VOLUME 6

FRONTIER STONE, LLC
PROPOSED FRONTIER STONE QUARRY

APPENDIX 14

- **Stormwater Pollution Prevention Plan**

January 29, 2014

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STORMWATER POLLUTION PREVENTION PLAN

FRONTIER STONE, LLC.
FRONTIER STONE QUARRY
TOWN OF SHELBY, NEW YORK

STORMWATER POLLUTION PREVENTION PLAN

FRONTIER STONE, LLC.
FRONTIER STONE QUARRY
TOWN OF SHELBY, NEW YORK

Prepared for:
David J. Mahar
President
Frontier Stone, LLC.

Prepared By:
Continental Placer Inc.
II Winners Circle
Albany, NY 12205

January 21, 2014

January 2014

AUTHORIZATION AND CERTIFICATION

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 ensure that qualified personnel properly gathered and evaluated the information contained in this document. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained herein is, to the best of 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.

Signature: _____ Date: _____

David J. Mahar, President
Frontier Stone, LLC

Stormwater Compliance Summary
For Frontier Stone, LLC (Frontier) Frontier Stone Quarry
Sector J (Mineral Mining and Dressing) and SIC 1429 - Crushed and Broken Stone Mining
Town of Shelby, New York

The following is a summary of key elements of the Stormwater Pollution Prevention Plan. To be in compliance with the New York State Department of Environmental Conservation (NYSDEC) Multi-Sector General Permit (MSGP) for stormwater discharges associated with industrial activities, GP-0-12-001, you must complete the following:

Monthly

- ✓ Conduct monthly tank inspections.
- ✓ Inspect sediment trap.
- ✓ **Secondary Containment Drainage Logs.**
  - If it is ever necessary to discharge from secondary containment the accumulated stormwater will be screened for contamination (i.e., sheen);
  - Log Drainage on Secondary Drainage Log provided in Appendix N, and
  - If a release has occurred in the secondary containment then a representative sample must be collected and analyzed for pH and the presence of the substance(s) stored within the containment area and/or any other pollutants that could be present.

Quarterly

- ✓ Conduct Quarterly **Visual Stormwater Monitoring** in accordance with Section 8.1.1. for outfall 001during the periods of:
  January through March;
  April through June;
  July through September, and
  October through December.
  - Complete Inspection Forms attached in Appendix I.
  - Retain the completed inspection forms in Appendix Q.
  - If deficiencies are identified, document and take appropriate corrective actions.

Annually

- ✓ Conduct **Annual Comprehensive Site Compliance Evaluation** Section 8.2
  - Complete Inspection Forms attached in Appendix O.
  - Retain the completed inspection forms in Appendix Q.
  - If deficiencies are identified, document and take appropriate corrective actions.

- ✓ Conduct **Annual Dry Weather Flow Inspection** Section 8.1.2.
  - Visually inspect the discharges from Outfall 001.
  - Complete Inspection Forms attached in Appendix J.
  - Retain the completed inspection forms in Appendix Q.
  - If deficiencies are identified, document and take appropriate corrective actions.

- ✓ Conduct **Annual Benchmark Sampling** Section 8.1.3
  - Review Sampling Guidance in Appendix H.
  - Collect stormwater sample from the following location from a storm event with at least 0.1 inch of precipitation from the outfall(s) using "Stormwater Sampling Field Data Form available in Appendix H one for Outfall 001.
  - Retain completed Stormwater Sampling Field Data Form in Appendix Q.
  - Submit to State Certified Laboratory for analysis of contaminants listed in Table 4: Benchmark Parameter List.
  - Maintain sample results from lab in Appendix Q.
  - Compare results to parameters, if exceeded take appropriate action.
  - Transfer results on the DMR form and Annual Certification Report (see instructions for summation below).
  - If results of analysis of a benchmark sample exceed a cut-off concentration for one or more parameters, you must:
    - Perform corrective action to minimize exceedance;
    - Collect an additional sample at the outfall where the exceedance occurred to determine the effectiveness of corrective actions. Sampling must occur during the first six months of the following calendar year January 1 to June 30, and
    - Complete a Corrective Action Form provided in Appendix K and submit to NYSDEC by July 31 of the calendar year.

- ✓ Complete **Annual Certification Report** Section 8.3.
  - Complete Annual Certification Form which is a fillable PDF provided on the NYSDEC's website or a copy is provided in Appendix O.
  - Include with Annual Certification Report your DMR's provided by the NYSDEC.
  - Mail Annual Certification Report and DMR's to the New York State Department of Environmental Conservation by **February 28th** of each year.
  - Retain the copies in Appendix Q.

- ✓ Conduct **Employee Training** Section 6.1.9.
  - All employees who "work with or in areas that contain potential sources of stormwater pollution" will receive this training on an annual basis. A record of training must be maintained and available upon request.
  - Complete Employee Training Form attached in Appendix F.
  - If deficiencies are identified, document and take appropriate corrective actions.

- ✓ Revise SWPPP Plans Section 9.0.
  - The facility shall amend the plan whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the US or if the stormwater pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified in the plan.
  - Revisions may include: Change in pollution prevention team members or their contact information, addition or deletion of potential pollution sources at the facility (dumpster, raw material or fuel storage).
  - Complete Table 6: Record of Revisions provided in Section 9.

General Permit Renewal

- ✓ The NYSDEC SPDES MSGP for Stormwater Discharges Associated with Industrial Activity (GP-0-12-001) became effective October 1, 2012, and will remain in effect until September 30, 2017. The facility will be notified by the NYSDEC if there are changes to the General Permit.

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GLOSSARY

BAT – Best Available Technology

BCT – Best Control Technology

BMP – Best Management Practices

BPT – Best Practicable Technology

CFR – Code of Federal Regulations

CWA – Clean Water Act

DMR – Discharge Monitoring Report

EMS – Environmental Management System

EPCRA – Emergency Planning and Community Right-To-Know Act

FWPCA – Federal Water Pollution Control Act

MS4 – Municipal Separate Storm Sewer System

MSGP – Multi-Sector General Permit

NOI – Notice of Intent

NOM – Notice of Modification

NOT – Notice of Termination

NYCRR – New York Codes Rules and Regulations

NYSDEC – New York State Department of Environmental Conservation

POTW – Publicly Owned Treatment Works

SEQRA – New York State Environmental Quality Review Act

SIC – Standard Industrial Classification

SPCC – Spill Prevention, Control and Countermeasures Plan

SPDES – State Pollutant Discharge Elimination System

SVOC – Semi-Volatile Organic Compound

SWPPP – Storm Water Pollution Prevention Plan

USEPA – United States Environmental Protections Agency

VOC – Volatile Organic Compound

1.0 INTRODUCTION

Frontier Stone's quarry is classified in industrial Sector J (Mineral Mining and Dressing) and SIC code 1429 - crushed and broken stone mining. This Storm Water Pollution Prevention Plan (SWPPP) was prepared for Frontier Stone, LLC (Frontier) to address stormwater pollution prevention at its proposed quarry located on Sour Springs Road, Town of Shelby, Orleans County, New York. Since there will be off-site discharge of stormwater related to industrial activity at this facility, Frontier must prepare a SWPPP and obtain a Multi-Sector General Permit for the discharge of stormwater. This SWPPP was prepared for the Frontier quarry by Continental Placer Inc. and will address stormwater pollution prevention at the facility. A redacted copy of the permit is provided in Appendix A.

1.1 Background

In 1972, Congress passed the Federal Water Pollution Control Act (FWPCA), also known as the Clean Water Act (CWA), to restore and maintain the quality of the nation's waterways. The ultimate goal was to ensure that rivers and streams were fishable, swimmable, and drinkable. In 1987, the Water Quality Act (WQA) added provisions to the CWA that allowed the United States Environmental Protection Agency (USEPA) to govern stormwater discharges from industrial activities. The USEPA established the Multi-Sector General Stormwater Permit, which included provisions for the development of a SWPPP by each industrial facility discharging stormwater. Regulatory implementation of this permit has been delegated to the New York State Department of Environmental Conservation (NYSDEC). The NYSDEC issued a multi-sector general permit for stormwater discharges associated with industrial activities, GP-0-12-001, on September 28, 2012. The effective date of GP-0-12-001 is October 1, 2012, and the expiration date is September 30, 2017.

Implementation and maintenance of the SWPPP will provide the Frontier Quarry personnel with the tools to reduce pollutants potentially contained in stormwater discharges. This SWPPP is to be maintained at the Frontier Quarry and is to be made available for review by the USEPA or NYSDEC or their duly authorized representatives in the event of an on-site inspection. If necessary, a copy of this plan is to be submitted to the USEPA or the NYSDEC within seven days upon receipt of request.

Frontier will file the necessary Notice of Intent (NOI) in accordance with the requirements of this permit and will be authorized to discharge stormwater under the terms and conditions of this permit 30 calendar days after the date that the NOI is received by the NYSDEC. A copy of the NOI is found in Appendix B.

1.2 SWPPP Content Check List

This SWPPP includes all of the following:

- ✓ Identification of the pollution prevention team members.
- ✓ Location and description of the facility.
- ✓ Summary of potential pollutant sources including:
- ✓ Identify areas where potential spills or releases can contribute to pollutants in discharges and their accompanying drainage points.

- ✓ A list of reportable spills and releases of petroleum and hazardous substances or other pollutants that may adversely affect water quality that occurred during the three year period prior to the date of submission of the Notice of Intent (NOI) form.
- ✓ A site map identifying the following:
  - Size of the property in acres;
  - Location and extent of significant structures and impervious surfaces;
  - Location of each outfall labeled with the outfall identification;
  - The approximate outline of the drainage area to each outfall;
  - Location of haul and access roads;
  - Direction of stormwater flow using arrows;
  - Location of all receiving waters in the immediate vicinity of the facility;
  - Location of all stormwater conveyances
  - Locations where stormwater flows have significant potential to cause erosion;
  - Location and source of runoff from adjacent property containing significant quantities of pollutants and/or volume of concern;
  - Locations of potential pollutant sources;
  - Location and description of non-stormwater discharges;
  - Locations where major spills or leaks have occurred;
  - Locations of all stormwater monitoring points, and Locations of all existing Best Management Practices (BMPs) and BCT Best Controls Technologies to reduce pollutants in stormwater discharge;
- ✓ Description of the facility inspection and monitoring plans;
- ✓ Description of the implementation schedule, training program, and provisions for amendment of the plan;
- ✓ Certification of Non-Stormwater discharges.
- ✓ Documentation of Permit Eligibility related to Endangered Species and Historic Places, if applicable.
- ✓ Monitoring and sampling data.
- ✓ A copy of the permit, the NOI authorization letter and all NOI/NOM forms.
- ✓ Sector J (Mineral Mining & Dressing) additions to the Site Map:
  - Mining site boundaries;
  - Outdoor chemical and explosives storage areas;
  - Overburden, materials, soils or waste storage areas;
  - Location of mine drainage dewatering or other process water;
  - Surface waters;
  - Boundary of tributary areas that are subject to effluent limitations guidelines, and
  - Location(s) of reclaimed areas.
- ✓ Sector J erosion and sediment control plan including details of temporary and permanent structural and vegetative measures, when applicable.

1.3 Other Plans and Documents

The Frontier Quarry is proposed at this time, pending a NYSDEC mine permit. At present the site is an agricultural field. Therefore, Frontier's only employee is Mr. David Mahar, its president. Hence, he is listed under all responsibilities at this time.

The Frontier Quarry will maintain a NYSDEC Mined Land Reclamation permit and associated Mined Land Use Plan. The site shall also minimize stormwater pollution through implementation of applicable permit conditions and/or practices specified in its Mined Land Use Plan. Copies of these documents are maintained with the "environmental files" at the corporate office.

2.0 STORMWATER POLLUTION PREVENTION TEAM

The SWPPP Coordinator for Frontier Quarry is David Mahar (Office: 716-751-9670, Cell: 716-861-8153). Mr. Mahar is also the responsible corporate person. The SWPPP coordinator and his responsibilities are shown in Table 1.

Table 1: SWPPP Coordinator and Summary of Duties

SWPPP Coordinator		
Name	Title	Phone Number
David Mahar	President	716-751-9670 716-861-8153 (cell)
Responsibilities: • Signatory Authority and authorize development and implementation of the SWPPP • Overall Facility Operation • Create SWPPP team • Spill Response Coordination • Authorize, initiate, and/or recommend facility and managerial improvements to prevent stormwater pollution • Oversee implementation of housekeeping, maintenance practices and monitoring procedures identified in SWPPP • Perform routine inspections and corrective action • Perform erosion and sediment control inspectional and follow up • Ensure the integrity of the non-numeric effluent BMPs/BCTs • Revise SWPPP, as needed, or requested by Team Members • Implement and oversee employee training • Ensure all samples are collected and analyzed as required by permit • Prepare DMR reports and supervise submittals • Perform Annual Comprehensive Site Compliance Evaluation		

3.0 FACILITY DESCRIPTION

3.1 Facility Location

The proposed mine site is located in the Town of Shelby, Orleans County about 3.7 miles south of Medina, New York. The property principally fronts along Fletcher Chapel Road with a small portion along Sour Springs Road. South of the site is a National Grid power line and south of the power line is the Iroquois National Wildlife Refuge. Figure 1 is a location map of the site.

The area can be characterized as rural farmland situated on the low relief Erie-Ontario Lowlands physiographic province. There are scattered hamlets in the area such as Shelby Center, East Shelby and Alabama, however, the predominate feature of the area is the Iroquois National Wildlife Refuge.

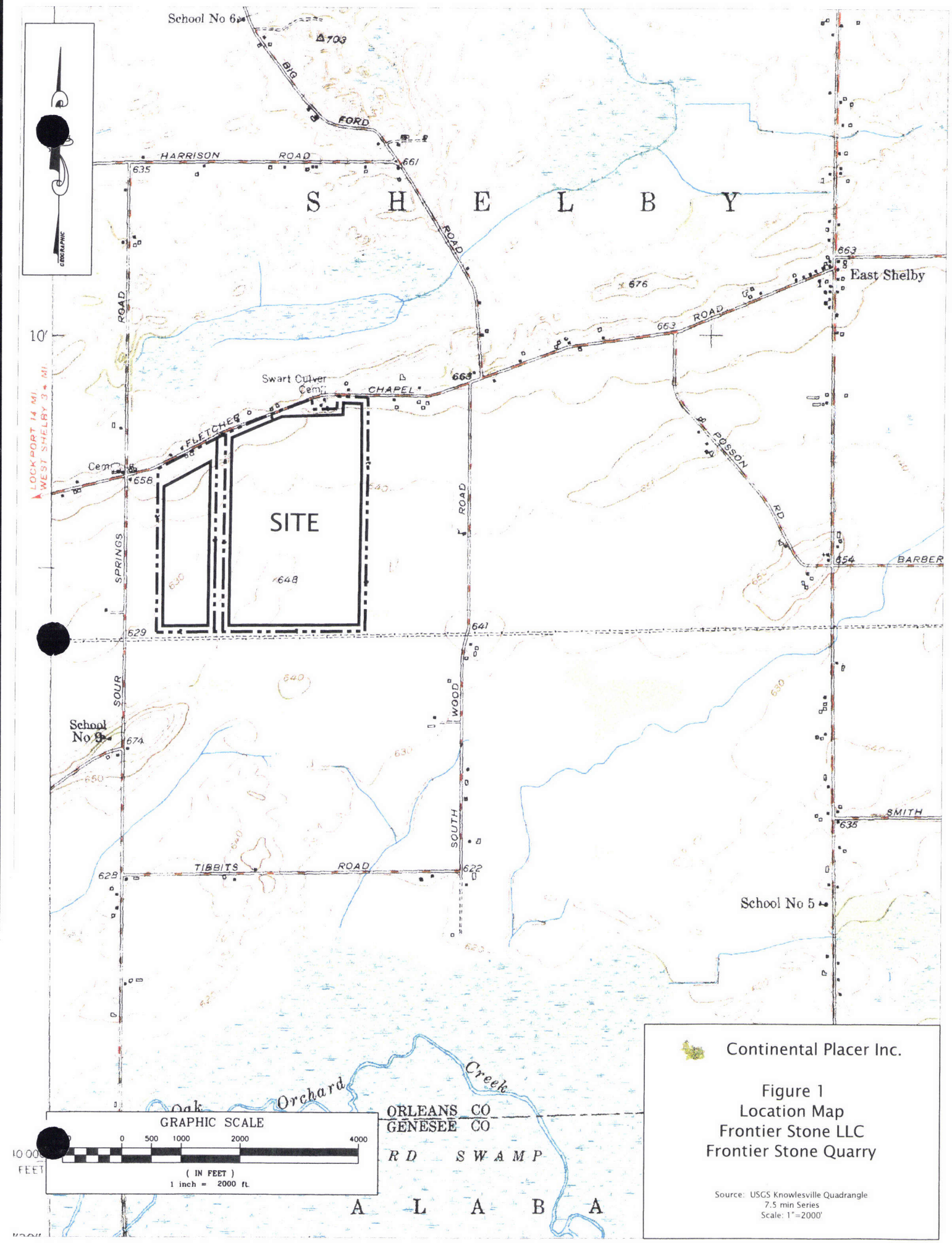
3.2 Site Industrial Activities

The Frontier site currently is composed of active farmland cultivated in row crops such as corn and beans. The parcel being leased by Frontier is approximately 269.5± acres in size and is bisected by a National Grid power line.

Frontier proposes to develop and operate a 215.5± acre dolomite/limestone quarry on a 269.45± acre parcel. The excavation area totals 172.2± acres and mining is divided into four phases over the estimated 75 year operational life of the facility. Quarrying will be conducted by standard drill and blast technology with front-end loaders and (or) excavators feeding an in-pit primary crusher with shot rock from the muck pile. The primary crusher will follow the advancing face. Rock will be conveyed upward to the processing plant at the land surface by conveyor for further processing. Mining will occur below the groundwater table and the project includes dewatering of the quarry area. Wash water potentially to be used in the future at the processing facility will be drawn from groundwater and surface water accumulating in the pit and recirculated for reuse. Settling ponds will be located in the plant area; no offsite discharge will occur from these ponds. The site will be reclaimed by grading, replacement of topsoil, re-vegetating upland areas with an approved seed mix, and the creation of two lakes. The lakes, separated by an existing utility line, are approximately 38.9 and 161.2 acres in size. The first 50 feet of shore below the water surface will be less than five feet deep. The reclamation objective will be to create recreational lakes/wildlife habitat.

During operation of the quarry, groundwater and precipitation will seasonally accumulate in the quarry sump, the planned location being the southwest corner of phase 1 (initially). This water will be discharged via pipe to the adjacent agricultural drainage ditch.

Proposed industrial activities at the site include the operation of mobile equipment to mine the stone and for its transport in addition to stripping of overburden. Mobile equipment includes trucks, front-end loaders, excavators and a bulldozer. Operation of the equipment includes the use of diesel fuel, hydraulic oil, greases and antifreeze. Operation of the equipment has the potential to contribute particulate matter, fuel, oil, grease and antifreeze through drips, leaks and/or spills. Mobile equipment is proposed to be fueled onsite from truck mounted tanks.



Continental Placer Inc.

Figure 1
Location Map
Frontier Stone LLC
Frontier Stone Quarry

Source: USGS Knowlesville Quadrangle
7.5 min Series
Scale: 1"=2000'

3.3 Facility Drainage and Path of Stormwater

The project is located in the Erie-Ontario Lowlands physiographic province. The site is fairly flat and featureless. Elevations vary from a low of 619± feet in the southwest corner to elevation 652± feet in the north central portion of the project area. The land surface gently slopes to the southwest and southeast. There is a raised elevation area forming a hill-like feature in the south central portion of the property. The higher elevations along the northern boundary are in response to the site being bounded there by a recessional glacial moraine.

There are no surface water resources (streams or floodplains) within the project area. There are no streams in close proximity to the site. The closest permanent stream to the site is Oak Orchard Creek, about one and one-half miles to the northwest and about the same distance to the south.

Site drainage patterns reflect the topography. Precipitation that falls on the site and does not percolate downward as during frozen ground conditions or peak precipitation events, flows as sheet flow north to south. Much of this sheet flow is intercepted by a shallow agriculture drainage ditch constructed by the landowner to drain the upland farm fields. This ditch directs the water off-site to the south. The ditch can be seen on the Mining Plan Map/photo, running along the landing strip and thence southward along the utility easement that bisects the site. Except for snowmelt conditions in the spring or significant storms, this feature generally is dry. During periods of runoff the agricultural drainage ditch flows southward into the woods south of the site.

Regionally, drainage leaves the site and drains southwestward to the area north of Oak Orchard Ridge Road through a wetland area. The wetland was created by a dike along its western perimeter with its water elevation controlled by an adjustable weir. Any water overflowing the weir flows westward via ditches, under Route 63, and thence westward several thousand feet to Oak Orchard Creek.

3.4 Impervious Areas

As stated in Section 3.2, the site is currently composed of active farmland and there are no impervious areas. As the quarry is developed and impervious areas are created, the SWPPP will be revised to note the impervious areas.

4.0 SUMMARY OF POTENTIAL POLLUTANT SOURCES

Materials proposed to be exposed to stormwater at the Frontier Quarry that have the potential to impact stormwater runoff include the following:

- Petroleum storage containers;
- Aggregate crushing, sorting and storage piles;
- Roadway dust/sediment, and
- Trucking and vehicular traffic.
- Miscellaneous vehicular and processing equipment fuels, lubrication and hydraulic oils leaked onto the ground by active equipment, and
- Mobile fuel storage truck.

The potential contaminants that could impact stormwater are sediment (total suspended solids), oil and grease, and volatile organic compounds (VOCs) from petroleum products.

The United States Environmental Protection Agency (USEPA) has produced a series of Industrial Stormwater fact sheets for each of the industrial sectors covered in the stormwater program. The USEPA fact sheets applicable for this facility are included in Appendix C. This information contains a list of potential pollutants associated with the various industrial activities that can be expected for Sector J. Also included are recommended best management practices associated with these activities.

4.1 Potential Source Areas for Stormwater Contamination

Table 2 contains descriptions of the Potential Pollutants identified for each area and activities at the Frontier Quarry that have the potential to contaminate stormwater and the likelihood that pollution will occur.

Table 2: Potential Pollutants

Area/Location	Drainage Basin	Activities/Description	Potential Pollutants	Predicted Direction of Flow	Potential for Presence in Stormwater
Entrance Road	Retention Pond	Vehicular Traffic	Sediment, Total Suspended Solids, Fuel Oil and Petroleum Products	South	Low
Quarry Excavation Area	Series of Retention Ponds	Mining, Crushing, Sizing and Storage	Sediment, Total Suspended Solids, Fuel Oil and Petroleum Products	Quarry area drains to itself then pumped to Outfall 001	Low

5.0 SPILLS AND RELEASES

No reportable spills have occurred at the facility since it is in the proposal stage. The facility will implement Stormwater Management Controls (next section) to reduce the potential pollutants in stormwater discharges to assure compliance.

