



Stormwater Pollution Prevention Training

Arkansas General Stormwater Permit For Industrial Activities (ARR00000)

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Background and Development of Arkansas Regulations and Permit Requirements

- The Clean Water Act (CWA) established the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.
- The CWA gave the EPA the authority to implement pollution prevention control programs such as setting wastewater standards for industry and all for contaminants in surface waters.
- The CWA prohibits the discharge of pollutants into navigable waters of the United States from a point source unless a permit was obtained.
- EPA established the National Pollutant Discharge Elimination System (NPDES) as the permit program to control such discharges.
- Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need a permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.





Background and Development of Arkansas Regulations and Permit Requirements

In general, there are five types of point sources:

- Direct discharges
- Indirect discharges
- Sources that spill oil or hazardous substances (EPA)
- Discharges of dredged or fill materials (U.S. Army Corps of Engineers)
- Sewage from vessels (EPA, Coast Guard, Marine Safety Office)





Background and Development of Arkansas Regulations and Permit Requirements

- Efforts to reduce pollutants in waters of the U.S. within the scope of NPDES programs traditionally focused primarily on reducing pollutants in industrial process wastewater and municipal sewage treatment plant processes.
- EPA promulgated rules establishing Phase I of the NPDES stormwater program in 1990.
- In Arkansas, the NPDES Permit Program is administered by the Arkansas Department of Environmental Quality (ADEQ).
- The ADEQ Water Division is governed by nine (9) regulations. These regulations can be found on the ADEQ website:
<http://www.adeq.state.ar.us/water/regulations.htm>
 - Arkansas Regulation 6 contains the regulations for state administration of the National Pollutant Discharge Elimination System (NPDES), effective August 28, 2015.
 - Arkansas Regulation 2 contains regulations establishing water quality standards for surface waters of the State of Arkansas.





Background and Development of Arkansas Regulations and Permit Requirements

- In general, ADEQ issues two types of NPDES Permits:
 - Individual Permits- Process wastewater permit specific to the discharge from an industrial or municipal facility.
 - General Permits - Permit specific to a class of discharges (i.e. stormwater, car washes, noncontact cooling water)
 - ADEQ has issued ten (10) non-stormwater General Permits
 - ADEQ has implemented the requirements of the EPA Stormwater Program through the issuance of three (3) General Permit specific to stormwater discharges:
 - ARR150000 – Arkansas General Permit for Stormwater Discharges Associated with Construction Activities
 - **ARR000000 - Arkansas General Permit for Stormwater Discharges Associated with Industrial Activity**
 - ARR040000 – Arkansas General Permit for the Discharge of Stormwater from Regulated Small Municipal Separate Storm Sewer Systems (MS4)





Arkansas General Industrial Stormwater Permit (IGP) Permit #ARR00000

- The most recent revision to the Arkansas General Stormwater Permit For Industrial Activities (IGP) was issued on December 31, 2013 with an effective date of July 1, 2014.
- Authorizes discharges of stormwater associated with industrial activities.
- Facilities covered by the General Permit must develop and implement a Stormwater Pollution Prevention Plan (SWPPP).
- The permit expires June 30, 2019





Authorized Non-Stormwater Discharges

- Discharges from emergency firefighting activities;
- Fire hydrant flushings;
- Potable water sources including waterline flushings;
- Runoff from irrigation using non-process water;
- Landscape watering provided all pesticides, herbicides, and fertilizers have been applied in accordance with the approved labeling;
- Routine external building wash down which does not use detergents;
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents are not used;
- Air compressor condensate;
- Steam condensate;
- Uncontaminated condensate from air conditioners, coolers, and other compressors, and from the outside storage of refrigerated gases or liquids such as the discharge of thawed condensate from the surface of liquid nitrogen tanks stored outdoors);
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (e.g., “piped” cooling tower blowdown or drains);
- Uncontaminated ground water or spring water;
- Foundation or footing drains where flows are not contaminated with process materials such as solvents;
- Excavation dewatering; and
- Non-process water used for dust suppression on roads.



