correct analytical method prescribed for the sample.



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General Storm Water Plan Requirements

Pending Changes – Revision of General NPDES Permit

Look for the Illinois Environmental Protection Agency to implement a periodic sampling and analysis requirement for industry specific parameters in the next permit cycle. Most surrounding states already have a program of this type in place. For example Ohio, Indiana and Missouri already require facilities covered under the general permit to collect and monitor storm water discharges for certain parameters.

Look for the Illinois Environmental Protection Agency to implement an electronic reporting system similar to the one used for reporting under the Discharge Monitoring Report (DMR) and TRI reporting during the next permit cycle.

The next permit cycle is not scheduled until March 30, 2022.



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