According to the State of New York, *Technical Field Guidance Document: Spill Reporting and Initial Notification Requirements* (1996), spills must be reported in accordance with NYSDEC SPDES regulations in accordance with 6 NYCRR Part 750-2.7. Petroleum spills must be reported to NYSDEC unless they meet all of the following criteria:

- The spill is known to be less than 5 gallons;
- The spill is contained and under the control of the spiller;
- The spill has not and will not reach the State's water or any land, and
- The spill is cleaned up within 2 hours of discovery.

The EPA has defined "significant spills" to include a release within a 24-hour period of hazardous substances in excess of its Reportable Quantity under Section 311 of the Clean Water Act and Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Reportable Quantities are set forth in 40 CFR Part 117 and 40 CFR Part 302. Spills must be reported in accordance with NYSDEC SPDES regulations in accordance with 6 NYCRR Part 750-2.7.

6.0 STORMWATER MANAGEMENT CONTROLS

The Frontier Quarry will utilize several Best Management Practices (BMPs), Best Practicable Control Technologies (BPTs) and Best Control Technology (BCTs) to minimize stormwater exposure to potential pollutants. These practices and the proper documentation will demonstrate the quarry's full compliance with the current permit.

6.1 Non Numeric Technology Based Effluent Limit Best Management Practices

6.1.1 *Minimize Exposure*

Frontier will employ measures to minimize the exposure of manufacturing, processing, and material storage areas from rain, snow, snowmelt, and runoff to include but not limited to the following:

- Locate industrial materials and activities inside or protect them with storm resistant coverings;
- Use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these industrial areas;
- Locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems;
- Clean up spills and leaks promptly using dry methods and employ spill response procedures as necessary see Section 6.1.4;
- Watering for dust control is only conducted on an as-needed basis. Prior to watering, a determination of application rate and timing is determined to minimize runoff;
- Deliveries of materials are overseen by employees and noted releases are reported to the Stormwater Pollution Prevention Team (see Section 2.0);
- Aggregate stockpiles piles are sloped to prevent erosion;
- Use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible;
- Use spill/overflow protection equipment and drain fluids from equipment and vehicles prior to on-site storage or disposal;
- Perform all cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on; also ensure that all wash water drains to a proper collection system (i.e., not the stormwater drainage system), and
- Minimize exposure of chemicals by replacing with a less toxic alternative.

6.1.2 *Good Housekeeping and Regular Inspections*

Good housekeeping practices will be employed to keep all exposed areas clean and orderly where the exposed areas could contribute pollutants to stormwater. Good housekeeping practices include the following:

- Sweeping at regular intervals, keep materials orderly and labeled, and store materials in appropriate containers;
- Quarterly inspection and assessment of stormwater diversion and conveyance systems, of retention ponds, ditches and swales;
- Organize operational and maintenance procedures to ensure that equipment is working properly, and
- Quarterly inspections for leaks and conditions of tanks and containers.

6.1.3 *Preventative Maintenance*

The Frontier Quarry will employ a preventative maintenance program that includes timely inspection and maintenance of all stormwater management devices to achieve the effluent limits required by this permit. In particular, the following activities are to be completed:

- Retention pond is inspected quarterly for sediment build-up and cleaned out as necessary to ensure effectiveness;
- The facility's equipment is regularly inspected, tested and maintain to avoid situations that may result in leaks, spills, and
- Nonstructural control measures are diligently maintained and the necessary repairs or modifications shall be made as expeditiously as practicable.

6.1.4 *Spill Prevention Response Procedures*

Spill Prevention and Response procedures will be used to *minimize* the potential for leaks, spills and other releases from entering any body of water. Good housekeeping and preventative maintenance practices will also prevent spills before they happen as described in Sections 6.1.2 and 3.

Prevention:

- Plainly label containers that could be susceptible to spillage or leakage and encourage proper handling;
- When possible use barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
- Have necessary spill response equipment available; expeditiously stopping, containing, and cleaning up leaks, spills, and other releases, and
- The Stormwater Pollution Prevention Team will evaluate the spill and spill response activities to make recommendations or plan updates to prevent any recurrence of the same type of spill.

Daily workplace inspection of manufacturing equipment for leaks as follows:

- On-site personnel in attendance of fuel deliveries;
- Increased training on spill prevention and cleanup, and
- Off-site removal of any oils, lubricants not required for daily operation. No unnecessary storage of petroleum products.

Response Procedures:

IMMEDIATELY

Assess the situation: Determine whether ignition sources or other safety issues exist. If a fire potential or life-threatening situation exists, evacuate the area and immediately notify a SWPPP Coordinator who should contact the appropriate emergency personnel. If a fire or life-threatening situation exists, await instruction from emergency crews - do not attempt to stop or contain the spill unless instructed by emergency crew to assist.

Stop the flow: Take measures (i.e., turn off pumps, close valves, etc.) to reduce the flow.

Contain the spill: Prevent discharges from reaching drainage or watercourses. Examine containment system, if applicable, for integrity. Contain localized spills with absorbent materials. Construct temporary earthen berms, dikes, channels, or impoundment areas where appropriate. If a release threatens to enter storm water catch basins, perform emergency catch basin shutdown procedures by using drain covers or by constructing a berm around the catch basin using absorbent booms.

Clean up the spill: Use enough absorbent to soak up the spilled liquid. If spilled liquid is flammable, use non-sparking shovels to prevent ignition. Scoop up spent absorbent and place in the proper waste container. Properly label waste container if material is flammable and combustible.

1. Notifications of Stormwater Pollution Prevention Team: David Mahar, President 716-861-8153 cell
2. Notification to the proper authorities (i.e., Fire Department, Spill Response Contractor, NYSDEC, etc.) will be made and reportable spills of a hazardous substance must be reported to the NYSDEC hotline (1-800-457-7362) within two hours of the release.
3. Document spill in Appendix D.

General Spills and Clean-Up:

- Residue or materials resulting from the clean-up will be properly disposed and the results documented;
- Liquid spill area to be contained using spill kit absorbents and the results documented. In the event of a large spill a local spill contractor will be contacted, and
- Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents for dry cleanup whenever possible.

6.1.5 *Erosion and Sediment Controls*

The Frontier Quarry facility will employ controls in accordance with the New York Standards and Specifications for Erosion and Sediment Controls. Best Management Practices will be used to stabilize

exposed areas and control runoff and minimize onsite erosion and sedimentation by performing the following:

- Complete required quarterly inspections of the facility and grounds; chemical handling and storage areas;
- Flow velocity dissipation devices must be placed at discharge locations and within outfall channels where necessary;
- Build aggregate stockpiles at slopes to minimize erosion;
- Stage aggregate stockpiles at slopes to minimize erosion, and
- Implement stormwater management procedures as outlined in the Mine Permit; and New York Standards and Specifications for Erosion and Sediment Control (2005), or equivalent.

As required in Part VIII. Sector J Specific: An erosion and sediment control (ESC) plan will be developed and implemented for mining activities that result in soil disturbance with the potential for stormwater discharge to surface waters of the State. The plan requirements and the "Blue Book Lite" from New York State Standards and Specifications for Erosion and Sediment Control can be found in Appendix E.

6.1.6 *Management of Runoff*

Using industry accepted BPTs/BMPs to minimize stormwater runoff this site contains the following:

- Access Road Retention Pond – Runoff will collected in a series of ditches and is conveyed to the stormwater retention pond and then either infiltrates into the ground, evaporates or is re-used.
- Quarry Area Retention Ponds – Runoff will collected in a series of retention ponds and then either infiltrates into the ground, evaporates or is pumped off-site through Outfall 001.

6.1.7 *Salt Storage*

This facility does not have slat storage.

6.1.8 *Best Control Technology Practices and Material Management*

The following structural and non structural management practices are shown in Table 3 Best Control Technologies:

Table 3: Best Control Technologies

Material	Location	Management Practice
Sediment from Traffic	Access Road	Control sediment, slow run-off and retain in ponds
Aggregate and Piles	Quarry Area	Area/piles sloped such that run-off is minimized and retained in sediment ponds prior to being discharged

6.1.9 *Sector Specific Non-Numeric Effluent Limits*

All BMP/BCTs at the facility shall be inspected quarterly (temporarily or permanently inactive facilities shall be inspected annually) for evidence of actual or potential discharges of contaminated stormwater. Sector J Mineral, Mining, and Dressing Industrial Activities shall include the inspection of the following areas:

- Chemical handling and storage areas;
- Vehicle and equipment maintenance areas;
- Fueling areas, and
- Other potential sources of pollution.

6.1.10 *Employee Training*

Training shall be conducted at least annually in the month of May for employees who have the potential to work in areas where significant materials may be exposed to stormwater, either through normal work activities or through spills. Training records are maintained in Appendix F. Ensure all employees understand the following:

1. Spill Response
   - Review past spill events, including how they happened and ways to avoid similar spills;
   - Review and demonstration of basic clean-up procedures, including notification of proper personnel, and
   - Review locations of spill clean-up equipment and spill response personnel.
2. Good Housekeeping
   - Review examples of good housekeeping practices;
   - Review and demonstration of basic clean-up procedures, and
   - Review locations of routine clean-up equipment.
3. Material Management Practices
   - Review which materials are hazardous and the locations of these materials;
   - Review proper labeling of various materials, and
   - Review proper handling practices for various materials.
4. Review how to recognize unauthorized discharges and when corrective action is required.
5. Review how to evaluate the condition and maintenance needs of stormwater controls and equipment that may contribute to contamination of stormwater if not functioning properly
6. Purpose of SWPPP
7. Proper sampling procedures and reporting procedures

6.1.11 *Non-Stormwater Discharges*

Certification of Non-Stormwater Discharges

The facility will eliminate all non-stormwater discharges and will not need coverage under a SPDES permit. The facility will also complete a Certification of Non-Stormwater Discharges as required by PART III C.7.f.1., that all discharges (i.e. outfalls) have been tested or evaluated for the presence of non-stormwater before submitting a Notice of Intent (NOI) to the NYSDEC. A copy Certification of Non-Stormwater Discharges is included as Appendix G.

Allowable Non-Stormwater Discharges

The following non-stormwater discharges may be authorized by this permit provided that the SWPPP contains the documentation specified in Part III.C.7.f.2:

- Discharges from firefighting activities;
- Fire hydrant flushing;
- Potable water sources including waterline flushing;
- Uncontaminated air conditioning or compressor condensate;
- Irrigation drainage;
- Landscape watering providing that all pesticides and fertilizer have been applied in accordance with manufacturer instructions;
- Routine external building washing which does not contain detergents;
- Pavement washing where detergents are not used and where spills of hazardous materials have occurred;
- Uncontaminated groundwater or spring water;
- Foundation or footing drains where flows are not contaminated with process materials such as solvents;
- Incidental wind-blown mist form cooling towers, and
- Watering for dust control which is commensurate with dust suppression needs at that time (i.e. minimal ponding of any dust suppression water).

6.1.12 *Waste, Garbage and Floatable Debris*

The facility's BMPs will ensure that waste, garbage, and floatable debris are not discharged to surface waters of the State by keeping exposed areas free of such materials or by intercepting them before they are discharged. Employees will be trained not to discard such materials on the grounds. Routine policing of the facility will also be performed and solid waste debris will be containerized and appropriately disposed off-site.

6.1.13 *Dust Generation and Vehicle Tracking of Industrial Materials*

The facility will employ several BCTs/BMPSs to minimize the generation of dust and off-site tracking of raw materials such as:

- Sprinkling/Irrigation;
- Vegetative Cover;
- Mulch;
- Wind Breaks, and
- Stone, in areas where vegetation cannot be established.

6.2 Numeric Effluent Limitations Based on Effluent Limitations Guidelines.

Effluent limitations shall be met by Frontier in accordance the numerical effluent limitation guidelines identified in Table 5 in Section 8.1.4. An exceedance of effluent limitation guideline values constitutes a permit violation, which triggers re-sampling, corrective action, SWPPP revision, and additional reporting as described in Section 8.1.4.

7.0 SPECIAL CONDITIONS UNDER MSGP NO. GP-0-12-001

7.1 Endangered Species and Historic Places

Frontier is applying for a NYSDEC mine permit. As part of the permitting process the site must comply with Article 8 of the Environmental Conservation Law, also known as the New York State Environmental Quality Review Act (SEQRA), and its implementing regulation (6 NYCRR Part 617). Issues such as endangered species and historic places are part of the SEQRA process prior to permit issuance. These studies have been completed and the reports are part of the Draft Environmental Impact Statement prepared for the site. Studies have shown that no endangered species or historic places will be affected by the mine.

7.2 Historic Places

Issues such as historic places are also part of the SEQRA process prior to permit issuances.

7.3 Discharges Into or Through a Municipal Separate Storm Sewer System (MS4)

There are no stormwater discharges into or through a MS4.

7.4 Discharges from Facilities Subject to EPCRA Section 313

This facility is not subject to EPCRA Section 313.

7.5 Discharges to Impaired Waters

This site discharges to an agricultural ditch that may ultimately drain to the Oak Orchard Creek and its tributaries, which is an impaired water body. The river is impaired for phosphorus and the applicable Sectors are A, D, E, F, G, I, J, K, L, M, N, U, AC, AD and AE. The applicable Sector for this site is Sector J and this site will not discharge phosphorus.

8.0 MONITORING, REPORTING AND RETENTION OF RECORDS

The facility will retain all data used to complete the NOI and/or NOM forms covered by this permit, all records of monitoring information, and copies of all reports required by this permit until at least five years after coverage under this permit terminates.

8.1 Required Stormwater Monitoring and Inspections:

Under this SWPPP, the facility is required to complete the following:

- Quarterly visual monitoring;
- Annual dry weather flow monitoring;
- Benchmark monitoring for Sector J;
- Numerical Effluent Limitation Monitoring as required for Sector J, as needed;
- Secondary Containment Inspections and Discharge Monitoring, as needed, and
- Annual Comprehensive Site Compliance Evaluation and Report.

Each of the required sampling events is discussed below and a Stormwater Sampling Guidance Manual is included as Appendix H.

8.1.1 *Quarterly Visual Monitoring*

The facility must complete quarterly visual monitoring examinations of each stormwater outfall as described below.

- Outfall 001 Visual Inspection: Observe discharge from retention pond system to an agricultural swale that may discharge to Oak Orchard Creek.
- Visual Inspection: Inspect berms and edge of quarry area to ensure no discharge of stormwater.
- Visual Inspection: Petroleum Storage, if any.

When and How to Sample:

A stormwater sample must be collected from the following stormwater outfalls (see Plate 1 for sampling locations):

- Outfall 001 Visual Inspection: Observe discharge from retention pond system to an agricultural swale that may discharge to Oak Orchard Creek.
- Sampling must be completed at least once in each of the following three month periods:
  January through March;
  April through June;
  July through September, and
  October through December.

The sample(s) must be collected from a storm event with at least 0.1 inches of precipitation (defined as a "measureable" event), provided the interval from the preceding measurable storm is at least 72 hours. Use an on-site rain gauge, or go to http://www.erh.noaa.gov/aly/, then enter city and state and go to 2-day weather history to obtain rainfall total for rain event or contact the local POTW. The 72-hour storm

interval is waived if the preceding measurable storm did not result in a stormwater discharge (i.e. a storm event in excess of 0.1 inches may not result in a stormwater discharge at some facilities), or if the permittee is able to document that less than a 72-hour interval is representative for local storm events during the sampling period.

The sample must be taken during the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of the discharge. If the sampled discharge commingles with process or non-process water, the permittee must attempt to sample the stormwater discharge before it mixes with the non-stormwater.

No analytical tests are required to be performed on the samples for the purpose of meeting the visual monitoring requirements. Visual examinations must be completed during daylight hours. The facility should make an effort to ensure that the same individual carries out the collection and examination of discharges for the entire permit term for consistency.

Sample Analysis: The visual examination must document the presence or lack thereof of color, odor, clarity, floating solids, suspended solids, foam, oil sheen and any other obvious indicators of stormwater pollution.

Corrective and Follow-Up Actions: If the visual examination indicates the presence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam, oil sheen, or other indicators), SWPPP Coordinator must ensure, at a minimum, the following is completed and documented:

- Evaluate the facility for potential sources of stormwater contamination;
- Remedy the problems identified, any sources of contamination that are identified must be addressed by implementation of non-structural and/or structural BMPs to prevent recurrence;
- Revise the facility's SWPPP in accordance with Parts III.E, and
- Perform an additional visual inspection during the first qualifying storm event following implementation of the corrective action. If the first qualifying storm event does not occur until the next quarterly monitoring period, this follow up action may be used as the next quarterly visual inspection.

Recordkeeping: A Quarterly Visual Monitoring fill-able form can be found on the NYSDEC website or one is provided in Appendix I and should be filed in Appendix Q.

8.1.2 *Annual Dry Weather Flow Monitoring*

The facility must perform and document at least one dry weather flow inspection each year after at least three consecutive days of no precipitation. The dry weather flow inspection shall be conducted to determine if the presence of non-stormwater discharges to the stormwater drainage system exists.

When and How to Sample:

- Outfall 001 Visual Inspection: Observe discharge from retention pond system to an agricultural swale that may discharge to Oak Orchard Creek.

Corrective and Follow-Up Actions: Only a determination if any water is being discharged during dry weather. If a non-stormwater discharge (authorized non-stormwater discharges are listed in Section 6.1.10) is discovered, the SWPPP Coordinator must ensure, at a minimum, that the following is completed:

- Identify its source to determine whether it is an authorized discharge (e.g., a discharge covered by another SPDES permit). If it is determined that the discharge is not covered under a SPDES permit, the facility shall take immediate action to eliminate the discharge.
- If it is not possible to immediately eliminate the discharge, the owner or operator must notify the Department within 14 days.

Stormwater General Permit Coordinator
NYSDEC, Bureau of Water Permits
625 Broadway
Albany, New York 12233-3505

- Appropriate actions may require coverage under an individual industrial SPDES permit or connection to a sanitary sewer system.
- Address any newly identified allowable non-stormwater discharges identified in Section 6.1.10 that were not previously certified in accordance with Part III.C.7.f.(1). The Non-Stormwater Certification may need to be revised.

Recordkeeping: Complete the dry weather flow inspections report form in Appendix J and file in Appendix Q.

8.1.3 *Benchmark Monitoring*

The facility will complete benchmark sampling on an annual basis in accordance with the following procedures.

Table 4: Benchmark Parameter List and Cut-Off Concentrations

Dimension and Crushed Stone and Nonmetallic Minerals (except fuels) SIC 1411, 1422-1429, 1481, 1499		
Parameter of Concern	Analytical Method	Benchmark Monitoring Cut-Off Concentration
Total Suspended Solids (TSS)	EPA 160.2	100 mg/l

When and How to Sample: A minimum of one grab sample must be collected from each of the following discharges:

- Outfall 001 Visual Inspection: Observe discharge from retention pond system to an agricultural swale that may discharge to Oak Orchard Creek.

The samples must be collected from a storm event with at least 0.1 inches of precipitation (defined as a "measureable" event), provided the interval from the preceding measurable storm is at least 72 hours. Use an on-site rain gauge, or go to http://www.erh.noaa.gov/aly/, then enter city and state and go to 2-day

weather history to obtain rainfall total for rain event or contact the local POTW. The 72-hour storm interval is waived if the preceding measurable storm did not result in a stormwater discharge (i.e. a storm event in excess of 0.1 inches may not result in a stormwater discharge at some facilities), or if the permittee is able to document that less than a 72-hour interval is representative for local storm events during the sampling period.

The sample must be taken during the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of the discharge. If the sampled discharge commingles with process or non-process water, the permittee must attempt to sample the stormwater discharge before it mixes with the non-stormwater.

Facilities with seasonal operations or operations with durations of less than a year must complete the required compliance monitoring while the facility is actively operating.

Sample Analysis: The collected sample must be delivered to a state certified laboratory (State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law) for analysis of the parameters listed in Table 4.

Corrective and Follow Up-Actions: The benchmark cut-off concentrations are primarily intended as a guideline for the site to determine the overall effectiveness of the SWPPP in controlling the discharge of pollutants to receiving waters. An exceedance of a benchmark cut-off concentration does not, in and of itself, constitute a violation or indicate that a violation of a water quality standard has occurred. It does, however, signal the need for the site to evaluate potential sources of stormwater contaminants at the facility. Any sources of contamination contributing to the exceedance are to be identified and remedied. Such remedies may include implementation of non-structural or structural BMPs to prevent recurrence. The facility's SWPPP will be updated to reflect these revisions.

Further Sampling: An additional sample also must be collected and analyzed for the parameter that exceeded the benchmark cut-off concentration to determine the effectiveness of the corrective action(s). This sample must be collected within the first six months of the following calendar year, pursuant to Part IV. B. 1. c. (6) of the permit. Results of the follow up compliance sampling must be reported on a Corrective Action Form provided in Appendix K and **submitted to NYSDEC by July 31 of the calendar year.**

If results of the re-sampling do not achieve a test result within the parameters, the facility must continue efforts to implement additional BMPs to improve the quality of the facility's discharge water. If it is determined that the exceedances are attributable to natural background, then the facility may request relief from the additional sampling from the NYSDEC by completing a Corrective Action Sampling Waiver Form provided in Appendix L.

Record Keeping: Along with the monitoring results and completed Discharge Monitoring Reports (DMRs supplied by the NYSDEC), the facility must provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event. Analytical results, DMRs and sampling logs are maintained in Appendix Q.

8.1.4 *Numeric Effluent Limitation*

The facility will also annually test for the numeric effluent parameters listed in Table 5 below. Facilities with seasonal operations or operations with durations of less than a year must complete the required numeric effluent compliance monitoring while the facility is actively operating.

Table 5: Numeric Effluent Limitations for Frontier Quarry

Parameter	Effluent Limitation	
	Daily Maximum	30-day Average
Total Suspended Solids (TSS)	45 mg/L	25 mg/L
pH	6.0 – 9.0	
Oil and Grease (O & G)	15 mg/l	10 mg/l

When and How to Sample: A minimum of one grab sample must be collected from each of the following discharges:

- Outfall 001 Visual Inspection: Observe discharge from retention pond system to an agricultural swale that may discharge to Oak Orchard Creek.

The samples must be collected from a storm event with at least 0.1 inch of precipitation (defined as a "measureable" event), providing the interval from the preceding measurable storm is at least 72 hours. Use an on-site rain gauge, go to http://www.erh.noaa.gov/aly/ then enter city and state and go to 2-day weather history to obtain rainfall total for rain event or contact local POTW. The 72-hour storm interval is waived if the preceding measurable storm did not result in a stormwater discharge (i.e. a storm event in excess of 0.1 inches may not result in a stormwater discharge at some facilities), or if the permittee is able to document that less than a 72-hour interval is representative for local storm events during the sampling period.

The sample must be taken during the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of the discharge. If the sampled discharge commingles with process or non-process water, the permittee must attempt to sample the stormwater discharge before it mixes with the non-stormwater.

Sample Analysis: The collected sample must be delivered to a state certified laboratory (State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law) for analysis of the parameters listed in Table 5.

Corrective and Follow-Up Actions: Exceedance of effluent limitation guideline values constitutes a permit violation. If results of one or more effluent limitation parameters exceed the applicable effluent limitation value, then the SWPPP coordinator must identify the cause of the exceedance, remedy problems identified, and revise the SWPPP.