- Wastewater that is generated from any process-related or cleanup activity cannot be dumped outside.
- Chemical or oil spills occurring outside cannot be washed off pavement with a water hose.
- Empty containers cannot be washed out outdoors where the discharge runs off the property.
- Truck or Equipment washing that contains detergents.



Required SWPPP Components

- Pollution Prevention Team (PPT) – These individuals are responsible for assisting in the implementation of the plan. Usually includes the following:
 - HSE Manager
 - Plant Manager
 - Team Member
- Descriptions of Pollution Sources/Industrial Activities that have a reasonable potential to contribute pollutants to stormwater runoff.
 - Examples:
 - Shipping/Receiving Areas
 - Bone Yards
 - Liquid Chemical Storage Tanks
 - Compactors/Balers/Generators
 - Compressors
 - Empty or Partially Empty Drums/Totes
 - Outdoor Transfers/Staging of Waste Materials
 - Used Oil Removal/Transfers/Staging
 - Fuel Storage/Receiving (Diesel/Gasoline/Kerosene ASTs)
 - Drummed Liquid Chemical/Receiving Areas
 - Scrap Metal Collection
 - Railways
 - Air Emissions Control Equipment
 - Areas where spills may have occurred
 - Roadways and Forklift Routes





SWPPP Components Continued

- Site drainage description and outfall(s) locations.
- A list of potential pollutants associated with each exposed activity/material - Examples
 - ▀ Total Suspended Solids (TSS)
 - ▀ Chemical Oxygen Demand (COD)
 - ▀ pH excursions
 - ▀ Trace Metals
 - ▀ Oil and Grease
 - ▀ Volatile Organic Compounds (VOCs)





SWPPP Components Continued

- List of significant spills and/or leaks that have occurred at the facility during the previous three (3) years.
 - For the purposes of the SWPPP, the term “significant spill” is defined as a release of a hazardous material or oil in excess of its federally designated Reportable Quantity (RQ) value found in 40 CFR 110, 117, and 302.
- The SWPPP will be updated if a significant or reportable quantity spill occurs during the five-year term of the General Permit.





SWPPP Components Continued Best Management Practices (BMPs)

- The Permit requires each facility to develop and implement measures and controls for minimizing the potential for stormwater pollution. These measures are called Best Management Practices (BMPs).
- The permit specifies that each of the following BMPs must be implemented at the facility. The implementation of each must be addressed in the SWPPP. Failure to implement the BMPs as described in the plan is a permit violation.
 - Minimize exposure
 - Implement good housekeeping
 - Maintain all equipment to prevent the discharge of pollutants
 - Implement spill prevention and response procedures
 - Implement erosion and sediment controls
 - Management of runoff
 - Salt storage piles must be covered
 - Employee training annually
 - Eliminate unauthorized non-stormwater discharges
 - Ensure garbage, waste and debris is contained
 - Minimize the potential for dust generation and tracking





SWPPP Components Continued Best Management Practices (BMPs)

- Minimize Exposure

- Always reconsider when placing materials outside.
- Use tarps, roofs and other covers if materials must be stored outside.
- Make sure materials stored outside are clean and not leaking fluids!
- Never place damaged or leaking containers outdoors where stormwater exposure can occur.
- Do not transfer liquids outdoors when precipitation is occurring.





SWPPP Components Continued Best Management Practices (BMPs)

- **Housekeeping – this is the Most Important and Easiest BMP to Implement!**
- Routine good housekeeping makes a good impression and shows that the facility cares about its appearance.
 - Pick up trash.
 - Don't stage process related wastes outside unless in a clean, closed and labeled container.
 - Cover scrap metals and materials that are stored outside.
 - Promptly cleanup and dispose of spills. Never wash a spill to a storm drain or drainage ditch.
 - Materials (such as drums and totes) that are staged outdoors, must be capped and stored in a neat and orderly manner.
 - Maintain the area around the compactor/dumpster.
 - Construction materials should be staged in a specific area in a neat and organized manner.
 - Liquids should never be stored without secondary spill containment.