Collection of Additional Samples: An additional sample must be collected within the first six months of the following calendar year to determine the effectiveness of corrective actions, pursuant to Part IV. B. 1. e. (5) of the permit. A Non-Compliance Event form must be completed and submitted to the NYSDEC with that year's DMR. The Non-Compliance Event form is provided in Appendix P. Results of the follow

up compliance sampling must be reported on a Corrective Action Form, located in Appendix K and submitted to NYSDEC by July 31 of the calendar year.

If results of the re-sampling do not result in achieving effluent limitations, the facility must continue efforts to implement additional BMPs to bring the facility into compliance. If it is determined that the exceedance is attributable to natural background, then the facility may request relief from the additional sampling from NYSDEC by completing a Corrective Action Sampling Waiver Form provided in Appendix L.

8.1.5 *Secondary Containment Discharge Monitoring*

The facility may, from time to time, have a temporary above ground fuel storage tanks with secondary containment systems. If a secondary containment system is on site, the facility must document the occurrence of accumulated stormwater drained from any secondary containment system by doing the following:

- Visually screen the accumulated stormwater for contamination (i.e. sheen);
- Monitor the volume of each discharge from the secondary containment system. To monitor the volume of each discharge, a facility employee must multiply the square footage of the containment area by the height of the accumulated stormwater. This measurement can be converted to gallons using the conversion factor of: 1 cubic foot = 7.48 gallons;
- The volume of stormwater discharged must be recorded on the Secondary Containment Discharge Log in Appendix N, and
- If a release occurred in the secondary containment, a representative sample of the first discharge following any cleaned up spill or leak that occurs in the secondary containment must be collected and analyzed for pH and the presence of the substance(s) stored within the containment area and any other pollutants that could be present

8.1.6 *Record Keeping and Internal Reporting Procedures*

Retain all records of monitoring information, copies of all reports required by this permit, and records of all data used to complete the NOI and/or NOM forms to be covered by this permit, until at least five years after coverage under this permit terminates. The Current NOI/NOM can be found in Appendix B.

- If records are stored electronically, the records must be preserved in a manner that reasonably assures their integrity and are acceptable to the Department. Such records must also be in a format which is accessible to the Department.
- The owner or operator shall make available to the Department for inspection and copying, or furnish to the Department within 14 days of receipt of a Department request for such information, any information retained in accordance with this subdivision.

8.2 Annual Comprehensive Site Compliance Inspection and Evaluation

At least once a year the owner/operator will conduct an Annual Comprehensive Site Compliance Evaluation. The inspections must be done by qualified personnel who may be either facility employees or outside consultants hired by the facility. The inspectors must be familiar with the industrial activity, the BMPs, the SWPPP, and must possess the skills to assess conditions at the facility that could impact stormwater quality and assess the effectiveness of the BMPs.

8.2.1 *Scope of the Comprehensive Site Compliance Inspection and Evaluation*

Inspections must include all areas where industrial materials or activities are exposed to stormwater as identified in Section 4.0, as well as any areas where spills and leaks have occurred within the past three years. After the site inspection is complete, a review of the SWPPP to ensure it is current and in compliance will be done. Guidance for this review can be found in PART III.E. "Keeping SWPPPs Current". The purpose of this review is to:

- Inspect industrial materials, residue or trash on the ground that could contaminate or be washed away in stormwater;
- Identify leaks or spills from industrial equipment, drums, barrels, tanks or similar containers;
- Identify unauthorized non-stormwater discharges or allowable non-stormwater discharges that are not certified in accordance with Section 6.1.10;
- Identify off-site tracking of industrial materials or sediment where vehicles enter or exit the site or tracking of material outside of the area where it originates;
- Identify tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas;
- Identify the potential for pollutants entering or discharging the drainage system.
- Inspect areas found to be the source of pollutants observed during visual and analytical monitoring done during the year;
- Inspect stormwater BMPs to ensure that they are operating correctly, and
- Where discharge outfalls are accessible, they must be inspected to see whether BMPs are effective in preventing significant impacts to receiving waters. Where discharge outfalls are inaccessible, nearby downstream locations must be inspected.

8.2.2 *Completing the Comprehensive Site Compliance*

- Using the Comprehensive Site Compliance Inspection and Evaluation form provided in Appendix O conduct a field inspection;
- Discuss corrective actions and perform necessary documentation with regards to corrective actions;
- Review SWPPP for completeness;
- Where a report does not identify any incidents of noncompliance, the report shall contain a statement that the facility is in compliance with the SWPPP and this permit, and
- The report shall be signed in accordance with Part V.H of the permit and filed in Appendix Q.

8.2.3 *Follow-Up Actions*

Based on the results of the inspection/evaluation, the SWPPP may need to be modified if any deficiencies are noted. Revisions to the SWPPP must be completed within 14 calendar days following the inspection/evaluation, unless permission for a later date is granted in writing by the NYSDEC. If existing BMPs need to be modified or if additional BCTs are necessary, implementation must be completed before the next anticipated storm event, if practicable, but not more than 12 weeks after completion of the Compliance Inspection and Evaluation Report, unless permission for a later date is granted in writing by the NYSDEC.

8.3 Monitoring Results and Annual Certification Reporting

The Annual Certification Report found in Appendix P is the primary mechanism for reporting to the NYSDEC. The facility is required to complete the reports from the monitoring of parameters listed in Table 4 and Table 5.

Annual Certification Reports must be submitted by February 28th of each year to:

Industrial Stormwater General Permit Coordinator
NYSDEC, Bureau of Water Permits
625 Broadway
Albany, New York 12233-3505

Copies of all reports and monitoring data must be maintained with the SWPPP for five years after coverage under the permit terminates.

Table 6: Reporting Requirements

Sampling Type	Sampling Frequency	Submission Deadline
Visual Monitoring	Quarterly	Retain documentation with SWPPP. Answer applicable questions on the Annual Certification Report Form and submit by February 28th.
Dry Weather Flow Inspection	Annually	Retain documentation with SWPPP. Answer applicable questions on the Annual Certification Report Form and submit by February 28th.
Benchmark Monitoring	Annually	Retain documentation with SWPPP Complete Discharge Monitoring Report (Supplied by NYSDEC in August). Answer applicable questions on the Annual Certification Report Form and submit by February 28th.
Effluent Numeric Limitation Monitoring	Annually	Retain documentation with SWPPP Complete Discharge Monitoring Report (Supplied by NYSDEC in August). Answer applicable questions on the Annual Certification Report Form and submit by February 28th.
Non-Compliance Report	As Needed	If Effluent Limitation Monitoring results exceed Effluent Limitation Guidelines, a Report of Non-Compliance Event Form (Appendix M) must be submitted along with the Discharge Monitoring Report.
Annual Certification Report	Annually	Retain documentation with SWPPP. Submit Annual Certification Report Form by February 28th.

9.0 PLAN REVISIONS

It is a requirement of the permit that the SWPPP be kept updated by making any necessary revisions. Guidance for this review can be found in PART III.E of the permit "Keeping SWPPPs Current". The SWPPP will be amended whenever:

- There is a change in design, construction, operation or maintenance at the facility that may have an effect on the potential for the discharge of pollutants from the facility that has not otherwise been addressed in the SWPPP, or
- During inspections, monitoring or investigations by facility personnel or by local, state or federal officials it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutants from sources identified in Section 4.0, or is otherwise not achieving the general

objectives of controlling pollutants in discharges from the facility.

The facility must notify the Department of any changes or corrections to the information submitted to gain coverage under this permit by submitting a Notice of Modification (NOM) form. All modifications, including changes of address or stormwater contact information must be submitted on the NOM form provided by the Department.

Table 7: Record of Revisions

Date	Description of Revision	Date Revised	SWPPP Coordinator Initials

10.0 SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

10.1 Regulations and Penalties

Section 311 (b)(1) of the Clean Water Act ("Act") states that "...there should be no discharge of oil onto, or upon, the navigable waters of the United States, adjoining shorelines or into, or upon, the waters of a contiguous zone." Subsequent to the Act, the Environmental Protection Agency (EPA) published regulations to prevent discharges of oil into navigable waters and to contain such discharges if they occur. These regulations include 40 CFR Parts 110 and 112 that set out rules and regulations governing oil pollution prevention, SPCC Plan requirements, and penalties for violation of regulations. 40 CFR Part 112 was amended on Tuesday, December 26, 2006 and the amended version became effective on February 26, 2007; 40 CFR 112 contains the content requirements for an SPCC Plan.

A facility is required to implement an SPCC Plan if, due to its location, it could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines, and the facility meets one of the following criteria regarding oil storage:

- The total aboveground storage capacity exceeds 1,320 gallons; or
- The underground storage capacity exceeds 42,000 gallons for completely buried tanks that are not covered by the technical requirements of 40 CFR 280 or 281.

The civil penalty for failure to have an SPCC Plan in operation at facilities required to have SPCC Plans is a maximum of $10,000 per day for each day that the violation exists.

The Frontier facility does not meet the requirement to prepare a SPCC plan because the mine is in the proposal stage and not yet developed. However, Frontier in using Best Management Practices has developed the following ***SPILL RESPONSE PLAN*** for future use.

10.2 Petroleum Inventory

Petroleum products are not presently stored or used at this site. As a completeness measure associated with the prevention of stormwater pollution, the following guidance is incorporated into this SWPPP.

10.3 Spill Response Plan

10.3.1 *Emergency Contacts*

Table 8: Emergency Contacts

NAME	TELEPHONE
Spill Response Coordinator:	David Mahar 716-751-9670 716-861-8153 (cell)
Fire Department	911
Police Department	911
NYSDEC Spill Hotline	(800) 457-7362
USEPA Region 2 Emergency Spill Line	(732) 548 8730
National Response Center	(800) 424-8802

10.4 Notification Sequence

An employee discovering a spill shall follow the proper notification procedures outlined in this section and summarized in Figure 3. An employee observing a spill of any quantity shall immediately notify his/her supervisor. The decision whether to call the fire department shall be made by the supervisor. The supervisor shall report the condition to the Spill Response Coordinator (SRC) who will be responsible for coordinating spill response and cleanup efforts and contacting necessary agencies. If the SRC cannot be contacted, an alternate SRC shall be contacted. The SRC or Alternate SRC shall notify the appropriate agencies, if applicable, within two hours of spill discovery, pursuant to NYCRR Part 613.

10.5 Spill Response Procedures

Actions to control, contain, remove, and cleanup spills shall begin immediately whenever an employee has reported an oil spill, or whenever a suspected release of oil is believed to have occurred, as summarized in Figure 4. A release is suspected if:

- Sampling indicates a release occurred.

- Impacts are discovered in the surrounding area, such as evidence of petroleum products in soil, basements, and utility lines, or nearby ditches, swales, or surface water bodies.
- Unusual operating conditions exist, such as sudden loss of product from a tank, unexplained presence of water in a tank, or physical presence of petroleum products on site of unknown origin.

Available equipment and manpower at the facility's disposal shall be used as required to minimize the amount of oil discharged and to prevent it from entering any body of water.

Normal course of action for the discovery of a spill shall be as follows:

(1) Assess the situation:

Determine whether ignition sources or other safety issues exist. If a fire potential or life-threatening situation exists, evacuate the area and immediately notify a supervisor who should contact the appropriate emergency personnel. If a fire or life-threatening situation exists, await instruction from emergency crews—do not attempt to stop or contain the spill unless instructed by an emergency crew to assist.

If a fire potential or life-threatening situation does not exist, proceed to Step 2.

(2) Stop the flow:

Take measures (i.e., turn off pumps, close valves, etc.) to reduce the flow.

(3) Contain the spill:

Prevent discharges from reaching drainage or watercourses. Examine containment system, if applicable, for integrity. Contain localized spills with absorbent materials. Construct temporary earthen berms, dikes, channels, or impoundment areas where appropriate to divert spills away from any potential transport pathways to navigable waters. If a release threatens to enter a stormwater ditch or drainage swale implement appropriate containment or diversionary methods to prevent potential transport to navigable waters.

(4) Notify the SRC or Alternate SRC:

Follow notification sequence outlined on page 25. While containment and cleanup is commencing, the SRC should verbally notify necessary regulatory agencies within 2 hours of spill discovery.

(5) Cleanup spill, or mobilize licensed cleanup contractor to clean up the spill:

Use enough absorbent to soak up the spilled liquid. If spilled liquid is flammable, use non-sparking shovels to prevent ignition. Scoop up spent absorbent and place in the proper waste container. Properly label waste container if material is flammable and combustible.

(6) Decontaminate equipment:

Wash equipment such as pumps, hoses, and tools used in emergency response; collect and contain wash water.

(7) Dispose of material and collected wash water properly:

Cleanup material immediately and dispose properly through a waste disposal contractor.

(8) Report the spill:

Written reports, if applicable, should be submitted by the SRC to the appropriate agency as described on pages 29 through 30.

(9) Replenish emergency response equipment:

Repair, restock, and check for normal operation emergency equipment used.

10.6 Spill Reporting Procedures

Verbal Reporting Requirements

The occurrence of a spill may require the SRC or Alternate SRC to call one or all of the following: the New York State Department of Environmental Conservation Spill Hotline, the National Spill Response Center, the US Environmental Protection Agency Region 2 Emergency Spill Hotline, the local fire department, and the local police department. The SRC or Alternate SRC should document notifications. The SRC or Alternate SRC should be prepared to supply the following information:

- Name and contact information,
- Specific location and street address of spill,
- Date and time of the spill,
- Identity of the material spilled,
- Approximate quantity spilled,
- Location and source of spill,
- Cause and circumstance of the spill,
- Existing or potential hazards,
- Personal injuries or casualties, if any,
- Description of media involved and nearest body of water to the spill area,
- Corrective actions being taken and timetable to contain, control, and cleanup spill,
- Identify the need for evacuation,
- Name of any response organization responding to the spill, and
- The list of agencies notified.

The following questions should be addressed to determine if a spill of petroleum is required to be reported.

1. **Was greater than five-gallons released, not contained, and not cleaned up in within 2 hours of discovery?**

   If yes, immediately report the spill to the NYSDEC Spill Hotline (1-800-457-7362)

   The Duty Officer will instruct on further local, state, and federal reporting requirements.

2. **Did the spill enter navigable water?**

   If yes, immediately notify the National Response Center at (1-800-424-8802)

   The NRC will relay required emergency information to the U.S. EPA office, if necessary.

3. **Did the spill cross over the facility boundaries?**

   Immediately notify the neighboring facility of the release.

Written Reporting Requirements

4. **Was the spill required to be reported to the NYSDEC as described in Question #1 above?**

   The Duty Officer will instruct on written reporting requirements at the time of notification.

   Make necessary updates to facility Stormwater Pollution Prevention Plan and record spill incident details in Appendix 2.

5. **Did the spill exceed 1,000 gallons of oil into navigable waters or have any two spills each exceeding 42 U. S. gallons occurred within any 12 month period in the three years prior the "Certification Date" affixed hereto and was it caused by or related to motive equipment?**

If yes, EPA, at their discretion, maintains the authority, under 311(j) (1) (c) of the Clean Water Act, to impose requirements to prevent oil discharges from motive power containers. The definition of motive power includes, but is not necessarily limited to, self-propelled construction excavation equipment, mining equipment, sport utility vehicles, and other similar equipment which contain oil in capacities greater than or equal to 55 gallons solely for the purpose of providing fuel for propulsion, or solely to facilitate the operation of the vehicle, such as lubrication of moving parts or operation of onboard hydraulic equipment. If a spill of significance is observed the SRC should be prepared to write a report containing the following information:

a. Name of facility;
b. Name(s) of the owner or operator of the facility;
c. Location of the facility;
d. Date and year of initial facility operation;
e. Maximum petroleum storage or handling capacity of the facility and normal daily throughput;
f. Descriptions of the facility, including maps, flow diagrams, and topographical maps;
g. A complete copy of the Spill Response Plan and any amendments;
h. The cause(s) of such spill, including a failure analysis of the system in which failure occurred;
i. The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;
j. Additional preventive measures taken or contemplated to minimize the possibility of recurrence;
k. Such other information as the Regional Administrator may reasonably require pertinent to the plan or spill event.

Plate 1

FLETCHER CHAPEL ROAD

SOUTHWOOD ROAD

SOUR SPRINGS ROAD

PROPOSED
LIFE-OF-MINE
AFFECTED AREA
43.7± ACRES

PROPOSED
LIFE-OF-MINE
AFFECTED AREA
171.8± ACRES

SAMPLE POINT
001

PROPOSED SETTLING BASINS

AGRICULTURE DRAINAGE DITCH

PROPOSED
SUMP

PROPOSED DRAINAGE DIRECTION

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

Date	Revisions	By
12/21/12	ADD DRAINAGE ARROWS	WKC

CONTINENTAL PLACER INC.

II Winners Circle, Albany, New York 12205
ph: 518/458-9203 fax: 518/458-9206

SWPPP MAP

Frontier Stone LLC.
Frontier Stone Quarry
Town of Shelby Orleans Co., NY.

Project Manager: JRH Prepared By: JRH Drafted By: BEW Reviewed By:	Date: March 31, 2008 Project No: 629-01-05-2531	Sheet No: 1

APPENDICES

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Appendix A

Multi-Sector General Permit for Stormwater Discharges
GP-0-12-001
(Redacted for Sector J only)

Appendix A

Multi-Sector General Permit for Stormwater Discharges
GP-0-12-001

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES MULTI-SECTOR GENERAL PERMIT

FOR STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

Permit No. GP-0-12-001

Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date:
October 1, 2012

Expiration Date:
September 30, 2017

Authorized Signature:

Date: September 28, 2012

John Ferguson, Chief Permit Administrator
NYS Department of Environmental Conservation
Division of Environmental Permits
625 Broadway
Albany, NY 12233-1750

PREFACE

The Clean Water Act (CWA)[1] provides that *stormwater discharges associated with industrial activity* from a *point source*[2] (including *discharges* through a *municipal separate storm sewer system)* to *waters of the United States* are unlawful, unless authorized by a *National Pollutant Discharge Elimination System (NPDES)* permit. In New York, EPA has approved the *State* program which is enacted through the administration of the *State Pollutant Discharge Elimination System (SPDES)* program.

A discharger who is subject to the stormwater *SPDES* regulations may be eligible to obtain coverage under a general permit by submitting a Notice of Intent (NOI) form to the address provided on the form. Blank NOI forms are available by calling (518) 402-8111 or can be downloaded from the NYSDEC website at:.
http://www.dec.ny.gov/docs/water_pdf/gpnoit.pdf.

Background

The version of the Multi-Sector General Permit for *Stormwater Discharges Associated with Industrial Activity* identified as GP-0-06-002 expired on March 27, 2012. The *Department* elected to reissue the MSGP without changes as GP-0-11-009 which became effective March 28, 2012 and will expire on September 30, 2012. For *discharges* covered under GP-0-06-002, coverage was automatically continued under GP-0-11-009.

Facilities covered under GP-0-11-009 and all new dischargers may seek coverage under this permit by submitting a Notice of Intent as set forth in Part I of this permit.

Please be sure to review and understand the requirements that apply to your facility. This permit includes general requirements applicable to all facilities with permit coverage (Parts I through VII) and industry specific requirements in Part VIII which address 31 different industrial activities.

Coverage under this general permit is available effective October 1, 2012 and will expire on September 30, 2017.

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[1] Also known as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972 (Pub.L. 92-500, as amended Pub. L. 92-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et.seq.)

[2] "Point Source" means any discernible, confined, and discrete conveyance, including *but not limited to*, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which *pollutants* are or may be discharged. The State's interpretation of "point source" is consistent with the Environmental Protection Agency's response to comments published with the final stormwater rule promulgated in the Federal Register Volume 55/No. 222, November 1, 1990, which states that point source discharges of stormwater result from structures which increase imperviousness of the ground which acts to collect runoff, with runoff being conveyed along the resulting or grading patterms.

SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity except Construction Activity

Table of Contents

Part I. COVERAGE UNDER THIS PERMIT

A. Permit Area

This permit is intended to provide *SPDES* Permit coverage to facilities with *stormwater discharges*[3] to *surface waters of the State*[4] from a *point source* or *outlet*[5] that conduct industrial activities identified within 40 CFR Part 122.26(b)(14)(i) through (ix) and (xi), as well as other miscellaneous industrial activities designated by the *Department* on a case by case basis. This Permit covers all areas of New York State where New York State implements Section 402 of the CWA. Except as in compliance with this general permit or with a duly authorized individual permit from DEC, stormwater "discharges associated with industrial activity"[6] by any person shall be unlawful.

B. Permit Conditions & Limitations

1. **Control Measures and Effluent Limits** - In the technology-based limits included below and in Part VIII, the term *"minimize"*means reduce and/or eliminate to the extent achievable using *control measures* (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

    a. *Control Measures* - The *owner or operator* must select, design, install, and implement control measures (including best management practices) to address the selection and design considerations in Part I.B.1.a.1, meet the non-numeric effluent limits in Part I.B.1.a.2, and meet limits contained in applicable *effluent limitations guidelines* in Part I.B.1.a.3. The selection, design, installation, and implementation of these *control measures* must be in accordance with good engineering practices and manufacturer's specifications. Note that the *owner or operator* may deviate from such manufacturer's specifications provided that a justification for such deviation is documented in the part of SWPPP that describes the *control measures*,

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[3] A "discharge associated with industrial activity" covered under this general permit, includes those defined in 40 CFR Section 122.26(b)(14)(i) through (ix) and (xi).

[4] For the purpose of this permit, *Surface Waters of the State* includes both *Surface Waters of the State* and *Waters of the United States* as defined in Appendix A.

[5] "Outlet means outfall" 6 NYCRR 750-1.2(a)(59) "Outfall means the terminus of a sewer system, or the point of emergence of any waterborne sewage, industrial waste or other wastes or the effluent therefrom, into the *waters of the State*." 6 NYCRR 750-1.2(a)(58)

[6] "It shall be unlawful for any person, until a written *SPDES* permit therefor has been granted by the commissioner, or by his designated representative, and unless such permit remains in full force and effect, to: a. Make or cause to make or use any outlet or point source for the discharge of sewage, industrial waste or other wastes or the effluent therefrom, into the waters of this state;" ECL §17-0701(1).

consistent with Part III.C.7. If the *owner or operator* finds that the *control measures* are not achieving their intended effect of *minimizing* pollutant *discharges*, the *owner or operator* must modify these *control measures* as expeditiously as practicable. Regulated stormwater *discharges* from the facility include stormwater run-on that commingles with *stormwater discharges associated with industrial activity* at the facility.

(1) Control Measure Selection and Design Considerations - The *owner or operator* must consider the following when selecting and designing *control measures*:

- preventing stormwater from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove *pollutants* from stormwater;
- using *control measures* in combination is more effective than using *control measures* in isolation for *minimizing pollutants* in stormwater *discharges*;
- assessing the type and quantity of *pollutants*, including their potential to impact receiving water quality, is critical to designing effective *control measures* that will achieve the limits in this permit;
- *minimizing* impervious areas at the facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches) can reduce runoff and improve *groundwater* recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination; attenuating flow using open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;
- conserving and/or restoring of riparian buffers will help protect streams from stormwater runoff and improve water quality; and,
- using treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to *minimize* the *discharge* of *pollutants*.

(2) Non Numeric Technology Based Effluent Limits (*BPT*/BAT/BCT)

(a) *Minimize* Exposure - The *owner or operator* must *minimize* the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff. In *minimizing* exposure, the *owner or operator* should pay particular attention to the following:

- locate industrial materials and activities inside or protect them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended);

- use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas;
- locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas);
- clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the *discharge* of *pollutants*;
- use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible;
- use spill/overflow protection equipment;
- drain fluids from equipment and vehicles prior to on-site storage or disposal;
- perform all cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray; and ensure that all washwater drains to a proper collection system (i.e., not the stormwater drainage system).
- Minimize exposure of chemicals by replacing with a less toxic alternative

The *discharge* of vehicle and equipment washwater, including tank cleaning operations, is not authorized by this permit. These wastewaters must be covered under a separate *SPDES* permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or disposed of otherwise in accordance with applicable law.

(b) Good Housekeeping - The *owner or operator* must keep clean all exposed areas that are potential sources of *pollutants*, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers.

(c) Maintenance - The *owner or operator* must regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of *pollutants* in stormwater discharged to *surface waters of the state*. All *control measures* that are used to achieve the effluent limits required by this permit must be maintained in effective operating condition. Nonstructural *control measures* must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If inspection indicate that *control measures*

need to be replaced or repaired, the necessary repairs or modifications shall be made as expeditiously as practicable

(d) Spill Prevention and Response Procedures - The *owner or operator* must *minimize* the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, The *owner or operator* must implement:

- Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides," etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
- Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;

- Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the stormwater pollution prevention team (see Part III.C.1); and,

- Procedures for notification of the appropriate facility personnel, emergency response agencies, and regulatory agencies. Any spills must be reported in accordance with 6 NYCRR Part 750-2.7

(e) Erosion and Sediment Controls - The *owner or operator* must stabilize exposed areas and control runoff using structural and/or non-structural *control measures* to *minimize* onsite erosion and sedimentation, and the resulting *discharge* of *pollutants*. Among other actions taken to meet this limit, flow velocity dissipation devices must be placed at *discharge* locations and within *Outfall* channels where necessary to reduce erosion and/or settle out *pollutants*. Controls must be in accordance with the New York State Standards & Specification for Erosion & Sediment Control (2005), or equivalent.

(f) Management of Runoff - The *owner or operator* must divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff, to *minimize pollutants* in the *discharges*.

Continue Part I.B.1.a.(2).(g). to Part I.B.1.a.(3).

(g) Salt Storage Piles or Piles Containing Salt - The *owner or operator* must enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. The *owner or operator* must implement appropriate measures (e.g., good housekeeping, diversions, containment) to *minimize* exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if stormwater runoff from the piles is not discharged or if *discharges* from the piles are authorized under another *SPDES* permit.

(h) Sector Specific Non-Numeric Effluent Limits - The *owner or operator* must achieve any additional non-numeric limits stipulated in the relevant sector-specific section(s) of Part VIII.

(i) The *owner or operator* must train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of the Pollution Prevention Team. Training must cover both the specific *control measures* used to achieve the effluent limits in this Part, and monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit. Training shall be conducted at least annually (or more often if employee turnover is high).

(j) Non-Stormwater Discharges - The *owner or operator* must eliminate non-stormwater *discharges* not authorized by a *SPDES* permit. See Part I.C.3 for a list of non-stormwater *discharges* authorized by this permit.

(k) Waste, Garbage and Floatable Debris - The *owner or operator* must ensure that waste, garbage, and floatable debris are not discharged to *surface waters of the state* by keeping exposed areas free of such materials or by intercepting them before they are discharged.

(l) Dust Generation and Vehicle Tracking of Industrial Materials - The *owner or operator* must *minimize* generation of dust and off-site tracking of raw, final, or waste materials

(3) Numeric Effluent Limitations based on *effluent limitations guidelines*. The *owner or operators* of facilities listed in an industrial category subject to one or more of the *effluent limitations guidelines* identified in Appendix D, must meet the effluent limits specified in the referenced Sector in Part VIII.

2. **Maintaining Water Quality Standards** - The *Department* expects that compliance with the other conditions of this permit will control *discharges* necessary to meet applicable water quality standards. It shall be a violation of the *Environmental Conservation Law (ECL)* for any *discharge* authorized by this general permit to either cause or contribute to a violation of water quality standards as contained in Parts 700-705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, including, but not limited to:

    a. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;

    b. There shall be no suspended, colloidal and settleable solids from sewage, *industrial wastes* or other wastes that will cause deposition or impair the waters for their best usages; and

    c. There shall be no residue from oil and floating substances attributable to sewage, *industrial wastes* or other wastes, nor visible oil film nor globules of grease.

3. If there is evidence indicating that the stormwater *discharges* authorized by this permit are causing, have the reasonable potential to cause, or are contributing to an excursion above an applicable water quality standard, the *owner or operator* must take appropriate corrective action and notify the *Department* of corrective actions taken. The *Department* may require the *owner or operator* to conduct follow-up monitoring or provide additional information, may require the *owner or operator* to include and implement appropriate controls in the SWPPP to correct the problem, may require the *owner or operator* to obtain an individual permit and/or may take appropriate enforcement action.

4. If there is evidence indicating that despite compliance with the terms and conditions of this permit it is demonstrated that the stormwater *discharges* authorized by this permit are causing or contributing to a violation of water quality standards, or if the *Department* determines that a modification of the permit is necessary to prevent a violation of water quality standards, the authorized *discharges* will no longer be eligible for coverage under this permit. The *Department* may require the *owner or operator* to obtain an *SPDES* individual permit to continue discharging.

C. Eligibility

The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

1. **Facilities Covered** - Permit eligibility is limited to the *discharge* of stormwater associated with industrial activities consistent with the definitions in 40 CFR 122.26(b)(14)(i-ix and xi), which identifies categories of *industrial activity* consistent with Standard Industrial Classification (SIC) codes; industrial activity codes; narrative descriptions; or non-classified *discharges* covered under sectors AD and AE of this general permit which have been designated by the *Department* (via written notification) as needing a stormwater permit and determined to be suitable for coverage under this permit. These industrial activities have been organized into specific industrial sectors A through AE in Part VIII. Reference to "sectors" in this permit (e.g., sector specific monitoring requirements, etc.) refer to these sectors.

    a. *Co-located industrial activity* - If more than one *industrial activity* occurs at the facility, those industrial activities are considered to be *co-located.* Stormwater *discharges* from *co-located industrial activities* are authorized by this permit, provided that the *owner or operator* complies with any and all additional sector specific requirements from Part VIII applicable to each *industrial activity* at the facility. A facility with a *primary industrial activity* that is required to obtain coverage under MSGP is also required to comply with requirements that apply to other activities at the facility if those additional activities would require coverage if considered on their own. If more than one activity listed in Appendix B is being performed at a facility, all SIC codes must be included in the NOI submitted to the *Department* to gain or renew coverage under MSGP. There are specific monitoring and SWPPP requirements associated with each industrial sector. *Owners/operatators* must comply with all requirements related to each activity.

    b. Industrial sector determination - If a *owner or operator* can provide adequate justification to the *Department*, and the *Department* agrees, the *owner or operator* may utilize another industrial sector which better reflects the industrial activities occurring at the facility than the industrial sector associated with the facility's SIC code. The *Department* reserves its right to classify such facilities in Sector AD instead.

    c. Municipally owned facilities - An industrial facility that is owned *and* operated by a *municipality* covered by the Phase II *Municipal Separate Storm Sewer (MS4)* General Permit may not need coverage under a separate MSGP permit provided that the Phase II *MS4* includes the facility in the *MS4*'s Stormwater Management Program Plan, implements the plan in accordance with the *MS4* General Permit and completes all the applicable monitoring and reporting requirements specified in the MSGP for facilities that would otherwise be subject to this permit.

2. **Discharges Covered -** Subject to compliance with terms and conditions of this permit, the following stormwater *discharges* are authorized:
   a. Stormwater associated with *industrial activity* to *surface waters of the State*, except ineligible stormwater *discharges* identified under Part I.D or under the sector specific requirements of Part VIII;
   b. *Stormwater discharges associated with industrial activity* that are mixed with stormwater *discharges* authorized under a different *SPDES* general permit or an *individual SPDES permit* provided that all *discharges* are in compliance with the terms and conditions of the various permits;
   c. *Stormwater discharges associated with industrial activity* which are authorized by this permit may be combined with other sources of stormwater which are not classified as associated with *industrial activity* pursuant to 40 CFR 122.26(b)(14), provided that the *discharge* is in compliance with this permit and the *discharges* have not been designated by the *Department* as requiring an individual *SPDES* Permit;
   d. *Discharge* subject to effluent guidelines listed in Table IV-1 or Appendix D that also meet all other eligibility requirements of the permit;
   e. *Discharges* designated by the *Department* as needing a stormwater permit and determined to be suitable for coverage under sectors AD & AE of this general permit; and
   f. Non-stormwater *discharges* explicitly listed in Part I.C.3.

3. **Non-Stormwater Discharges** - The following non-stormwater *discharges* may be authorized by this permit provided that the SWPPP contains the documentation specified in Part III.C.7.f.2:

   a. *Discharges* from fire fighting activities;

   b. Fire hydrant flushings;

   c. Potable water sources including waterline flushings;

   d. Uncontaminated air conditioning or compressor condensate, and other uncontaminated condensate such as condensate from the surface of pressurized gas cylinders stored outside;

   e. Irrigation drainage;

   f. Landscape watering provided that all pesticides[7] and fertilizers have been applied in accordance with manufacturer's instructions;

[7] All pesticide, herbicide and fungicide products used at the facility must be registered with New York State and applied in accordance with the label directions. Any use contrary to the legal label is considered a violation of Federal and State Pesticide Law. Certification of pesticide applicators may be required. http://www.dec.ny.gov/permits/209.html

g. Routine external building washdown which does not use detergents

h. Uncontaminated ground water or spring water;

i. Foundation or footing drains where flows are not contaminated with process materials such as solvents; and

j. Incidental windblown mist from cooling towers that collect on rooftops or adjacent portions of the facility, but not intentional *discharges* from cooling tower (e.g.; "piped" cooling tower blowdown or drains).

D. Activities Which are Ineligible for Coverage under this General Permit

The following *discharges* from *industrial activity* are not authorized by this permit:

1. *Discharges* from *industrial activity* that are mixed with sources of non-stormwater other than those expressly authorized under either this permit or a different *SPDES* permit.

2. *Discharges* from *industrial activity* that are subject to an existing *SPDES* individual or general permit located at a facility where a *SPDES* permit has been terminated or denied; where the facility has failed to renew an expired individual permit; or which are issued an individual or alternative general permit;

3. *Discharges* from *industrial activity* which are subject to an existing *effluent limitation guideline* addressing stormwater which are not specifically listed in Table IV-1 or Appendix D (or a combination of stormwater and process water);

4. *Discharges* from *industrial activity* from *construction activities*, except stormwater *discharges* from portions of a construction site at facilities covered under Sectors J & L or that can be classified as an *industrial activity* under 40 CFR 122.26(b)(14)(i) through (ix) or (xi). (Examples of stormwater *discharges* requiring coverage are those associated with areas where mobile asphalt plants and mobile concrete plants are operated);

5. *Discharges* from *industrial activities* that have the potential to adversely affect a listed or proposed to be listed endangered or threatened species or its critical habitat, unless the facility has documentation of a written agreement with the *Department* per 6 NYCRR Part 182 (http://www.dec.ny.gov/regs/3932.html);

6. *Discharges* from *industrial activity* that have the potential to adversely affect a property that is listed or is eligible for listing on the *State* or National Registers of Historic Places (Note: includes archeological sites), unless there are written agreements in place with the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) or other governmental agencies to mitigate the effects, or there are local land use approvals evidencing the same.; and

7. *Discharges* occurring on federal lands from *industrial activity* from either: inactive mining, inactive landfills, or inactive oil and gas operations where an *owner or operator* cannot be identified.

8. *Discharges* from *industrial activity* to *impaired water* bodies at facilities that fail to achieve and maintain eligibility in accordance with Part II.C.

E. How to Obtain Authorization Under this Permit

1. **Eligibility** - A discharger of *stormwater associated with industrial activity* may be authorized under this permit only if the *discharge* from the facility meets the eligibility requirements in Part I.C. of this permit.

2. **Stormwater Pollution Prevention Plan** - A discharger of stormwater associated with *industrial activity* may be authorized under this permit only if the *owner or operator* has developed and implemented a Stormwater Pollution Prevention Plan (SWPPP) according to the requirements in Parts III, IV, and applicable sections of Parts VIII and IX of this permit.

3. **Notice of Intent** – Unless notified by the *Department* to the contrary, *owner or operators* who submit completed forms made available by the *Department* in accordance with Parts I.E.3.a and b below may be authorized to *discharge* stormwater under the terms and conditions of this permit. Completed forms must be submitted to:

   MSGP Permit Coordinator
   NYSDEC, Bureau of Water Permits
   625 Broadway
   Albany, New York 12233-3505

   a. Initial authorization- *Owners or operators* who submit an NOI in accordance with the requirements of this permit are authorized to *discharge* stormwater under the terms and conditions of this permit 30 calendar days after the date that the NOI is received. An exception to this is for transfers of ownership for which permits are effective once the conditions of Parts I.F.2 and VII are met.

   b. Modification of coverage under this permit – After gaining initial authorization under this permit, an *owner or operator* may submit a Notice of Modification (NOM) to correct or update information provided in the NOI submitted to gain initial authorization.

   c. The *Department* may deny coverage under this permit and require submittal of an application for an *individual SPDES permit* based on a review of the NOI or other information pursuant to Part V.N.

F. Deadlines for Notification

1. New dischargers or other *owners or operators* of facilities who intend to obtain coverage under this general permit shall submit a complete NOI at least 30 calendar days prior to the commencement of the *industrial activity* at the facility;

2. Where the *owner or operator* of a facility with stormwater *discharge associated with industrial activity* which is covered by this permit changes, the previous *owner or operator* shall submit a Notice of Termination (NOT) in accordance with Part VII. (Termination of Coverage), and the new *owner or operator* of the facility must submit an NOI.

3. A facility must notify the *Department* of any changes or corrections to the information submitted to gain coverage under this permit by submitting a Notice of Modification (NOM) form. *Stormwater discharges associated with industrial activities* or *outfalls* not included in previously submitted NOIs or NOMs are not authorized unless and until a complete NOM is received by the *Department*. All modifications, including changes of address or stormwater contact information must be submitted on the NOM form provided by the *Department*.

4. Facilities with effective coverage under the *SPDES* General Permit for *Stormwater Discharges Associated with Industrial Activity* (GP-0-11-009) on its expiration date are eligible for continued permit coverage on an interim basis for up to one hundred twenty (120) calendar days. A completed NOI must be received within ninety (90) calendar days from the date this permit becomes effective as coverage under this permit will not begin until thirty (30) calendar days from when the *Department* receives a complete NOI. Interim coverage will terminate once a completed NOI has been submitted and coverage is granted.

    a. During this interim period, an *owner/operator* must:

        (1) Update the facility's SWPPP to comply with the requirements of this permit prior to submission of the NOI.

        (2) Comply with the terms and conditions of the *SPDES* General Permit for *Stormwater Discharges Associated with Industrial Activity* (GP-0-11-009)

    b. Coverage under GP-0-11-009 shall terminate thirty (30) calendar days after the new NOI, or one hundred twenty (120) calendar days after issuance of GP-0-12-001, whichever comes first.

G. Conditional Exclusion for No Exposure

Facilities may qualify for a "Conditional Exclusion for No Exposure" where industrial activities and materials are completely sheltered from exposure to rain, snow, snowmelt and/or runoff. Facilities qualifying for this exclusion are not required to obtain a general

permit for stormwater *discharges* associated with *industrial activity*. This exclusion is available on a facility-wide basis only and is not applicable to individual *outfalls*.

To obtain the "Conditional Exclusion of No Exposure", the *owner or operator* must submit a certification to the *Department* attesting to the condition of *no exposure* using forms provided by the *Department*. This certification must be completed and submitted once every 5 years and is non-transferable. Facilities must maintain the condition of *no exposure*. If changes at a facility result in industrial activities or materials becoming exposed, the *no exposure* exclusion ceases to apply. *Owners or operators* who certified that their facilities qualify for the conditional *no exposure* exclusion may, nonetheless, be required by the *Department* to obtain permit coverage, based on a determination that stormwater *discharges* are likely to have an adverse impact on water quality. More information regarding the "Conditional Exclusion for No Exposure" is available at: http://www.dec.ny.gov/chemical/62833.html

Facilities with uncovered parking areas for vehicles awaiting maintenance may be eligible for this waiver if only routine maintenance, such as lubrication and oil changes, are performed on site and all *No Exposure* criteria are met. Facilities accepting disabled vehicles and/or vehicles that have been involved in accidents are not eligible for the Conditional Exclusion for *No Exposure*.

Part II. SPECIAL CONDITIONS

A. New Stormwater Discharges

New *stormwater discharges associated with industrial activity* which require any other *Uniform Procedures Act* permits (*Environmental Conservation Law*, 6 NYCRR Part 621) cannot be covered under this permit until the other required permits are obtained (see Appendix E). Upon satisfying the State Environmental Quality Review Act (SEQRA) requirements and obtaining the necessary permits, the applicant may submit a NOI to obtain coverage under this general permit. In order to facilitate the *Department*'s review of a multi-permitted project, an applicant must submit a report including the information specified in Appendix E with the NOI. A copy of this report must be retained with the SWPPP.

B. Releases of Hazardous Substances or Petroleum

1. This permit does not authorize the *discharge* of hazardous substances (as listed in 6 NYCRR Part 597) or petroleum. The *discharge* of hazardous substances or petroleum in the stormwater *discharge(s)* from the facility shall be prevented or *minimized* in accordance with the stormwater pollution prevention plan for the facility. Any spill of petroleum must be reported in accordance with 6 NYCRR Part 613.8 (http://www.dec.ny.gov/regs/4433.html). Any spill of a hazardous substance must be reported in accordance with 6 NYCRR Part 595.3. Notification must be reported to the NYSDEC Spills hotline (1-800- 457-7362) within two hours of the release. Additional notifications may be required for Federal level notification through the National Response Center (NRC) at 1-800-424-8802.

2. Where a release enters a *municipal separate storm sewer system (MS4),* the *owner or operator* shall also notify the *owner* of the *MS4* within 2 hours of the time at which facility staff becomes aware of the release; and

3. Following any release incident, the *owner or operator* must evaluate the facility's stormwater pollution prevention plan to identify measures preventing reoccurrence and to improve the emergency response to such releases. The plan must be modified where appropriate.

C. Impaired Waters (303(d) and TMDL)

1. *Discharges* to an *impaired waterbody*[8] that is included on the 303(d) list or in a watershed for which a *TMDL* has been developed are not eligible for coverage under this permit if the cause of impairment is a *pollutant* of concern included in the *benchmarks* and/or *effluent limitations* to which the facility is subject unless the facility:

    a. Prevents all exposure to stormwater of the *pollutant(s)* for which the waterbody is impaired,

    b. Documents that the *pollutant* for which the waterbody is impaired is not present on- site, or

    c. Provides additional information in the SWPPP to *minimize* the *pollutant* of concern causing the impairment as specified in Part III.F.4.

2. If conditions at the facility conform with Part II.C.1.a or b, results of analysis and/or visual monitoring supporting eligibility and other documentation, such as structural BMPs utilized to maintain a condition of no exposure or a certification that the substance is not present on site must be maintained with the SWPPP.

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[8] Information about impaired waters identified in the 303(d) list and approved Total Daily Maximum Load (TMDL) strategies is found on the Department's public web site at: http://www.dec.ny.gov/chemical/31290.html.

Section 303(d) of the federal Clean Water Act requires the Department to periodically to prepare a list of all surface waters in the state for which beneficial uses of the water – such as for drinking, recreation, aquatic habitat, and industrial use – are impaired by *pollutants*. These are water quality-limited estuaries, lakes, and streams that fall short of state surface water quality standards, and are not expected to improve within the next two years.

Waters placed on the 303(d) list require the preparation of *Total Maximum Daily Loads (TMDLs)*, a key tool in the work to clean up polluted waters. TMDLs identify the maximum amount of a pollutant to be allowed to be released into a waterbody so as not to impair uses of the water. TMDLs allocate that amount among various sources. In addition, even before a TMDL is completed, the inclusion of a water on the 303(d) list can reduce the amount of *pollutants* allowed to be released under permits issued by the Department.

Part III. STORMWATER POLLUTION PREVENTION PLANS

A. Stormwater Pollution Prevention Plan Requirements

A stormwater pollution prevention plan (SWPPP) shall be developed and implemented by the *owner or operator* for each facility covered by this permit. The SWPPP is intended to document the selection, design, installation and maintenance of *control measures* selected to meet *effluent limitations*. The SWPPP does not contain *effluent limitations*; the limitations are contained in Part I.B.1 and for some sectors Part VIII of this permit. SWPPPs shall be prepared in accordance with good engineering practices and in accordance with the factors outlined in 40 CFR 125.3(d)(2) or (3) as appropriate. This plan does not necessarily have to be developed or certified by a licensed Professional Engineer; however all components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of a professional engineer licensed to practice in the State of New York . Erosion and Sediment Control plans addressing soil disturbance(s) at facilities covered under this permit shall be prepared by, or under the supervision of a *trained individual* who is knowledgeable in the principles and practices of erosion and sediment control. All SWPPPs that require post-construction stormwater management controls shall be prepared by a *qualified professional.*

The SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges associated with industrial activity* from the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to *minimize* the *pollutants* in *stormwater discharges associated with industrial activity* at the facility and to assure compliance with the terms and conditions of this permit. Facilities must implement the provisions of the SWPPP.

The SWPPP requirements of this general permit may be fulfilled by incorporating by reference other plans or documents such as an Erosion and Sediment Control (ESC) plan, a Mined Land Use Plan, a Spill Prevention Control and Countermeasure (SPCC) plan developed for the facility or *BMP* programs otherwise required for the facility provided that the incorporated plan meets or exceeds the plan requirements of Part III.C and the applicable activity- specific requirements in Part VIII and IX. (All plans incorporated by reference into the SWPPP become enforceable under this permit; however, this enforcement is limited only to those aspects of these other plans that are specifically referenced to provide information or practices required for the SWPPP.)

B. Deadlines for Preparation and Compliance

1. The SWPPP shall be prepared and provide for compliance with the terms of this permit on or before the date of submission of an NOI to be covered under this permit; and

2. Upon showing of good cause, the *Department* may establish a later date in writing for preparing and compliance with the SWPPP for a stormwater *discharge* associated with *industrial activity* that submits an NOI in accordance with Part I.E.3.