SWPPP Components Continued Best Management Practices (BMPs)

- Preventive Maintenance
 - Maintain equipment so that leaks and drips do not occur, particularly for equipment outdoors (forklifts, compactor, bailer, etc.)
- Spill Prevention and Response - This is the second most important BMP in terms of ensuring compliance with the IGP.
 - Minimize transfers of liquids when precipitation is occurring or imminent.
 - Ensure lids and caps are securely fastened prior to transferring materials outdoors.
 - Never place a leaking or damaged container (with material inside) outdoors.
 - Ensure all liquid materials containers are provided with secondary spill containment.
 - Know where spill control materials are at the facility procedures for clean-up and notification.
 - Never wash a spill to a storm drain or ditch.
 - Know how to respond should a spill occur.





SWPPP Components Continued

Best Management Practices (BMPs)

- Employee Training
 - Ensures employees understand their responsibilities with respect to pollution prevention and why certain activities can and cannot take place.
 - Required annually for all employees whose duties may impact stormwater runoff from the facility.
 - This training meets the requirements within the IGP.
- Recordkeeping and Internal Reporting
 - Quarterly Inspections (one must be a wet weather inspection)
 - Conducted by the PPT Leader or someone trained by the PPT Leader.
 - Annual Comprehensive Site Inspection (May serve as a quarterly inspection)
 - Performed by the PPT Leader or someone trained by the PPT Leader.





SWPPP Components Continued Best Management Practices (BMPs)

- Sedimentation and Erosion Control
 - It is necessary to maintain vegetated areas to control sediment loading to receiving streams when areas are to be disturbed for construction, or other surface disturbing activities such as heavy truck traffic.
 - Measures are to be implemented to control erosion and siltation such as maintaining grassy areas.





Stormwater Monitoring Requirements

- All facilities covered under the IGP are required to monitor the stormwater discharge from their facility annually.
- Monitoring Period
 - January 1 – December 31
- Monitoring Parameters are Industrial Sector Specific.





Sample Collection Procedures

- In general, the permit requires that all outfalls are sampled unless the permittee can justify that certain outfalls drain areas of similar activity. When a stormwater outfall is determined to be similar to another outfall at the facility, the permittee may sample only the discharge point with the highest expected concentration of pollutants.
- Grab samples are to be collected at the representative outfalls within the first 30 minutes of the discharge resulting from a measureable storm event.
- A measurable storm event is defined as any precipitation event that produces a discharge from the facility.
- The sample collected must be from a precipitation event that has been preceded by at least 72 hours of dry conditions.
- The date, duration and rainfall total in inches must be recorded for the rain event sampled.





Sample Collection Procedures

- Samples are to be collected using a designated sampling container and the sample transferred from the sampling container into the laboratory provided sample bottles. Take care to not overfill or overflow the bottles.
- pH must be measured on-site.
- Seal and label all bottles and complete the Chain of Custody Form, prior to placing all bottles and documentation in the laboratory provided ice chest. The ice chest should be filled with ice prior to shipping to the laboratory.



ECCI[®] Reporting Requirements

- Analytical data received from the monitoring event must be compared to the benchmark values established in the permit for that specific parameter.
- If the data indicates an exceedance of any parameter benchmark value, the facility must investigate the cause/source of the elevated pollutant levels, review the SWPPP and determine and document a Corrective Action Plan (CAP) to address the exceedance.
- This process is to be initiated with 30 days of receiving the data.
- ADEQ Inspectors will request to see analytical data and if there is an exceedance, the facility must have a written CAP on-site. Failure to do so can result in enforcement action.





Corrective Action Plan Requirements (CAP)

- Results of the facility review;
- Corrective actions that will or have been implemented;
- Information on whether a modification of the SWPPP is needed; and
- Implementation schedule for implementation of corrective actions.





CAP Requirements

- When a facility can effectively demonstrate that the results from four consecutive monitoring events for any parameter complies with the benchmark value, the facility can request, in writing to forego further sampling for that parameter for the remainder of the permit term.