C. Contents of the SWPPP

The contents of the SWPPP must include the documentation listed below and in appropiate sectors of Part VIII to comply with the *effluent limitations* contained in Part I.B.1 and for some sectors, Part VIII. If a facility has *co-located* activities that are covered in more than one sector of Part VIII, that facility's SWPPP must comply with the requirements listed in all applicable sectors. These requirements are additive. All SWPPPs developed under this general permit shall include, at a minimum, the following items:

1. **Pollution Prevention Team** - The SWPPP shall identify the staff individuals (by name or title) that comprise the facility's stormwater pollution prevention team. The pollution prevention team is responsible for assisting the *owner or operator* in developing, implementing maintaining, and revising the facility's SWPPP. Responsibilities of each staff individuals on the team must be listed. The activities and responsibilities of the team shall address all aspects of the facility's SWPPP.

2. **General Site Description** - A written description of the nature of the *industrial activity*(ies) at the facility including, at minimum:

   a. A general description of the industrial activities occurring in each drainage area.

   b. A general description of the path of stormwater within the facility.

   c. A description of runoff from adjacent property, if present, containing significant quantities of *pollutants* of concern to the facility (the *owner or operator* may include an evaluation of how the quantity or quality of the stormwater running onto the facility impacts the facility's stormwater *discharges*)

   d. The general path of stormwater flows between the facility and the nearest surface water body(ies) and/or location(s) where stormwater enters an *MS4,* if applicable.

   e. Receiving waters - The name of the nearest receiving water(s), including intermittent streams and the areal extent and description of wetlands (mapped and federally regulated wetlands) that may receive *discharges* from the facility.

   f. *Municipal separate storm sewer systems* - If stormwater is discharged to an *MS4,* the SWPPP must identify the *MS4* operator and the receiving water to which the *MS4 discharges*. Contact information for the *MS4* must be included in this section.

g. Other *SPDES* permitted *discharges* - The SWPPP must describe any *discharges* that are currently covered by another *SPDES* permit at the facility (e.g., process wastewater, sanitary wastewater, non-contact cooling water, etc.)

h. Impervious surface estimate - Provide an estimate of the percent imperviousness of the site:

$$\frac{\text{(Area of Roofs + Area of Paved and Other Impervious Surfaces)}}{\text{Total Area of Facility}} \times 100$$

i. Location of sensitive areas (e.g. impaired waters; listed threatened & endangered species or their critical habitat; historic properties, etc.)

j. Size of the property in acres.

3. **Summary of Potential Pollutant Sources** - The SWPPP shall identify each separate area at the facility where industrial materials or activities are exposed to stormwater including any potential *pollutant* sources for which the facility has reporting requirements under EPCRA Section 313[9]. Industrial materials or activities include, but are not limited to material handling equipment or activities, industrial machinery, raw materials, intermediate products, byproducts, 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. For each separate area identified, the description must include:

   a. Activities in area - A list of the activities (e.g., material storage, equipment fueling and cleaning, cutting steel beams, etc.); and

   b. *Pollutants* - A list of the associated *pollutant(s)* or *pollutant* parameter(s) (e.g., crankcase oil, iron, biochemical oxygen demand, pH, etc.) for each activity. The *pollutant* list must include all *significant materials* that have been handled, treated, stored or disposed in a manner to allow exposure to stormwater for a period of three years before being covered under this permit.

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[9] Pursuant to Section 313 of Title III of the Emergency Planning and Community Right-to-Know Act (EPCRA) (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986), a facility is subject to the annual reporting provisions of Section 313 if it meets all three of the following criteria for a calendar year: it is included in SIC codes 20-39; it has 10 or more full-time employees; and it manufactures (including imports), processes or otherwise uses chemicals listed in 40 CFR 372.65 in amounts greater than the "threshold" quantities specified in 40 CFR 372.25. Section 313 water priority chemicals are defined as chemical or chemical categories that: 1) are listed at 40 CFR 372.65; 2) are manufactured, processed or otherwise used at or above threshold levels at a facility subject to EPCRA Section 313 reporting requirements; and 3) that meet at least one of the following criteria: (i) are listed in Appendix D of 40 CFR 122 on either Table II (organic priority *pollutants*), Table III (certain metals, cyanides and phenols) or Table V (certain toxic *pollutants* and hazardous substances); (ii) are listed as a hazardous substance pursuant to section 311(b)(2)(A) of the CWA at 40 CFR 116.4; or (iii) are *pollutants* for which EPA has established acute or chronic water quality criteria.

c. Potential for presence in stormwater - For each area of the facility that generates *stormwater discharges associated with industrial activity* with a reasonable potential to contaminate stormwater, a prediction of the direction of flow, and an identification of the types of *pollutants* which are likely to be present in stormwater *discharges* associated with *industrial activity*. Factors to consider include the toxicity of chemicals; quantity of chemicals used, produced or discharged; the likelihood of contact with stormwater; and history of reportable leaks or spills of toxic or hazardous *pollutants*.

4. **Spills and Releases** - The SWPPP must clearly identify areas where potential spills or releases can contribute to *pollutants* in stormwater *discharges* and their accompanying drainage points. For areas that are exposed to precipitation or that otherwise drain to a stormwater conveyance at the facility to be covered under this permit, the plan must include a list of reportable spills or releases[10] of petroleum and hazardous substances or other *pollutants* that may adversely affect water quality that occurred during the three-year period prior to the date of the submission of a NOI. The list must be updated if reportable spills or releases occur in exposed areas of the facility during the term of the permit. This permit does not relieve the *owner or operator* of any reporting or other requirements related to spills or other releases of petroleum or hazardous substances.

5. **General Location Map** - A general location map (e.g., USGS quadrangle or other map) with enough detail to identify the location of the facility and the receiving waters and locations where stormwater enters an *MS4*, if applicable, within one mile of the facility.

6. **Site Map** - A site map identifying the following:

   a. Size of the property in acres

   b. Location and extent of significant structures and impervious surfaces

   c. Location of each *outfall* labeled with the *outfall* identification, including *outfalls* with *discharges* authorized under other *SPDES* permits

   d. The approximate outline of the drainage area to each *outfall*

   e. Locations of haul and access roads

   f. Rail cars and tracks

[10] This may also include releases of petroleum or hazardous substances that are not in excess of reporting quantities but which may still cause or contribute to significant water quality impairment. For example, the reportable quantity for ammonia is listed to be 100 pounds and releases well below this threshold will cause water quality impairment and must be addressed.

g. Direction of stormwater flow using arrows to show which ways stormwater will flow

h. Location of all receiving waters in the immediate vicinity of the facility, indicating if any of the waters are impaired and, if so, whether they waters have *TMDLs* established for them

i. *Location of MS4s* and where the stormwater *discharges* to them

j. Location of all stormwater conveyances including ditches, pipes, and swales

k. Locations where stormwater flows have significant potential to cause erosion

l. Location and source of runoff from adjacent property containing significant quantities of *pollutants* and/or volume of concern to the facility

m. Locations of the following activities where such activities are exposed to precipitation or runon:

- Fueling stations
- Vehicle and equipment maintenance and/or cleaning areas
- Loading/unloading areas
- Locations used for the treatment, storage or disposal of wastes
- Liquid storage tanks
- Processing and storage areas
- Locations where significant materials, fuel or chemicals are stored and transferred
- Locations where vehicles and/or machinery are stored when not in use
- Transfer areas for substances in bulk

n. Locations of potential *pollutant* sources identified under Part III.C.3

o. Location and description of non-stormwater *discharges*, including but not limited to those listed in Parts I.C.3

p. Locations where major spills or leaks identified under Part III.C.4 have occurred

q. Locations of all stormwater monitoring points

r. Locations of all existing structural *BMPs*

7. **Stormwater Controls** - The SWPPP must document the location and type of *BMPs* installed and implemented at the facility to achieve the non-numeric effluent limits in Part I.B.1.a.(2) and where applicable in Part VIII, and the sector specific numeric

effluent limitations in Part VIII. The SWPPP shall describe how each *BMP* is being, or will be implemented for all the areas identified in Part III.C.3 (summary of potential *pollutant* sources). Selection of *BMP*s should take into consideration:

- The quantity and nature of the *pollutants*, and their potential to impact the water quality of receiving waters;
- Opportunities to combine the dual purposes of water quality protection and local flood control benefits, including physical impacts of high flows on streams (e.g., bank erosion, impairment of aquatic habitat, etc.);
- Opportunities to offset the impact of impervious areas of the facility on ground water recharge and base flows in local streams, taking into account the potential for ground water contamination (i.e., *hotspots*).

The *owner/operator* must select, design, install, and implement *BMPs* as specified in Part I.B.1.a. and Part VIII to meet the *benchmarks* and/or *effluent limitations* included in Part VIII.

If the *owner or operator* determines that any of the *BMPs* described below are not appropriate for the facility, an explanation of why they are not appropriate shall be included in the SWPPP. The *BMPs* listed below are not intended to be an exclusive list of *BMP*s that may be used. The *owner or operator* is encouraged to keep abreast of new *BMP*s or new applications of existing *BMP*s to find the most cost effective means of permit compliance for the facility. If *BMP*s are being used or planned at the facility that are not listed here (e.g., adopting a new or innovative *BMP*, etc.), descriptions of them shall be included in this section of the SWPPP.

a. **Develop and implement good housekeeping practices to keep exposed areas clean** The SWPPP must describe good housekeeping practices to ensure that all exposed areas that are potential sources of *pollutants* clean, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers.

b. **Perform regular inspections** – The SWPPP must describe procedures for scheduling, completing and recording results of inspections at frequencies meeting or exceeding those specified in this permit.

   (1) In addition to or as part of the comprehensive site inspection required under Part IV.A, *qualified facility personnel* (trained in accordance with section e below) must perform routine inspections including all areas of the facility where industrial materials or activities are exposed to stormwater to:

      (a) Evaluate conditions and maintenance needs of stormwater management devices (e.g., cleaning oil/water separators, catch

basins) to avoid situations that may result in the practice becoming a source of *pollutants*.

(b) Detect leaks and ensure the good condition of drums, tanks and containers

(c) Evaluate the performance of the existing stormwater *BMPs* described in the SWPPP.

(2) The inspection frequency shall be specified in the plan based upon the frequency identified under the SWPPP requirements for the applicable specific industrial sector. If an inspection frequency is not indicated under the industrial sector, one should be established based upon a consideration of the level of activity in the areas being inspected. Quarterly inspections are required as a minimum frequency for those that don't have a frequency set for the specific industrial sectors.

(3) Any deficiencies in the implementation and/or adequacy of the SWPPP must be documented.

(4) Deficiencies must be addressed, corrected, monitored and recorded in accordance with Part III.E.3.

c. **Test, maintain and repair of all industrial equipment and systems** - An effective preventative maintenance program of all industrial equipment and systems that are exposed to stormwater will prevent unnecessary exposure of *pollutants*. The SWPPP must describe a preventative maintenance program that includes timely inspection, maintenance and repairs. *BMPs* identified in the SWPPP must be maintained in effective operating condition. In the case of nonstructural *BMPs*, the effectiveness of the *BMP* must be maintained by appropriate means (e.g., spill response supplies available and personnel trained, etc.). If site inspections or sampling required by Part IV identify *BMPs* that are not operating effectively, maintenance must be performed before the next anticipated storm event, or as necessary to maintain the continued effectiveness of stormwater controls. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable, but not more than 12 weeks after completion of the routine facility inspection or the comprehensive site inspection, unless permission for a later date is granted in writing by the *Department*. Planned changes or anticipated noncompliance does not stay any permit condition.

d. ***Minimize* the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur.**

(1) The SWPPP must include an explanation of existing or planned material handling procedures, storage requirements, secondary containment, and equipment (e.g., diversion valves), that are intended to *minimize* spills or leaks at the facility.

(2) The SWPPP must document considerations of alternatives to *minimize* chemicals exposed to stormwater used at the facility.

(3) Where practicable, industrial materials and activities should be protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, or runoff.

(4) Spill Prevention and Response Procedures - The SWPPP must describe the procedures that will be followed for cleaning up spills or leaks. The procedures and necessary spill response equipment must be made available to those employees who may cause or detect a spill or leak. Measures for cleaning up spills or leaks must be consistent with applicable petroleum bulk storage, chemical bulk storage or hazardous waste management regulations at 6 NYCRR Parts 595-599, 612-614 and 370-373.

e. **Provide Training and Education-** The SWPPP must describe the stormwater training program required for individuals conducting *industrial activity* at the facility. Train all individuals who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of the Pollution Prevention Team . The description must include:

(1) The target audience (e.g. employees in positions responsible for specific tasks, club members performing engine repair, etc.).

(2) Identify periodic dates for such training (e.g., annually, every six months during the months of July and January). Training shall be conducted at least annually. An annual signed and dated employee training log must be kept in the SWPPP.

(3) At a minimum, include the following training for individuals with related duties:

- Spill response
- Good housekeeping
- Material management practices
- How to recognize unauthorized *discharges*

- How to evaluate the condition and maintenance needs of stormwater controls and equipment that may contribute to contamination of stormwater if not functioning properly
- Purpose of SWPPP
- Proper sampling procedures
- Proper reporting procedures
- How to identify when corrective actions are required

f. **Eliminate non-stormwater discharges not authorized by this general permit or another *SPDES* permit** – Non-stormwater *discharges* that are not listed in Part I.C.3 to *surface waters of the State* which are not authorized by a *SPDES* permit are unlawful and must be terminated.

(1) **Discharge Certification** - The SWPPP must include a certification that all *discharges* (i.e., *outfalls*) have been tested or evaluated for the presence of non-stormwater *discharges* before submitting an NOI to gain coverage under this permit. A copy of the certification must be signed in accordance with Part V.H. of this permit and included in the SWPPP at the facility. The certification must include:

(a) The date of any testing and/or evaluation;

(b) Identification of potential significant sources of non-stormwater *discharges* at the site;

(c) A description of the results of any test and/or evaluation for the presence of non-stormwater *discharges*;

(d) A description of the evaluation criteria or testing method used; and

(e) A list of the *outfalls* or on-site drainage points that were directly observed during the test.

(2) **Allowable Non-Stormwater Discharges** - The sources of non-stormwater *discharges* listed in Part I.C.3. (allowable nonstormwater *discharges*) are allowable *discharges* under this permit provided the *owner or operator* includes the following information in the SWPPP:

(a) Identification of each allowable non-stormwater source (flows from fire fighting activities do not need to be identified);

(b) The location where the non-stormwater *discharge* is likely to occur;

(c) Descriptions of appropriate *BMPs* for each source; and,

(d) If mist blown from cooling towers is included as one of the allowable non-stormwater *discharges* from the facility, the *owner or operator* must specifically evaluate the potential for the *discharges* to be contaminated by chemicals used in the cooling tower and must select and implement *BMPs* to control such *discharges* so that the levels of cooling tower chemicals in the *discharges* would not cause or contribute to a violation of an applicable water quality standard.

g. **Ensure that waste, garbage and floatable debris are not discharged to receiving waters** – The SWPPP must describe *BMPs* selected to eliminate discharged of solid materials, including floating debris, to *surface waters of the State*, except as authorized by a permit issued under section 404 of the CWA.

h. ***Minimize* generation of dust and off-site tracking of raw, final or waste materials** The SWPPP must describe *BMPs* selected to *minimize* off-site vehicle tracking of raw, final, or waste materials or sediments, and the generation of dust. Tracking or blowing of raw, final, or waste materials from areas of *no exposure* to exposed areas must be *minimized.*

i. **Stabilize exposed area and contain runoff using structural and/or non-structural *control measures* to *minimize* onsite erosion and sedimentation, and the resulting *discharge* of *pollutants*.**

(1) The SWPPP shall identify areas at the facility which, due to topography, land disturbance (e.g., construction) or other factors, have potential for significant soil erosion.

(2) The SWPPP must identify structural, vegetative, and/or stabilization *BMPs* that will be implemented to limit erosion.

(3) Velocity dissipation devices (or equivalent measures) must be placed at *discharge* locations and along the length of any *outfall* channel if they are necessary to provide a non-erosive flow velocity from the structure to a water course.

(4) The SWPPP must contain adequate details to demonstrate controls conform to the New York Standards and Specifications for Erosion and Sediment Control (2005), or equivalent. This document is available at: http://www.dec.ny.gov/chemical/29066.html.

j. **Divert, infiltrate, reuse, contain or otherwise reduce stormwater runoff, to *minimize pollutants* in *discharges*.**-The SWPPP shall describe the traditional stormwater management practices (permanent structural *BMPs* other than those that control the generation or source(s) of *pollutants*) that

currently exist or that are planned for the facility. These types of *BMPs* are typically used to divert, infiltrate, reuse, or otherwise reduce *pollutants* in stormwater *discharges* from the site. Examples of *BMPs* that could be used include but are not limited to: stormwater detention structures (including wet ponds); green infrastructure practices; stormwater retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff on-site; and sequential systems (which combine several practices). Whenever possible, the facility should reuse stormwater.

The SWPPP shall provide that all measures that the *owner or operator* determines to be reasonable and appropriate, or are required by a *State* or local authority, shall be implemented and maintained. Factors for the *owner or operator* to consider when selecting appropriate *BMPs* should include:

(1) The industrial materials and activities that are exposed to stormwater, and the associated *pollutant* potential of those materials and activities; and

(2) The beneficial and potential detrimental effects on surface water quality, ground water quality, receiving water base flow (dry weather stream flow), and physical integrity of receiving waters. Structural measures shall be placed on upland soils, avoiding wetlands and floodplains, if possible. Structural *BMPs* may require a separate permit under section 404 of the CWA before installation begins.

k. **Enclose or cover storage piles of salt or piles containing salt used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces-**

(1) The SWPPP must document that all storage piles of salt used for deicing or other commercial or industrial purposes are enclosed or covered to prevent exposure to precipitation, except during active operations to add or remove materials from the pile.

(2) For a salt storage facility, the SWPPP must document all good housekeeping measures in place to assure that salt spilled during transfer and spilled or tracked along haul and access roads is removed and returned to the covered storage pile.

l. **The SWPPP must document the location and type of *BMPs* installed and implemented at the facility to achieve the non-numeric limits stipulated in Part I.B.1.a.(2) and any relevant sector-specific section(s) of Part VIII of this permit.**

m. **The SWPPP must document the location and type of *BMPs* installed and implemented at the facility to achieve and address any applicable *effluent***

limitations **based in the activity-specific section(s) of Part VIII, which are summarized in the table in Appendix D of this permit.**

8. **Documentation of Permit Eligibility Related to Endangered Species** - For new facilities (to be built) and facilities expanding the perimeter of operations beyond the existing footprint, the SWPPP must include documentation supporting the determination of permit eligibility with regard to Part I.D.5. (Endangered Species), including:

    a. Information on whether listed endangered or threatened species, or critical habitat, are found in the *Action Area*. This information is available on the NYSDEC Environemental Resource Mapper; http://www.dec.ny.gov/imsmaps/ERM/viewer.htm.

    b. If *Action Area* is within a location displayed in the **Rare Plants and Rare Animals** or **Significant Natural Communities** data layer, or is close enough to a location that off-site effects are possible (such as surface water runoff, soil erosion, downstream water quality changes, or access road construction); and if the project or action requires a review under the State Environmental Quality Review Act (SEQR), or requires review by NYS DEC for possible permits, a request for a project screening must be made to the NY Natural Heritage Program, or to the local Regional DEC Division of Environmental Permits office (http://www.dec.ny.gov/about/255.html#Regional_Offices) for the county in which the project is located, to determine whether such species may be affected by the facility's stormwater *discharges* or stormwater *discharge*-related activities. More information on requesting a project screening from NY Natural Heritage is available at http://www.dec.ny.gov/animals/31181.html.;

    c. Results of endangered species screening determinations; and,

    d. A description of measures necessary to protect listed endangered or threatened species, or critical habitat. If the *owner or operator* fails to describe and implement such measures, the stormwater *discharge* is ineligible for coverage under this permit.

9. **Documentation of Permit Eligibility Related to Historic Places** - For new facilities (to be built) and facilities expanding the perimeter of operations beyond existing footprints, the SWPPP must include documentation supporting the determination of permit eligibility with regard to Part I.D.6. (Historic Places). At minimum, the supporting documentation shall include the following:

    a. Information regarding the location of places listed, or eligible for listing, on the *State* or National Registers of Historic Places should be obtained by consulting with New York State Historic Preservation Office, Peebles Island Resource Center, P.O. Box 189, Waterford, NY 12188-0189, Phone: (518)

237-8643, or using the GIS online resources available at: http://nysparks.state.ny.us/shpo/

b. Information on whether the stormwater *discharges* or stormwater discharge-related activities would have the potential to affect a property (historic or archeological resource) that is listed or eligible for listing on the *State* or National Register of Historic Places.

c. Where effects may occur, any written agreements that the *owner or operator* has made with the State Historic Preservation Office to mitigate those effects;

d. Results of historic places screening determinations;

e. A description of measures necessary to avoid or *minimize* adverse impacts on places listed, or eligible for listing, on the State or National Register of Historic Places. If the *owner or operator* fails to describe and implement such measures, the stormwater *discharge* is ineligible for coverage under this permit;

10. **Monitoring and Sampling Data** - The SWPPP must include:

a. A summary of existing stormwater *discharge* sampling data taken at the facility

b. Chain of Custody Records for samples collected and transported to an approved laboratory

c. Laboratory reports of results of sample analysis

d. Quarterly Visual Monitoring Reports

e. Copies of *Discharge Monitoring Reports (DMRs)*

f. Copies of *Annual Certification Reports (ACR)*

g. A summary of all stormwater sampling data collected during the term of this permit

11. **Copy of Permit Requirements** – The *owner or operator* must maintain a copy of the permit with the SWPPP. The NOI Authorization Letter and all NOIs (including modifications) must be maintained in the SWPPP.

12. **Inspection Schedule** - The SWPPP shall contain the schedule for conducting inspections and all documentation resulting from inspection.

Continue Part III.D. to Part III.E.2.a.(1).

D. Signature and Stormwater Pollution Prevention Plan Availability

1. **Signature/Location** - The SWPPP shall be signed in accordance with Part V.H. and retained on-site at the facility covered by this permit in accordance with Parts III.C.11 and IV.E. For inactive facilities, the plan may be kept at the nearest office of the *owner or operator*. Failure to keep a copy of the SWPPP as specified above is a violation of the permit.

2. **Availability**

   a. The *owner or operator* must keep a copy of the SWPPP on-site or locally available (when the site is unstaffed) to the *Department* for review at the time of an on-site inspection.

   b. The *owner or operator* must furnish a copy of the SWPPP to the *Department*, local agency approving stormwater management plans, or the *owner* of a *municipal separate storm sewer system* receiving *discharge* from the site upon request. Also, in the interest of the public's right to know, the *owner or operator* must make a copy of the SWPPP available to the public within 14 days of receipt of a written request. The *owner or operator* shall identify on the NOI the location (URL # or physical location) and contact information to allow public access to the SWPPP. The NOI will be considered incomplete if this information is not provided. (Note: A facility may withhold justifiable portions of the SWPPP from public review that contain trade secrets, confidential commercial information or critical infrastructure information in accordance with 6 NYCRR 616.7).

E. Keeping SWPPPs Current

The *owner or operator* shall amend the SWPPP whenever:

1. There is a change in design, construction, operation, or maintenance at the facility which may have an effect on the potential for the *discharge* of *pollutants* from the facility which has not otherwise been addressed in the SWPPP; or

2. It is found to be ineffective in eliminating or significantly minimizing *pollutants* from sources identified under Part III.C., or is otherwise not achieving the goals or requirements of this permit. The SWPPP shall be modified, and additional monitoring and analysis shall be completed as follows:

   a. SWPPP modifications

      (1) Maps or description of industrial activities – If the SWPPP has been found to be inaccurate or incomplete, modifications must be completed to correct the deficiency(ies) identified.

(2) Stormwater controls –The modification must identify the corrective actions needed and include a schedule for the implementation with a final date no later than 12 weeks unless special permission is obtained in writing from the *Department*. Failure to complete the required follow up action(s) is a violation of this permit.

(3) Additional inspections monitoring and/or analysis- If the results of inspections, monitoring and/or analysis reveal a violation of this permit, a failure to maintain eligibility for coverage under this permit or a failure to comply with the *benchmarks* or other action levels in this permit, additional inspections, monitoring and/or laboratory analysis of stormwater samples may be required. Such requirements are set forth in the applicable Parts.

b. Deadlines for Corrective Actions

(1) If existing *BMPs* need to be modified or if additional *BMPs* are necessary, implementation must be completed before the next anticipated storm event, if practicable, but not more than 12 weeks after completion of the comprehensive site evaluation or other inspection, unless permission for a later date is granted in writing by the *Department*.

For structural *BMPs* that will take longer than 12 weeks to implement, the *owner or operator* must request approval from the *Department*. Such request must be in writing and include a schedule for completing the proposed project.

(2) Modifications required by the *Department* - The *Department* may notify the *owner or operator* at any time that the plan does not meet one or more of the minimum requirements of this permit. The notification shall identify those provisions of the permit that are not being met, as well as the required modifications. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the *Department*, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the *Department* that the changes have been made.

F. Special Stormwater Pollution Prevention Plan Requirements

1. Additional requirements for *stormwater discharges associated with industrial activity* that *discharge* into or through *MS4s*.

a. In addition to the applicable requirements of this permit, facilities covered by this permit must comply with applicable requirements in municipal stormwater management programs developed under *SPDES* permits issued for the *discharge* of the *MS4* that receives the facility's *discharge*, provided that the *owner or operator* has been notified of such conditions.

b. *Owners or operators* that *discharge stormwater associated with industrial activity* through an *MS4*, or a municipal system designated by the *Department* shall make their SWPPP available to the municipal operator of the system upon request.

2. **Additional requirements for *stormwater discharges associated with industrial activity* from facilities subject to EPCRA Section 313 reporting requirements for Water Priority Chemicals** - Any potential *pollutant* sources for which the facility has reporting requirements under EPCRA 313 must be identified in the SWPPP in Part III.C.3. (Summary of Potential *Pollutant* Sources).

3. **Additional requirements for facilities with Secondary Containment at Storage and Transfer Areas** - Compliance must be maintained with all applicable regulations including, but not limited to, those involving releases, registration, handling and storage of petroleum, chemical bulk and hazardous waste storage facilities (6 NYCRR 595-599, 612-614 and 370-373). Stormwater *discharges* from handling and storage areas should be eliminated where practical. Where this is not feasible, the *owner or operator* shall comply with the following *BMPs*:

   a. Loading/Unloading Areas - Loading and unloading areas shall be operated to *minimize* spills, leaks or the *discharge* of *pollutants* in stormwater. Protection such as roofs, overhangs or door skirts to enclose trailer ends at truck loading/unloading docks shall be provided as appropriate. Where this is not feasible, the *owner or operator* shall comply with the following *BMPs*:

      (1) During deliveries, have staff familiar with spill prevention and response procedures present to ensure that any leaks/spills are immediately contained and cleaned up; and

      (2) Use of spill and overflow protection (e.g., drip pans, drip diapers, and/or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

   b. Spill Cleanup - All spilled or leaked substances must be removed from secondary containment systems as soon as practical and for Chemical Bulk Storage (CBS) storage areas within 24 hours of the *owner or operator* discovering the spill, unless authorization is received from the *Department*. This permit does not relieve the *owner or operator* of any reporting or other requirement related to spills or other releases of petroleum or hazardous substances. [Also See Part II Special Condition B regarding releases of hazardous substances or petroleum.] The containment system must be thoroughly cleaned to remove any residual contamination which could cause contamination of stormwater and the resulting *discharge* of *pollutants* to *waters of the State*. Following spill cleanup the affected area must be completely flushed with clean water three times and the water removed after

each flushing for proper disposal in an on-site or off-site wastewater treatment plant designed to treat such water and permitted to *discharge* such wastewater. Alternately, the *owner or operator* may test the first batch of stormwater following the spill cleanup to determine *discharge* acceptability. If the water contains no *pollutants* it may be discharged, otherwise it must be disposed of as noted above. (See the Discharge Monitoring section below for the list of parameters to be sampled for.)

c. Discharge Operation - Stormwater must be removed before it compromises the required containment system capacity. Each *discharge* may only proceed with the prior approval of the facility representative responsible for ensuring *SPDES* permit compliance. Bulk storage secondary containment drainage systems must be locked in a closed position except when the *owner or operator* is in the process of draining accumulated stormwater. Transfer area secondary containment drainage systems must be locked in a closed position during all transfers and must not be reopened unless the transfer area is clean of contaminants. Stormwater *discharges* from secondary containment systems should be avoided during periods of precipitation. A logbook shall be maintained on site noting, for each *discharge*:

- Screening method;
- Results of screening;
- Date time and volume; and,
- Supervising personnel.

d. Discharge Screening - Prior to each *discharge*[11] from a secondary containment system the stormwater must be screened for contamination. (Note: All stormwater must be inspected for visible evidence of contamination.) Additional screening methods shall be developed by the *owner or operator* as part of the overall *BMP* Plan (e.g., the use of volatile gas meters to detect the presence of gross levels of gasoline or volatile organic compounds). If the screening indicates contamination, the *owner or operator* must collect and analyze a representative sample[12] of the stormwater. If the water contains no *pollutants*, the stormwater may be discharged. Otherwise it must either be disposed of in an onsite or off-site wastewater treatment plant designed to treat and permitted to *discharge* such wastewater, or the Regional Water Engineer can be contacted to determine if it may be discharged without treatment.

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[11] Note: Discharge includes stormwater discharges and snow and ice removal. If applicable, a representative sample of snow and/or ice should be collected and allowed to melt prior to assessment.

[12] If the stored substance is gasoline or aviation fuel then sample for oil & grease, benzene, ethylbenzene, naphthalene, toluene and total xylenes (EPA method 602). If the stored substance is kerosene, diesel fuel, fuel oil, or lubricating oil then sample for oil & grease and polynuclear aromatic hydrocarbons (EPA method 610). In all cases an estimated discharge volume and pH monitoring is required.

e. Discharge Monitoring. - Unless the *discharge* from any containment system outlet is permitted by an *individual SPDES permit* as an *outfall* with explicit effluent and monitoring requirements, the *owner or operator* shall monitor the outlet as follows:

(1) Storage Area Secondary Containment Systems - The volume of each *discharge* from each outlet must be monitored. *Discharge* volume may be calculated by measuring the depth of water within the containment area times the wetted area converted to gallons or by other suitable methods. A representative sample shall be collected of the first *discharge*[10] following any cleaned up spill or leak. The sample must be analyzed for pH, the substance(s) stored within the containment area and any other *pollutants* the *owner or operator* knows or has reason to believe are present.[11]

(2) Transfer Area Secondary Containment Systems - The first *discharge*[10] following any spill or leak must be sampled for flow, pH, the substance(s) transferred in that area and any other *pollutants* the *owner or operator* knows or has reason to believe are present[11].

f. Discharge Reporting - Any results of monitoring required above, must be maintained with the facility's SWPPP and retained in accordance with Parts III.C.10 & IV.E. Failure to perform the required monitoring shall constitute a violation of the terms of this permit.

g. Prohibited Discharges - In all cases, any *discharge* which contains a visible sheen, foam, or odor, or may cause or contribute to a violation of water quality is prohibited.

4. **Additional requirements for *stormwater discharges associated with industrial activity* to *impaired waterbodies*.** Facilities that are discharging to an *impaired waterbody* that is included in the 303(d) list or in a watershed for which a *TMDL* has been developed and the cause of the impairment is a *pollutant* of concern included in the *benchmarks* and/or effluent limitations (see Appendix G) to which the facility is subject must include the following in their SWPP:

a. Identification of *Impaired Waterbody* – Identify any *impaired waterbody* that may receive *stormwater discharges associated with industrial activity* from the facility and the cause of the waterbody's impairment.

b. *Pollutant(s)* of Concern – A list of *pollutant(s)* or *pollutant parameter(s)* that have been handled, treated, stored or disposed of in a manner that would create the potential for the *pollutant* of concern causing the impairment to be discharged.

c. Potential for Presence in Stormwater – Identify each area of the facility that generates *stormwater discharges associated with industrial activity* with a

reasonable potential to *discharge* the *pollutant(s)* of concern. Factors to consider include the likelihood of the *industrial activity* producing the *pollutant(s)* of concern to have contact with stormwater and a history of reportable leaks or spills that could result in the *pollutant(s)* of concern being *discharged* to the *impaired waterbody*.

d. Stormwater Controls – The SWPPP shall include a description of the type and location of existing and planned *BMPs* selected for each of the areas where the *pollutant(s)* of concern are exposed to *stormwater*. The *BMPs* shall be selected to *minimize* the *pollutant(s)* of concern from being *discharged* to the *impaired waterbody*. The plan shall describe how each *BMP* is being, or will be implemented for all the areas where the *pollutant(s)* of concern will be exposed to *stormwater*. Selection of *BMPs* should take into consideration all *stormwater* controls listed in Part III.C.7.

Part IV. MONITORING, REPORTING AND RETENTION OF RECORDS

There are eight individual and separate categories of monitoring requirements that may apply to a facility with *discharges* authorized under this permit:

- Comprehensive Site Inspection
- Quarterly visual monitoring
- Annual dry weather flow monitoring
- *Benchmark monitoring*
- Coal pile runoff
- Compliance monitoring for *discharges* subject to *effluent limitations*
- Monitoring of *discharges* from secondary containment at storage and transfer areas
- Monitoring of *discharges* to *impaired waterbodies*

A. Comprehensive Site Compliance Inspection & Evaluation

The *owner or operator* shall conduct facility inspections (site compliance inspection) at least once a year. The inspections must be done by *qualified personnel* who may be either facility employees or outside consultants hired by the facility. The inspectors must be familiar with the *industrial activity*, the *BMPs*, the SWPPP, and must possess the skills to assess conditions at the facility that could impact stormwater quality and assess the effectiveness of the *BMPs* that have been chosen to control the quality of the stormwater *discharges*. If more frequent inspections are conducted, the SWPPP must specify the frequency of inspections.

1. **Scope of the Compliance Inspection & Evaluation** - Inspections must include all areas where industrial materials or activities are exposed to stormwater, as identified in Part III.C.3., and areas where spills and leaks have occurred within the past three years. At a minimum the inspection shall identify or include:

a. Industrial materials, residue or trash on the ground that could contaminate or be washed away in stormwater;

b. Leaks or spills from industrial equipment, drums, barrels, tanks or similar containers;

c. Unauthorized non-stormwater *discharges* or allowable non-stormwater *discharges* that are not certified in accordance with Part III.C.7.(f)(1).;

d. Off-site tracking of industrial materials or sediment where vehicles enter or exit the site or tracking of material outside of the area where it originates;

e. Tracking or blowing of raw, final, or waste materials from areas of *no exposure* to exposed areas; and

f. Evidence of, or the potential for, *pollutants* entering or discharging the drainage system.

g. Inspection of areas found to be the source of *pollutants* observed during visual and analytical monitoring done during the year.

h. Stormwater *B*MPs identified in the SWPPP must be observed to ensure that they are operating correctly.

i. If *discharge* locations or points are accessible, they must be inspected to see whether *BMPs* are effective in preventing significant impacts to receiving waters. Where *discharge* locations are inaccessible, nearby downstream locations must be inspected.

2. **Compliance inspection & evaluation report** - A compliance inspection & evaluation report must be made and retained as part of the SWPPP for at least five (5) years from the date permit coverage expires or is terminated. At minimum, the report must include:

a. The scope of the inspection,

b. The name(s) of personnel making the inspection,

c. The date(s) of the inspection,

d. Major observations relating to the implementation of the SWPPP, including:

(1) the location(s) of *discharges* of *pollutants* from the site;

(2) the location(s) of previously unidentified *discharges* of *pollutants* from the site;

(3) location(s) of *BMPs* that need to be maintained;

(4) location(s) of *BMPs* that failed to operate as designed or proved inadequate for a particular location;

(5) location(s) where additional *BMPs* are needed that did not exist at the time of inspection;

(6) any incidents of noncompliance; and,

(7) summary of results of sample analysis

e. Required corrective actions (corrective actions completed in accordance with Part III.E.) must be recorded and retained with the SWPPP (Part III.C.12).

f. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the SWPPP and this permit.

g. The report shall be signed in accordance with Part V.H and kept with the SWPPP (Part III.C.12)

3. **Credit as a Routine Facility Inspection** - Where compliance inspection schedules overlap with routine inspections required under Part III.C.7.b., the annual compliance inspection may be used as one of the routine inspections.

B. Monitoring Requirments

The monitoring requirements applicable to a facility depend on the types of industrial activities generating stormwater runoff from the facility. Part VIII of the permit identifies monitoring requirements applicable to specific sectors of *industrial activity*. The *owner or operator* must review Parts III, IV and VIII; and Appendices C, D, E and G of the permit to determine which monitoring requirements and/or numeric limitations apply to the facility. Unless otherwise specified, monitoring requirements under Parts III, IV and VIII are additive. Specific monitoring requirements and limitations are applied to each *discharge* at a facility. Where stormwater from *co-located* activities are commingled, the monitoring requirements and limitations are additive. Where more than one numeric limitation for a specific parameter applies to a *discharge*, compliance with the more restrictive limitation is required. Where monitoring requirements for a monitoring period overlap (e.g., need to monitor TSS once/year for compliance monitoring and also once/year for *benchmark monitoring*), the *owner or operator* may use a single sample to satisfy both monitoring requirements.

1. Monitoring Requirements, Analysis and Limitations

a. **Quarterly visual monitoring** - The requirements and procedures for quarterly visual monitoring are applicable to all facilities covered under this permit, regardless of the facility's *industrial activity*

(1) The examination(s) must be made at least once in each of the following three month periods:

- January through March,
- April through June,
- July through September, and
- October through December.

(2) All samples must be collected from *discharges* resulting from a *qualifying storm event*, in accordance with Part IV.B.2.b.(1).

(3) The *owner or operator* must perform and document a quarterly visual examination of a stormwater *discharge* associated with *industrial activity* from each *outfall* unless:

- A valid waiver is claimed in accordance with Part IV.B.4 or

- There is no *discharge* from a *qualifying storm event* during a monitoring period. If no *qualifying storm event* resulted in runoff from the facility during a monitoring quarter, the *owner or operator* is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no *qualifying storm event* occurred that resulted in stormwater runoff during that quarter. If a visual examination was performed and the storm event was later determined not to be a measurable (greater than 0.1 inch rainfall) storm event, the visual examination should be included in the SWPPP records.

(4) No analytical tests are required to be performed on the samples for the purpose of meeting the visual monitoring requirements.

- The examination must document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and any other obvious indicators of stormwater pollution.
- The examination must be conducted in a well-lit area.
- Where practicable, the same individual should carry out the collection and examination of *discharges* for the entire permit term for consistency.

(5) Corrective and Follow Up Actions - If the visual examination indicates the presence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam, oil sheen, or other indicators), the *owner or operator* must, at minimum, complete and document the following actions:

(a) Evaluate the facility for potential sources of stormwater contamination.

(b) Remedy the problems identified - Any sources of contamination that are identified must be addressed by implementation of non-structural and/or structural *BMPs* to prevent recurrence.

(c) Revise the facility's SWPPP in accordance with Parts III.E.

(d) Perform an additional visual inspection during the first *qualifying storm event* following implementation of the corrective action. If the first *qualifying storm event* does not occur until the next quarterly monitoring period, this follow up action may be used as the next quarterly visual inspection.

(6) Storm Event Data must be recorded in accordance with Part IV.B.2.c.

(7) All documentation must be signed and certified in accordance with Part V.H

(8) The visual examination must be documented and maintained on-site with the Stormwater Pollution Prevention Plan (SWPPP) in accordance with Parts III.C.10 & IV.C. The report must include:

- *Outfall* location;
- Examination date and time;
- Personnel conducting the examination;
- Nature of the *discharge* (i.e., runoff or snow melt);
- Visual quality of the stormwater *discharge* (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution);
- Probable sources of any observed stormwater contamination; and,
- Actions taken or proposed to be taken to eliminate these sources.

A Quarterly Visual Monitoring Form and fact sheet are available on the DEC website (http://www.dec.ny.gov/chemical/62803.html).

b. **Annual dry weather flow monitoring** - The requirements and procedures for annual dry weather flow monitoring are applicable to all facilities covered under this permit, regardless of the facility's sector of *industrial activity.*

(1) The *owner or operator* must perform and document at least one dry weather flow inspection each year after at least three (3) consecutive days of no precipitation. The dry weather flow inspection shall be conducted to determine the presence of non-stormwater *discharges* to the stormwater drainage system.

(2) The dry weather inspection shall be documented in an inspection report which must include the *outfall* locations, the inspection date and time, inspection personnel, description of *discharges* indentified, the source of any *discharges* and actions taken to address any newly identified allowable non-stormwater *discharges* or elimination of non-authorized *discharges.*

(3) Corrective and Follow Up Actions - If a non-stormwater *discharge* is discovered, the *owner or operator* must, at minimum, complete and document the following actions:

(a) Identify its source to determine whether it is an authorized *discharge* (e.g, a *discharge* covered by another *SPDES* permit or an authorized non-stormwater *discharge* addressed under Part I.C.3).

(b) If it is determined that the *discharge* is not covered under this permit or another *SPDES* permit, the *owner or operator* shall take immediate action to eliminate the *discharge.*

(c) If it is not possible to immediately eliminate the *discharge*, the *owner or operator* must notify the *Department* within 14 days. Appropriate actions may require coverage under an individual industrial *SPDES* permit or connection to the sanitary sewer system. Planned changes or anticipated non-compliance, does not stay any permit condition.

(d) The *owner or operator* shall modify the SWPPP to address any newly identified allowable non-stormwater *discharges* identified in Part I.C.3 that were not previously certified in accordance with Part III.C.7.f.(1).

(4) The dry weather flow inspections reports of Part III.C.7.f.(1) must be documented and retained on-site with the SWPPP in accordance with Part III.C.12 and Part IV.E.

c. ***Benchmark Monitoring* of *discharges* associated with specific industrial activities** The requirements and procedures for *benchmark monitoring* apply to *discharges* associated with specific industrial activities identified in Part VIII (summarized in Appendix C). *Co-located industrial activities* at the facility that are described in more than one sector in Part VIII must comply with all applicable *benchmark monitoring* requirements from each sector.

(1) Monitoring periods for *benchmark monitoring* - If a facility falls within a sector(s) required to conduct *benchmark monitoring*, monitoring must be performed annually during the calendar year. Facilities with seasonal operations or operations with duration of less than one year must complete the required *benchmark monitoring* during the period of operation at least once during each calendar year in which the operation occurs.

(2) All samples must be collected from *discharges* resulting from a *qualifying storm event*, in accordance with Part IV.B.2.b.(1).

(3) The *permittee* must perform and document annual *benchmark monitoring* of a stormwater *discharge* associated with *industrial activity* from each *outfall* unless:

- A valid waiver is claimed in accordance with Part IV.B.4, or
- There is no *discharge* from a *qualifying storm event* during a monitoring period. If no *qualifying storm event* resulted in runoff from the facility during a calendar year, the *owner or operator* is excused from *benchmark monitoring* for that monitoring period, provided that documentation is included with the monitoring records indicating that no *qualifying storm event* occurred that resulted in stormwater runoff during that year. If a *benchmark* sample was collected during a storm event that was later determined not to be a measurable (greater than 0.1 inch rainfall) storm event, the results should be included in the SWPPP records, but the *owner or operator* is not required to report results on the annual *DMR*. (Note: *DMRs* must be submitted in accordance with Part IV.C.2).

(4) All samples must be analyzed in accordance with Part IV.B.2.b.(2) and (3).

(5) Evaluation of Results of Analysis - The *owner or operator* must refer to the tables found in the individual sectors in Part VIII for *benchmark monitoring cut-off concentrations*. The *benchmark monitoring cut-off concentrations* are intended as a guideline for the *owner or operator* to determine the overall effectiveness of the SWPPP in controlling the *discharge* of *pollutants* to receiving waters. The *benchmark* concentrations do not constitute direct *effluent limitations*. Therefore, a *benchmark* exceedance is not a permit violation in and of itself. It does,

however, signal the need for the *owner or operator* to evaluate potential sources of stormwater contaminants at the facility.

(6) Corrective and Follow Up Actions – If results of analysis of a benchmark sample exceed a cut-off concentration for one or more parameters, the *owner or operator* must:

(a) Evaluate the facility for potential sources of stormwater contamination.

(b) Remedy the problems identified - Any sources of contamination that are identified must be addressed by implementation of non-structural and/or structural *BMPs* to prevent recurrence.

(c) Revise the facility's SWPPP in accordance with Part III.E.

(d) Collect an additional sample to determine the effectiveness of corrective actions. Facilities with an exceedance of a benchmark cutoff concentration in a calendar year must collect a stormwater sample at the *outfall* where the exceedance occurred during the first six months of the following calendar year (January 1 to June 30), and complete analysis for the pollutant(s) that exceeded the benchmark cutoff concentration. This sample collection and analysis is in addition to the sample collection required in Part IV.B.1.c (1) for the calendar year. The sample may not be collected during the same storm event as the benchmark sample collected to satisfy Part IV.B.1.c (1).

(i) If no *qualifying storm event* occurs during the first six months of the calendar year following the year in which the exceedance occurred, the *owner or operator* must complete the additional sample and analysis during the next six months of the year.

(ii) Results of analysis of the follow up benchmark sample must be reported on the Corrective Action Form provided by the *Department* by July 31st of the calendar year in which the sample is collected.

(iii) If corrective actions at a facility do not result in achieving *benchmark monitoring cut-off concentrations*, the facility must continue efforts to implement additional *BMPs*. Failure to undertake and document the review and/or take the necessary corrective actions are violations of the permit. Continued exceedance of *benchmark monitoring cut-off concentrations* may identify facilities that would be

more appropriately covered under an individual *SPDES* permit.