Reporting Requirements

- Annual Stormwater Reports are to be completed by January 31 of the year following the completion the monitoring year. The reports are maintained onsite and available for review if requested. The SWAR includes the following elements:
 - Findings of the Quarterly Site Inspections;
 - Findings of Annual Site Comprehensive Evaluation;
 - Analytical Data from the annual monitoring event;
 - Corrective Action Plan (if required); and
 - Status of the corrective actions identified in the CAP.
 - The SWAR can be found on the ADEQ Website:
- www.adeg.state.ar.us/water/branch_permits/general_permits/stormwater/industrial.htm





Consequences of Non-Compliance

- The revised permit eliminated the requirement for facilities to submit annual reports to ADEQ.
- However, in lieu of receiving paper reports, ADEQ has increased their inspection frequency.
- Inspections will involve a review of all documentation required by the permit (SWPPP, inspections, data, and SWAR). The inspection will also include a comprehensive site evaluation to determine if the facility is implementing the SWPPP as described.
- If violations are found, the Enforcement Section will be notified and the facility will receive penalties and a schedule for compliance. The penalties can range from a simple Notice of Violation (with a schedule for compliance) to significant monetary fines depending on the severity of non-compliance.
- Significant non-compliance can result in termination of the permit coverage.





Consequences of Non-Compliance

- Examples of conditions that could be considered significant non-compliance
 - Visible oil spills into or upon stormwater drainage ditch or at outfall locations.
 - Discharges of process related wastewater to stormwater outfalls.
 - Staging of liquid materials containers outdoors without secondary containment.
 - Leaking containers or equipment staged outdoors.
 - Scrap metal pieces or shavings outside on the ground around receptacles.
 - Absence of inspections, analytical data or SWAR.
 - Benchmark exceedances without development of a CAP.
 - Poor housekeeping.



- Poor Housekeeping



- Poor Housekeeping



- Good BMP for Spill Control – If used properly!



- Evidence of Oil Tracking





When sampling take care not to over fill or pour out any preservative.



This is an example of a safer technique.



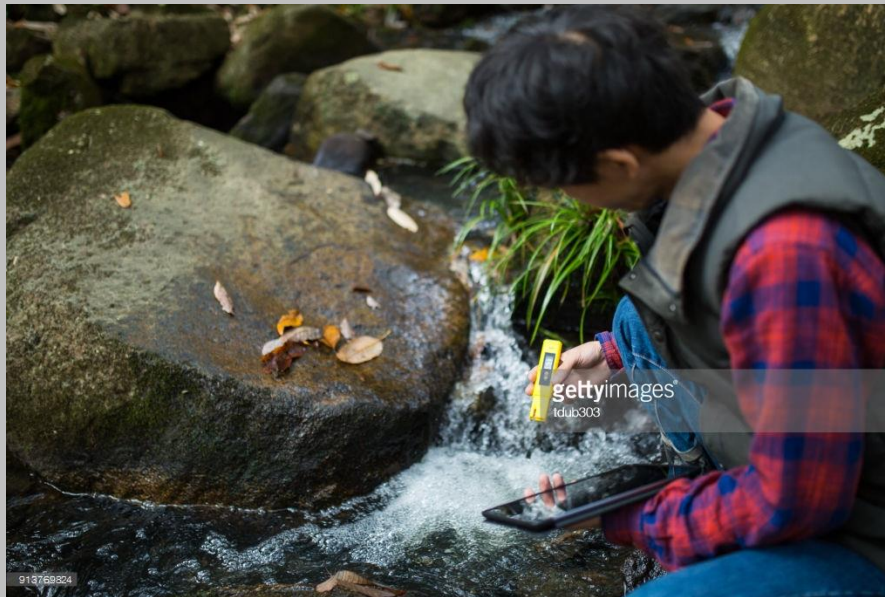
Be sure the water container has been decontaminated properly before use!

This is another example of a safe technique.



Be sure the water container has been decontaminated properly before use!

Collect pH measurements in the field.



The pH measurement can be taken from the outfall location or from the decontaminated container. Not the sample bottle!