(iv) If it is determined that the exceedances of the benchmark are attributable solely to the presence of that *pollutant* in the *natural background* the *owner or operator* may request relief from the additional sampling above by completing the Corrective Action Sampling Waiver Form provided by the *Department.*

(7) Storm Event Data must be recorded in accordance with Part IV.B.2.c.

(8) All documentation must be signed and certified in accordance with Part V.H.

(9) Monitoring results must be reported in accordance with Part IV.C.2 and retained in accordance with Part III.C.10 and Part IV.E.

d. **Coal pile runoff** - Facilities with *discharges* of stormwater from coal storage piles must comply with the limitations and monitoring requirements of Table IV-1 for all *discharges* containing the coal pile runoff, regardless of the facility's sector of *industrial activity.*

(1) *Owner or operators* shall monitor such stormwater *discharges* at least annually during the calendar year. Facilities with seasonal operations or operations with duration of less than one year must complete the required *benchmark monitoring* during the period of operation at least once during each calendar year in which the operation occurs.

(2) Samples must be collected in accordance with Part IV.B.2.b.

(3) The coal pile runoff must not be diluted with stormwater or other flows in order to meet this limitation.

(4) If a facility is designed, constructed and operated to treat the volume of coal pile runoff that is associated with a 10-year, 24-hour rainfall event, any untreated overflow of coal pile runoff from the treatment unit is not subject to the 50 mg/L limitation for total suspended solids.

(5) Evaluation of Results of Analysis - The *owner or operator* must refer to Table IV-1 for *effluent limitations*. An exceedance of an *effluent limitation* is a violation of this permit, except as allowable per Part IV. B.1.d (4).

(6) Corrective and Follow up Actions must be completed in accordance with Part IV.B.1.e (5).

(7) Storm Event Data must be recorded in accordance with Part IV.B.2.c.

(8) All documentation must be signed and certified in accordance with Part V.H.

TABLE IV-1. ***Numeric Limitations for Coal Pile Runoff***			
Parameter	**Limit**	**Monitoring Frequency**	**Sample Type**
Total Suspended Solids (TSS)	50 mg/l, max.	1/year	Grab
pH	6.0 - 9.0 min. and max.	1/year	Grab

e. **Compliance monitoring for *discharges* subject to *effluent limitation guidelines*** Activity-specific *effluent limitations* and compliance monitoring requirements are described in Part VIII and summarized in Appendix D of the permit. *Co-located industrial activities* at the facility that are described in more than one sector in Part VIII must comply on a *discharge*-by-*discharge* basis with all applicable *effluent limitations* from each sector.

(1) Monitoring periods for compliance monitoring - If a facility has *discharges* required to conduct monitoring to evaluate compliance with *effluent limitations*, monitoring must be performed annually during the calendar year. Facilities with seasonal operations or operations with duration of less than one year must complete the required compliance monitoring during the period of operation at least once during each calendar year in which the operation occurs.

(2) Samples (other than *discharges* from mine dewatering) must be collected in accordance with Part IV.B.2.b.

(3) The *owner or operator* must perform and document annual compliance monitoring of *stormwater discharges associated with industrial activity* from each *outfall* subject to numeric *effluent limitation guidelines* unless:

- A valid waiver is claimed in accordance with Part IV.B.4 (Note: The representative *outfalls* provision of Part IV.B.4.d and the alternative certification provision of Part IV.B.4.b, are not applicable to monitoring for compliance with *effluent limitations*), or

- There are no *discharges* subject to *effluent limitation guidelines* from a *qualifying storm event* during the monitoring period. If no *qualifying storm event* resulted in runoff from the facility during a calendar year,

the *owner or operator* is excused from compliance monitoring for that monitoring period, provided that documentation is included with the monitoring records indicating that no *qualifying storm event* occurred that resulted in stormwater runoff during that year. If a compliance monitoring sample was collected during a storm event that was later determined not to be a *measurable storm event*, the results should be included in the SWPPP records, but the *owner or operator* is not required to report results on the annual *DMR*. (Note: *DMRs* must be submitted in accordance with Part IV.C.2).

(4) All samples must be analyzed in accordance with Part IV.B.2.b.(2) and (3).

(5) Corrective and Follow Up Actions - Exceedance of *Effluent Limitation Guidelines* constitute a permit violation. If results of one or more parameters for which analysis of a compliance monitoring sample was required exceeds the applicable effluent limitation, the *owner or operator* must:

(a) Identify the cause of the exceedance of the effluent limitation(s).

(b) Remedy the problems identified - Any source of contamination identified must be addressed by implementation of non-structural and/or structural *BMPs* to prevent recurrence.

(c) Revise the facility's SWPPP in accordance with Part III.E.

(d) Collect an additional sample to determine the effectiveness of corrective actions.

(e) Facilities with an exceedance of one or more effluent limits in a calendar year must collect a stormwater sample at the *outfall* where the exceedance occurred during the first six months of the following calendar year (January 1 to June 30), and complete analysis for the pollutant(s) that exceeded the effluent limit. This sample collection and analysis is in addition to the sample collection required in Part IV.B.1.e (1) for the calendar year. The sample may not be collected during the same storm event as the sample collected to satisfy Part IV.B.1.e (1).

(i) If no *qualifying storm event* occurs during the first six months of the calendar year following the year in which the exceedance occurred, the *owner or operator* must complete the additional sample and analysis during the next six months of the year.

(ii) Results of analysis of the follow up compliance sample must be reported on the Corrective Action Form provided by the *Department* by July 31st of the calendar year in which the sample is collected.

(iii) If corrective actions at a facility do not result in achieving *effluent limitations*, the facility must continue efforts to implement additional *BMPs*. Failures to undertake and document the review and/or take the necessary corrective actions are violations of the permit. Continued exceedance of *effluent limitations* may identify facilities that would be more appropriately covered under an individual *SPDES* permit.

(iv) If it is determined that the exceedances of the effluent limits are attributable solely to the presence of that *pollutant* in the *natural background* the *owner or operator* may request relief from the additional sampling above by completing the Corrective Action Sampling Waiver Form provided by the *Department*.

(6) Storm Event Data must be recorded in accordance with Part IV.B.2.c.

(7) All documentation must be signed and certified in accordance with Part V.H.

(8) Samples must be collected in accordance with Part IV.B.2.b.

(9) Results of all compliance monitoring must be reported in accordance with Part IV.C.2 and retained in accordance with Part III.C.10 and Part IV.E.

f. **Secondary Containment at Storage and Transfer Areas** - *Discharge* screening and monitoring for bulk storage and transfer area secondary containment systems shall be in accordance with Part III.F.3:

(1) Storage Area Secondary Containment Systems - The volume of each *discharge* from each outlet must be monitored. A representative sample shall be collected of the first *discharge* following any cleaned up spill or leak. The sample must be analyzed for pH, the substance(s) stored within the containment area and any other *pollutants* the *owner or operator* knows or has reason to believe are present.

(2) Transfer Area Secondary Containment Systems - The first *discharge* following any spill or leak must be sampled for flow, pH, the substance(s) transferred in that area and any other *pollutants* the *owner or operator* knows or has reason to believe are present.

(3) *Discharge* Reporting – All monitoring records must be maintained with the facility's SWPPP and retained in accordance with Part III.C.10 and Part IV.E.

(4) Sample analyses shall be done in accordance with Part IV.B.2.b (2) and (3).

g. **Compliance monitoring for *discharges* to impaired waterbodies** – If a facility *discharges* to an *impaired waterbody* and the cause of impairment is a *pollutant* of concern included in the *benchmarks* and/or *effluent limitations* to which the facility is subject to in Part VIII, the facility is required to conduct the additional sampling requirements detailed below for that particular *pollutant(s)* only. The compliance monitoring for *discharges* to impaired waterbodies is in addition to any applicable sector specific *Benchmark Monitoring* in Part IV.B.1.c and compliance monitoring in Part IV.B.1.e. A summary of the applicable *benchmarks* and/or *effluent limits* associated with the *pollutant* of concern to an *impaired waterbody* and their applicable sector is located in Appendix G.

(1) Monitoring periods for compliance monitoring for *discharges* to *impaired waterbodies* – Monitoring must be conducted at least once in each of the following three month periods:

- January through March,
- April through June,
- July through September, and
- October through December.

(2) All samples must be collected from *discharges* resulting from a *qualifying storm event*, in accordance with part IV.B.2.b.(1).

(3) The *owner or operator* must perform and document the quarterly compliance monitoring of *stormwater discharges associated with industrial activity* to *impaired waterbodies* from each *outfall* unless:

- A valid waiver is claimed in accordance with Part IV.B.4 (Note: The representative *outfalls* provision of Part IV.B.4.d and the alternative certification provision of Part IV.B.4.b, are not applicable to monitoring for *discharges* to an *impaired waterbody*), or

- There are no *discharges* from a *qualify storm event* during a monitoring period. If no *qualifying storm event* resulted in runoff from the facility during the three month period, the *owner or operator* is excused from the additional monitoring requirements for that

monitoring period, provided that documentation is included with the monitoring records indicating that no *qualifying storm event* occurred that resulted in stormwater runoff during that quarter. If a monitoring sample was collected during a storm event that was later determined not to be a *measurable storm event*, the results should be included in the SWPPP records, but the *owner or operator* is not required to include results on the quarterly *DMR*. (Note: *DMRs* must be submitted in accordance with Part IV.C.2).

(4) All samples must be analyzed in accordance with Part IV.B.2.b.(2) and (3).

(5) Evaluation of Results of Analysis - The *owner or operator* must refer to the tables found in the individual sectors in Part VIII for *benchmark monitoring cut-off concentrations* and *effluent limitation guidelines* and evaluate the sampling results as follows:

(a) *Benchmark monitoring cut-off concentrations* are intended as a guideline for the *owner or operator* to determine the overall effectiveness of the SWPPP in controlling the *discharge* of *pollutants* to receiving waters. The *benchmark* concentrations do not constitute direct *effluent limitations*. Therefore, a *benchmark* exceedance is not a permit violation in and of itself. It does, however, signal the need for the *owner or operator* to evaluate potential sources of stormwater contaminants at the facility

(b) Exceedance of *Effluent Limitation Guidelines* constitutes a permit violation. If the results of one or more parameters for which analysis of a compliance monitoring sample was required exceeds the applicable effluent limitation, the *owner or operator* must institute a corrective action(s).

(6) Corrective and Follow Up Actions - If the results of one or more parameters for which analysis of a compliance monitoring sample was required exceeds the applicable *benchmark* or *effluent limitation*, the *owner or operator* must:

(a) Identify the cause of the exceedance of the benchmark(s) and/or effluent limitation(s).

(b) Remedy the problems identified - Any source of contamination identified must be addressed by implementation of non-structural and/or structural *BMPs* to prevent recurrence.

(c) Revise the facility's SWPPP in accordance with Part III.E.

(d) Results of the exceedance(s) and correction action(s) taken must be reported on the Corrective Action Form provided by the *Department* no later than 14 days after the end of the monitoring period in which the exceedance(s) occurred.

(i) If corrective actions at a facility do not result in achieving *benchmark monitoring cut-off concentrations* and/or *effluent limitation guidelines*, the facility must continue efforts to implement additional *BMPs*. Failures to undertake and document the review and/or take the necessary corrective actions are violations of the permit. Continued exceedance of *benchmark cut-off concentrations* and/or *effluent limitations guidelines* for *discharges* to impaired waterbodies may identify facilities that would be more appropriately covered under an individual *SPDES* permit.

(7) Storm Event Data must be recorded in accordance with Part IV.B.2.c.

(8) All documentation must be signed and certified in accordance with Part V.H.

(9) Samples must be collected in accordance with Part IV.B.2.b.

(10) Results of all compliance monitoring must be reported in accordance with Part IV.C.2 and retained in accordance with Part III.C.10 and Part IV.E.

2. Monitoring Instructions

a. **Monitoring periods** - *Owner or operators* that are required to conduct *Benchmark* or *Effluent Limitation Guideline* monitoring on an annual basis must collect samples within the following time periods (unless otherwise specified in Part IV.B.3 (Monitoring Required by the *Department*)):

(1) The monitoring period for annual sample requirements is a calendar year (January 1 to December 31). Facilities with seasonal operations or operations with duration of less than one year must complete the required monitoring during the period of operation at least once during each calendar year in which the operation occurs.

(2) If a facility's permit coverage was effective less than one month from the end of a quarterly or yearly monitoring period, the first period starts with the next respective monitoring period (e.g., if permit coverage begins September 5, the *permittee* would not need to start quarterly sampling until October to December

quarter, but the *permittee* would only have from September 5 to December 31 to complete that year's annual monitoring.

b. **Collection and analysis of samples** - Sampling requirements must be assessed on an *outfall* by *outfall* basis. Samples must be collected as follows:

(1) When and How to Sample - Except for snowmelt samples, a minimum of one grab sample must be taken from the *stormwater discharge associated with industrial activity* resulting from a storm event with at least 0.1 inch of precipitation (defined as a "measurable" event), providing the interval from the preceding measurable storm is at least 72 hours. The 72-hour storm interval is waived if the preceding measurable storm did not result in a stormwater *discharge* (e.g., a storm events in excess of 0.1 inches may not result in a stormwater *discharge* at some facilities), or if the *owner or operator* is able to document that less than a 72 hour interval is representative for local storm events during the sampling period.

The grab sample must be taken during the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of the *discharge*. If the sampled *discharge* commingles with non-stormwater water, the *owner or operator* must attempt to sample the stormwater *discharge* before it mixes.

(2) Sample Analysis - Monitoring and analysis must be conducted according to test procedures approved under 40 CFR Part 136, or equivalent, unless other test procedures have been specified in this permit.

(3) Any laboratory test or sample analysis required by this permit for which the *State* Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law shall be conducted by a laboratory that has been issued a certificate of approval (ELAP certified).

c. **Storm event data** - Along with the monitoring results, the *owner or operator* must provide storm event documentation using the Storm Event Data Form provided by the *Department*. Data to be collected include the following:

- The date and duration (in hours) of the storm event(s) sampled;
- Rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff;
- The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event.

3. **Monitoring Required by the Department** - The *Department* may provide written notice to any facility (including those otherwise exempt from sampling) requiring *discharge* sampling for specific parameters and a specific monitoring frequency in accordance with Part.1.B.3.

4. **Monitoring Waivers** - Unless specifically stated otherwise, the following waivers may be applied to any monitoring required under this permit.

   a. Adverse Climatic Conditions Waiver - When adverse weather conditions prevent the collection of samples, a sample may be taken during a *qualifying storm event* in the next monitoring period. Adverse weather conditions are those that are dangerous or create inaccessibility for personnel. This waiver may be claimed if the only qualifying event in a monitoring period (e.g. a calendar year for *benchmark monitoring*) created dangerous conditions for personnel, created conditions which made the sample location inaccessible or made collection of a sample impossible. Examples of these conditions include but not limited to local flooding, high winds and electrical storms. This waiver may not be claimed to indicate that samples were not collected due to inconvenient timing of storms or other failures to collect stormwater samples.

   If the Adverse Climactic Conditions Waiver is claimed a certification of conditions leading to the claim must be signed and submitted with the *ACR* and associated *DMR(s)* in accordance with Part V.H and maintained with the SWPPP.

   b. Alternative certification of "Not Present" or "*No Exposure*" - A facility may qualify for a waiver from *benchmark monitoring* on an *outfall*-by-*outfall* or *pollutant*-by-*pollutant* basis if a condition of "Not Present" or "*No Exposure*" is met for an entire monitoring period. (A *benchmark monitoring* period is a calendar year for most facilities.). This monitoring waiver is not applicable to compliance monitoring of coal pile run-off or *discharges* subject to numerical *effluent limitations* established in Parts IV and VIII. :

   A claim of this waiver will only be accepted in fulfillment of the *benchmark monitoring* requirement if, for each *outfall* and parameter for which a waiver is being claimed:

   (1) Results of all analyses (at least one) of stormwater sample(s) collected prior to claiming this waiver, support the assertion that the concentration of the pollutant(s) of concern is/are at or below the Practical Quantification Limit (PQR).

   (2) Supporting documentation, such as structural *BMPs* utilized to maintain a condition of *no exposure* and/or a certification that the substance is not present or not exposed to precipitation on site is submitted with the *DMRs* and maintained with the SWPPP. The certification must state that the *pollutant* for which the waiver is being claimed is not present on site and/or material handling, equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, or *significant materials* from past *industrial activity* that are located in areas of the facility within the

drainage area of each *outfall* for which the waiver is being claimed were not exposed to stormwater during the certification period.

(3) The certification is signed in accordance with Part V.H and submitted with the *ACR* and *DMR*.

c. Inactive and unstaffed sites - An Annual Comprehensive Site Inspection (Part IV.A) is not required at a facility that is inactive and unstaffed for an entire monitoring period and if no industrial materials or activities are exposed to stormwater for the entire monitoring period. Facilities covered under Sector J are not required to meet the requirement that no materials are exposed to stormwater; however adequate stormwater controls must be in place to prevent migration of contaminated stormwater to surface water. If this waiver is exercised, the *owner or operator* must:

(1) Maintain a certification with the SWPPP stating the dates the site is inactive and unstaffed and that performing visual examinations or *benchmark and compliance monitoring* during a *qualifying storm event* is not feasible.

(2) A Dry Weather Flow Inspection (Part IV.B.1.b) must be performed prior to shut down, recorded and maintained in the SWPPP. The certification must include the results of the Dry Weather Flow Inspection performed prior to shut down.

(3) The certification is signed in accordance with Part V.H and submitted with the *ACR* and *DMR*.

d. Representative *outfalls* - If a facility has two or more *outfalls* that *discharge* substantially identical effluents, based on similarities of the industrial activities, *significant materials* or stormwater management practices occurring within the drainage areas of the *outfalls*, the *owner or operator* may test the effluent of just one of the *outfalls* and report that the quantitative data also applies to the substantially identical *outfall(s)*. This *outfall* monitoring waiver for substantially identical *discharges* applies to quarterly visual monitoring and *benchmark monitoring*, but does not apply to compliance monitoring for *discharges* subject to *effluent limitation guidelines*. The *owner or operator* must collect a sample from the anticipated "worst case" *outfall* as indicated by the area or level of *industrial activity*. A representative waiver may not be claimed at *outfalls* with *discharges* associated with different industrial activities. If the drainage areas are similar, or if all past monitoring has been below *benchmark monitoring cut-off concentrations*, *owner or operator* may vary which *outfall* is sampled as part of the monitoring program. If there is an event that triggers corrective action at an *outfall* that represents other substantially identical *outfalls*, corrective and follow up actions must be completed for all *outfalls* claiming the waiver. The *owner or operator* must

include the following information in the SWPPP, and in any reports s that are required to be submitted to the *Department*:

(1) The locations of the *outfalls*;

(2) Why the *outfalls* are expected to *discharge* substantially identical effluents;

(3) Estimates of the size of the drainage area (in square feet) for each of the *outfalls*; and An estimate of the *runoff coefficient* of the drainage areas (low: under 40%; medium: 40% to 65%; high: above 65%).

C. Reporting Monitoring Results and Annual Certification Reporting

Owners or operators must submit *ACRs, DMRs* (if required) and other documentation for activities for facilities with coverage that becomes effective on or before October 30 of calendar year.

1. **Annual Certification Report (ACR)** - The *ACR* is the primary mechanism for reporting to the *Department*. Every facility covered by this general permit must complete and submit an *ACR* form in accordance with the submission deadlines in Part IV.D -Table IV-2.

2. **Discharge Monitoring Report (DMR)** – The *owner or operator* with Benchmark and/or *Effluent Limitation Guideline* monitoring requirements shall submit results of analysis for each parameter at each *outfall* associated with *industrial activity* on *DMR* forms provided by the *Department*. The completed *DMR* forms and any additional monitoring requested by the *Department*, where applicable, must be submitted along with the *ACR*.

3. **Monitoring waivers** - Any sampling waivers (including representative *outfalls* or monitoring at inactive/unstaffed sites) must be described using the form provided by the *Department*. Information should describe the sampling waiver being claimed, the monitoring period(s) for which the monitoring waiver is being claimed, the affected *outfall(s)* and specific parameters (in the case of the alternative certification for "not present" or "*no exposure*"[13]) and all additional information specified for the specific waivers being claimed. Only waivers applied in conformance with the terms and conditions of this permit are accepted in fulfillment of monitoring requirements. In order for a waiver to be accepted in lieu of benchmark and/or compliance monitoring requirements, *DMRs* signed in accordance with Part V.H must be submitted with a notation in the comments section of the *DMR* indicating the waiver being claimed.

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[13] For the purpose of the alternative certification of "Not Present" monitoring waiver, at least one annual sampling event for benchmark parameters must be conducted and documented to be at or below the Practical Quantitation Limit (PQL), which is typically 3 times the analytical Method Detection Levels (MDL). An exception to using the PQL would be a condition where the *benchmark monitoring* cut-off concentration is less than the PQL. Under these circumstances, the sample result must be below the MDL to qualify for the monitoring waiver

4. **Additional reporting**

   a. **Report of Non-Compliance Event**- If results of analysis of a sample collected to fulfill a compliance monitoring requirement exceed the applicable *Effluent Limitation Guideline*, a Report of Non-Compliance Event Form must be submitted along with the *DMR*

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   b. In addition to filing the *ACR*s and *DMR*s, *owner or operators* with at least one stormwater *discharge* associated with *industrial activity* through an *MS4*, or a municipal system designated by the *Department*, must submit signed copies of *ACRs* and *DMRs* for those outfalls to the *MS4* operator at the same time.

5. **Mailing Address** – The *ACR*s, *DMRs* (if required), documentation to support claims of monitoring waivers, Reports of Non-Compliance (Parts IV.B.3 and 4, respectively) must be submitted to:

MSGP Permit Coordinator
NYSDEC, Bureau of Water Compliance
625 Broadway
Albany, New York 12233-3506

D. Monitoring Reporting Submission Deadlines

Every facility covered by this general permit must complete and submit all applicable monitoring reports by the submission deadlines listed in the table below.

Table IV-2
Monitoring/Report Submission Deadlines

Monitoring type	Submission Deadline
Visual Monitoring	Retain documentation on-site with SWPPP.
Dry Weather Flow Inspection	Retain documentation on-site with SWPPP.
Annual Certification Report	Report must be received in the *Department*'s Central Office no later than February 28 of the year following the reporting period.
Benchmark Monitoring	Results must be received on a *Discharge Monitoring Report* form in the *Department*'s Central Office no later than February 28 of the year following the reporting period.
Coal Pile Run-off	Results must be received on a *Discharge Monitoring Report* form in the *Department's* Central Office no later than February 28 of the year following the reporting period.
Monitoring for Effluent Numeric Limitation	Results must be received on a *Discharge Monitoring Report* form in the *Department's* Central Office no later than February 28 of the year following the reporting period.
Monitoring for Bulk Storage and Loading/Unloading Areas	Retain documentation on-site with SWPPP.
Discharge from Secondary Containment	Retain logbook of *discharges*, including the screening method, results of screening; date, time and volume of each *discharge*; and the personnel supervising each *discharge*.
Monitoring for Discharges to Impaired Waterbodies	Results must be received on a *Discharge Monitoring Report* form in the *Department*'s Central Office no later than 28 days following the reporting period.

E. Retention of Monitoring Records

Monitoring records must be retained to meet both of the following requirements:

1. **Stormwater Pollution Prevention Plan (SWPPP) -** The *owner or operator* shall retain the SWPPP developed in accordance with Part III of this permit until at least five years after coverage under this permit terminates. The *owner or operator* shall retain all records of monitoring information, copies of all reports required by this permit, and records of all data used to complete the NOI and/or NOM forms to be covered by this permit, until at least 5 years after coverage under this permit

terminates. This period may be explicitly modified by or extended by request of the *Department* at any time; and

2. **Recording of Monitoring Activities and Results -** Records must be maintained as follows in accordance with 6 NYCRR Part 750-2.5(c):

   a. The *owner or operator* shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by a *SPDES* permit, and records of all data used to complete the application for the permit, for a period of at least 5 years from the date of the sample, measurement, report or application. This period may be extended by written request of the *Department*, provided that the extension is necessary to implement the provisions of this Part or *ECL* and that the reason or reasons for the extension are provided in the request.

   b. Records of monitoring information shall include:

      (1) the date, exact place, and time of sampling or measurements;

      (2) the individual(s) who performed the sampling or measurements;

      (3) the date(s) analyses were performed;

      (4) the individual(s) who performed the analyses;

      (5) the analytical techniques or methods used;

      (6) the results of such analyses; and

      (7) Quality assurance/quality control documentation.

   c. When records are stored electronically, the records must be preserved in a manner that reasonably assures their integrity and are acceptable to the *Department*. Such records must also be in a format which is accessible to the *Department*.

   d. The *owner or operator* shall make available to the *Department* for inspection and copying or furnish to the *Department* within 14 days of receipt of a *Department* request for such information, any information retained in accordance with this subdivision

Part V. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all terms and conditions of the permit. Any permit noncompliance constitutes a violation of the *Environmental Conservation Law* and the Clean Water Act and is grounds for enforcement action, permit suspension, revocation, modification or denial of a permit renewal application.

B. Continuation of the Expired General Permit

In the event a new general permit is not issued prior to termination of this general permit, then the *owner or operator* may continue to operate and *discharge* in accordance with the terms and conditions of this general permit until such time that a new general permit is issued.

C. Penalties for Violations of Permit Conditions

There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate

The *owner or operator* shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information

The *owner or operator* shall furnish to the *Department*, within a specified time, any information requested to determine compliance with this permit in accordance with 6 NYCRR Part 750-2.1(i). The *owner or operator* shall also furnish upon request, copies of records required by this permit.

G. Other Information

When the *owner or operator* becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent (NOI), Notice of Modification (NOM) or Notice of Termination (NOT) form or in any other report to the *Department*, he or she shall promptly submit corrected facts or information by submitting a Notice of Modification.

H. Signatory Requirements

All Notice of Intent (NOI), Notice of Modification (NOM) and Notice of Termination (NOT) forms, SWPPPs, reports, certifications or information submitted to the *Department* (and/or the operator of a large or medium *MS4),* or records that this permit requires to be maintained by the *owner or operator*, shall be signed as follows:

1. All Notice of Intent (NOI) , Notice of Modification (NOM) and Notice of Termination (NOT) forms shall be signed as follows:

    a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

        1. a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

        2. the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements, and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

    b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

    c. For a *municipality*: *State*, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrators of EPA).

2. **Duly Authorized Representatives** All reports required by the permit and other information requested by the *Department* shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

    a. The authorization is made in writing by a person described above and submitted to the *Department*.

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, *owner or operator*, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

3. **Changes to authorization** If an authorization under Part VI.H.1. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, letter notification satisfying the requirements above must be submitted to the *Department* prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. **Certification** - Any person signing documents under this section shall make the following certification: "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 inquiry of the *person or persons* who manage the system, or those person directly responsible for gathering the information, the information submitted is, to the best of 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.

I. Penalties for Falsification of Reports

In accordance with 6 NYCRR Part 750-2.4(f) any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $37,500, or by imprisonment for not more than 2 years, or by both.

J. Penalties for Falsification of Monitoring Systems

In accordance with 6 NYCRR Part 750-2.5(a)(6) any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by fines and imprisonment.

K. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject under section 311 of the CWA or section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA").

L. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, *State* or local laws or regulations

M. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

N. Requiring an Individual Permit or an Alternative General Permit

1. At its sole discretion, the *Department* may require any person authorized by this general permit to apply for and/or obtain either an *individual SPDES permit* or an alternative *SPDES* general permit in accordance with 6 NYCRR Part 750-1.21(e).

2. Any *owner or operator* authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The *owner or operator* shall submit an individual application (Industrial *SPDES* Form 2C) with reasons supporting the request to the *Department*. Individual permit applications shall be submitted to the Regional Permit Administrator in the appropriate NYSDEC Regional Office (see Appendix F). The request may be granted by the issuance of any individual permit or an alternative general permit if the reasons cited by the *owner or operator* are adequate to support the request.

3. When an *individual SPDES permit* is issued to a discharger authorized to *discharge* under a *general SPDES permit* for the same *discharge(s),* the *owner or operator* must file a NOT.

O. State/Environmental Laws

1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties established pursuant to any applicable *State* law or regulation under authority preserved by section 510 of the Clean Water Act.

2. No condition of this permit shall release the *owner or operator* from any responsibility or requirements under other environmental statutes or regulations.

P. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of stormwater pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems installed by an *owner or operator* only when necessary to achieve compliance with the conditions of the permit.

Q. Inspection and Entry

The *owner or operator* shall allow the *Department* or an authorized representative of EPA, the *State*, or, in the case of a facility which *discharges* through a *municipal separate storm sewer system* , an authorized representative of the municipal operator of the separate storm sewer receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the *owner or operators* premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit: and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

R. Permit Actions

At the *Department's* sole discretion, this permit may, at any time, be modified, revoked or renewed. The filing of a request by the *owner or operator* for a permit modification, reissuance, termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

S. Definitions

Definitions are included in Appendix A of this permit. Additional definitions are provided within the Part VIII industrial sectors for terms that are specific to those industries.

Part VI. REOPENER CLAUSE

A. If there is evidence indicating potential or realized impacts on water quality due to any *stormwater discharge associated with industrial activity* covered by this permit, the *owner or operator* of such *discharge* may be required to obtain an individual permit or an alternative general permit in accordance with Part V.N (requiring an individual permit or alternative general permit) of this permit or the permit may be modified to include different limitations and/or requirements.

B. Permit modification or revocation will be conducted according to 6 NYCRR Part 621 and 6NYCRR Part 750-1.18.

Part VII. TERMINATION OR TRANSFER OF COVERAGE

A. Notice of Termination (NOT) Form

Having submitted a Notice of Intent (NOI) to gain coverage under this permit, an *owner or operator* continues to be responsible for meeting permit requirements and payment of annual fees until a complete Notice of Termination (NOT) that has been signed in accordance with Part V.H. is received by the *Department* in accordance with the following conditions:

1. An *owner or operator* must submit an NOT to terminate coverage under this permit when one or more of the following conditions are met:

    a. When all *stormwater discharges associated with industrial activity* authorized by this permit are eliminated;

    b. If all stormwater *discharges* have been determined to be conveyed to a sanitary sewer or treatment works or a combined sewer system and the pertinent authority has accepted responsibility or approved connection;

    c. All *industrial activities* defined in 40 CFR 122.26(b)(14) or otherwise required by the *Department* to obtain coverage under this permit cease AND all materials, equipment or other potential *pollutants*, including but not limited to, residue in soils are removed;

    d. When a different *SPDES* authorization for a *discharge* covered under this permit becomes effective; or

    e. When the *owner or operator* of the *stormwater discharges associated with industrial activity* at a facility changes.

2. When the *owner or operator* of a facility changes, the original *owner* must notify the new *owner or operator* in writing of the possible requirement to submit a new NOI to obtain coverage under this permit.

B. Addresses

All Notice of Intent (NOIs), Notice of Modification (NOMs), and Notice of Termination (NOT) forms are to be submitted, using the forms provided by the *Department* (or a photocopy thereof), to the address indicated on the form which (as of the issuance date of this permit) is:

MSGP Permit Coordinator
NYS DEC, Division of Water
Bureau of Water Permits
625 Broadway
Albany, NY 12233-3505

PART VIII. SECTOR SPECIFIC PERMIT REQUIREMENTS

The *owner or operator* must comply with the additional requirements of Part VIII that apply to the specific *industrial activity* located at the *owner or operator's* facility. These requirements are in addition to the general requirements specified in the previous sections of this permit. The industry specific requirements are broken down into sections referred to as industrial sectors A through AE.

If the facility has more than one *industrial activity* meeting the description(s) of more than one sector occurring on-site, those industrial activities are considered to be *co-located.* Stormwater *discharges* from *co-located industrial activities* are authorized by this permit, provided that the *owner or operator* complies with any and all of the requirements applicable to each *industrial activity* at the facility. The monitoring and SWPPP terms and conditions of this permit are additive for *industrial activities* being conducted at a facility.

Examples of common *co-located* activities include, but are not limited to:

- Timber Products (Sector A) and vehicle maintenance (Sector P)
- Auto salvage (Sector M) and auto recycling (Sector N)
- Mineral mining (Sector J) and maintenance of vehicles and equipment (Sector P)
- Mineral mining (Sector J) and asphalt manufacturing (Sector D)
- Mineral mining (Sector J) and concrete manufacturing (Sector E)
- Transfer stations accepting recyclables (Sector N) and maintenance of vehicles used in local trucking without storage (Sector P)
- Manufacturers of food and kindred products (Sector U) and maintenance of vehicles used in local or long distance trucking (Sector P)

Sector J – Mineral Mining & Dressing	
Applicability	The requirements listed under this section apply to stormwater discharges associated with *industrial activity* from active and inactive mineral mining and dressing facilities as identified by the SIC Major Group 14. The types of activities that *owner or operators* under Sector J are primarily engaged in are: • Exploring for minerals (e.g., stone, sand, clay, chemical and fertilizer minerals, non-metallic minerals, etc.) • Developing mines and the mining of minerals • Mineral dressing • Nonmetallic mineral services. Most stormwater discharges subject to an existing *effluent limitation* guideline in 40 CFR Part 436 are not authorized by this permit, except for mine dewatering discharges composed entirely of stormwater or ground water seepage from construction sand and gravel, industrial sand, and crushed stone mining facilities.
Limitations of Coverage	Stormwater discharges from soils disturbance associated with *mining* except for reclamation activities where the pre-approved, post-mining use would otherwise require post construction stormwater controls under the *SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001).*
Prohibitions	In addition to the general prohibitions of non stormwater discharges, the following discharges not covered by this permit include, but are not limited to: • Mineral wash water • Transport (slurry) water • Wet scrubber blowdown • Contact cooling water • Noncontact cooling water • Floor and equipment washing • Water used for dust suppression (except as indicated below) • Cooling tower and boiler blowdowns • Vehicle and equipment maintenance fluids • Intake water treatment backwashes. • Stormwater discharges subject to an existing *effluent limitation* guideline in 40CFR Part 436, except for mine dewatering discharges composed entirely of stormwater or *groundwater* seepage from construction sand and gravel, industrial sand, and rushed stone mining facilities. These discharges must be covered under a separate *SPDES* permit.
Non-Stormwater discharges	In addition to the discharges described in Paragraph I.D, the discharge of clean water applied to roadways for dust control may be authorized by this permit provided that *BMPs* are in place to limit application rates thus preventing erosion and minimizing surface runoff.

Definitions

The following definitions are only for this section of the general permit:

"Haulageway" means all roads utilized for mining purposes, together with that area of land over which material is transported, that are located within the permitted area.

"Mine" means any excavation from which a mineral is to be produced for sale or exchange, or for commercial, industrial or municipal use; all haulageways and all equipment above, on or below the surface of the ground used in connection with such excavation, and all lands included in the life of the mine review by the *Department*.

"*Mining Activity or Activities*" means the activities associated with mining and reclamation including the exploration and land disturbance to determine the financial viability of a site, construction of haulageways, buildings and structures associated with *mining*.

"Mining" means the extraction of overburden and minerals from the earth; the preparation and processing of minerals, including any activities or processes or parts thereof for the extraction or removal of minerals from their original location and the preparation, washing, cleaning, crushing, stockpiling or other processing of minerals at the mine location so as to make them suitable for commercial, industrial, or construction use; exclusive of manufacturing processes, at the mine location; the removal of such materials through sale or exchange, or for commercial, industrial or municipal use; and the disposition of overburden, tailings and waste at the mine location. "Mining" shall not include the excavation, removal and disposition of minerals from construction projects, exclusive of the creation of water bodies, or excavations in aid of agricultural activities.

"Reclamation" means the activities associated with conditioning of the affected land to make it suitable for any uses or purposes consistent with the pre-approved, post mining use.

Note: The following definitions are not intended to supercede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

"*Active Mineral Mining Facility*" means a place where work or other activity related to the extraction, removal or recovery of minerals is being conducted. This definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun.

"*Inactive Mineral Mining Facility*" means a site or portion of a site where mineral mining and/or dressing occurred in the past but is not an active facility as defined above, and where the inactive portion is not covered by an active permit issued by the applicable *State* or Federal government agency.

"Mine Dewatering" means any water that is impounded or that collects in the mine and is pumped, drained or otherwise removed from the mine through the efforts of the mine operator. This term shall also include wet pit overflows caused solely by direct rainfall and/or ground water seepage.

"*Process Generated Wastewater*" means if a mine is also used for treatment of process generated waste water, discharges of commingled water from the facilities shall be deemed discharges of process generated waste water.

"*Temporarily Inactive Mineral Mining Facility*" means a site or portion of a site where mineral mining and/or dressing occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable *State* or Federal government agency.

"*Final Stabilization*" means that a site or portion of a site has implemented all applicable Federal and State (6NYCRR §422.3) reclamation requirements.

SWPPP Requirements in addition to Part III.C	
Site Map	Document on your site map the locations of the following: • Mining or milling site boundaries • Access and haul roads, • Outline of the drainage areas or each stormwater *outfall* within the facility with indications of the types of discharges from the drainage areas • Location(s) of all permitted discharges covered under an *individual SPDES permit* • Outdoor equipment storage, fueling, and maintenance areas • Materials handling areas • Outdoor manufacturing, outdoor storage, and material disposal areas • Outdoor chemicals and explosives storage areas • Overburden, materials, soils, or waste storage areas • Location of mine drainage dewatering or other process water • Surface waters • Boundary of tributary areas that are subject to *effluent limitations guidelines* • Location(s) of reclaimed areas
Additional Non-Numeric Effluent Limits	
Erosion and Sediment Control Plan	An erosion and sediment control (ESC) plan must be developed and implemented for *mining activities* that result in a soil disturbance with the potential for stormwater discharge to surface *waters of the State*. Areas draining internal to the mine that do not have the potential to discharge to *surface waters of the State* and areas that have achieved *final stabilization* are not subject to these requirements. This plan shall include details of temporary and permanent structural and vegetative measures that will be used to control erosion and sedimentation. The design, installation, inspection, maintenance and repair of erosion and sediment controls shall conform to the New York Standards and Specifications for Erosion and Sediment Control, 2005 and New York State Revegetation Procedures Manual: Surface Mining Reclamation, or their equivalents.
ESC Inspections	The *owner or operator* shall have a *qualified personnel* conduct site inspections in areas with the potential to discharge to *surface waters of the State* as follows: • All erosion and sediment control practices in areas with potential for stormwater discharge to surface water, to ensure integrity and effectiveness to ensure that practices are constructed as indicated in the SWPPP. • All areas of disturbance in areas with potential for stormwater discharge to surface water that have not achieved *final stabilization;* • All points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *mine.* • All points of discharge.

Erosion and Sediment Control Plan	**ESC Inspection Frequency**	For sites where soil disturbance activities are on-going, the *qualified personnel* shall conduct a site inspection at least once every seven (7) calendar days. Where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* has been applied to all disturbed areas or if runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen), the *qualified personnel* shall conduct a site inspection at least once every thirty (30) calendar days.
	ESC Inspection Reports	At a minimum, the inspection report shall include and/or address the following: • Date and time of inspection; • Name and title of person(s) performing inspection; • A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection; • A description of the condition of the runoff at all points of discharge from the site. • Identify any discharges of sediment or other *pollutants* from the site, including discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; • A description of the condition of all natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface water body; • Identification of all *BMPs* and erosion and sediment control practices that need repair or maintenance • Identification of all *BMPs* and erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; • Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection; • Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s)
	ESC Inspection Follow-Up	Within one (1) business day of the completion of an inspection, the *qualified personnel* shall notify the *owner or operator* and appropriate contractor of any corrective actions that need to be taken. The *owner or operator* shall begin implementing the corrective actions within one (1) business day of this notification and shall complete the corrective actions within seven (7) calendar days unless otherwise notified by the *Department.*

Routine Inspections

All *BMPs* (other than Erosion & Sediment Controls) at the facility shall be inspected quarterly for evidence of actual or potential discharges of contaminated stormwater and shall include the following areas:

- Chemical handling and storage areas
- Vehicle & equipment maintenance areas
- Fueling areas
- Other potential sources of pollution

Temporarily or permanently inactive facilities shall be inspected annually.

Numeric Effluent Limitations

The following *effluent limitations* shall be met by existing and new discharges from *Mine Dewatering* activities at construction sand and gravel; industrial sand; and crushed stone mining facilities (SIC 1422–1429, 1442, 1446) in accordance with 40 CFR 436:

Table VIII-J-1.
Sector J - Numeric Effluent Limitations

Parameter	Effluent Limitations	
	Daily Maximum	30-day Average
Mine Dewatering Activities at Construction Sand and Gravel; Industrial Sand; and Crushed Stone Mining Facilities (SIC 1422–1429, 1442, 1446) Subject to the Point Source Category Provisions of 40CFR Part 436 Subparts B, C & D		
Total Suspended Solids (TSS)	45 mg/L	25 mg/L
pH	6.0 to 9.0 SU	

Benchmarks

Sand and gravel mining facilities (SIC 1442, 1446) and facilities manufacturing dimension, crushed stone and nonmetallic minerals (except fuels (SIC 1411, 1422-1429, 1481, 1499) are required to monitor their stormwater discharges for the *pollutants* of concern listed in Table VIII-J-2.

Table VIII-J-2
Sector J - Benchmark Monitoring Requirement

Pollutants of Concern	**Benchmark Monitoring Cut-off Concentration**
Sand and Gravel Mining (SIC 1442, 1446)	
Total Nitrogen	6 mg/L
Total Phosphorous (TP)	2 mg/L
Total Suspended Solids (TSS)	100 mg/L
Total Recoverable Iron	1 mg/L

Benchmarks (Continued)

Table VIII-J-2 (Continued)
Sector J - Benchmark Monitoring Requirement

Pollutants of Concern	Benchmark Monitoring Cut-off Concentration
Sand and Gravel Mining (SIC 1442, 1446) (Continued)	
Total Recoverable Zinc	110 ug/L
Dimension and Crushed Stone and Nonmetallic Minerals (except fuels) (SIC 1411, 1422-1429, 1481, 1499)	
Total Suspended Solids (TSS)	100 mg/L
* Total Nitrogen is calculated as the sum of ammonia, nitrate-nitrite and organic nitrogen	

APPENDIX A – Definitions and Acronyms

Note: Additional definitions are provided within the Part VIII industrial sectors for definitions that are specific for those industries.

Action Area – all areas to be affected directly or indirectly by the stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities, and not merely the immediate area involved in these discharges and activities.

Annual Certification Report (ACR) - is the primary mechanism for reporting to the *Department*. Every facility covered by this general permit must complete and submit an *ACR* form in accordance with the submission deadlines in Part IV.D -Table IV-2.

Best Management Practices (BMPs) - means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the *State*. *BMPs* also include treatment requirements (if determined necessary by the *permittee*), operating procedures, and practices to control plant site runoff, spillage and leaks, sludge or waste disposal, or drainage from raw material storage.

Benchmark Monitoring – means sampling and analyses of stormwater *discharges* for parameters specified in Part VIII for specific sectors.

Benchmark Monitoring Cut-off Concentrations – means *pollutant* levels that are intended to provide a guideline for the *owner or operator* to determine the overall effectiveness of the SWPPP in controlling the *discharge* of *pollutants* to receiving waters. The *benchmark* concentrations do not constitute direct *effluent limitations*. Therefore, a *benchmark* exceedance is not a permit violation in and of itself. It does, however, signal the need for the *owner or operator* to evaluate potential sources of stormwater contaminants at the facility.

Best Practicable Control Technology Currently Available (BPT) – means the first level of technology-based standards established by the CWA to control pollutants discharged to waters of the U.S. BPT effluent limitations guidelines are generally based on the average of the best existing performance by plants within an industrial category or subcategory.

Co-located Industrial Activities - occurs when a facility has industrial activities included in more than one industrial sector. Stormwater *discharges* from co-located activities must comply with requirements for all relevant sectors.

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for "*Construction Activity*(ies)" also.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not

limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Construction SWPPP - means a stand alone document that meets the requirements of Part IX.

Control Measure - refers to any *BMP* or other method (including *effluent limitations*) used to prevent or reduce the discharge of *pollutants* to waters of the United States.

Department - means the New York State Department of Environmental Conservation as well as meaning the Department's designated agent.

Discharge(s) - means any addition of any *pollutant* to *waters of the State* through an outlet or *point source*.

Discharge Authorized by a *SPDES* Permit - means *discharges* of wastewater or stormwater from sources listed in the permit, that do not violate *ECL* Section 17-0501, that are through *outfalls* listed in the permit, and that are:

1. *discharges* within permit limitations of *pollutants* limited in the *SPDES* permit;

2. *discharges* within permit limitations of *pollutants* limited by an indicator limit in the *SPDES* permit;

3. *discharges* of *pollutants* subject to action level requirements in the *SPDES* permit;

4. *discharges* of *pollutants* not explicitly listed in the *SPDES* permit, but reported in the *SPDES* permit application record as detected in the *discharge* or as something the *permittee* knows or has reason to believe to be present in the *discharge*, provided the special conditions section of the applicable *SPDES* permit does not otherwise forbid such a *discharge* and provided that such *discharge* does not exceed, by an amount in excess of normal effluent variability, the level of *discharge* that may reasonably be expected for that *pollutant* from information provided in the *SPDES* permit application record;

5. *discharges* of *pollutants* not required to be reported on the appropriate and current New York State *SPDES* permit application; provided the special conditions section of the permit does not otherwise forbid such a *discharge*. The *Department* may, in accordance with law and regulation, modify the permit to include limits for any *pollutant* even if that *pollutant* is not required to be reported on the *SPDES* permit application; or

6. *discharges* from fire fighting activities; fire hydrant flushings; testing of fire fighting equipment, provided that such equipment is for water only fire suppression; potable water sources including waterline flushings; irrigation drainage; lawn watering; uncontaminated infiltration and inflow; leakage from raw water conveyance systems; routine external building washdown and vehicle washing which does not use detergents or other compounds; pavement washwaters where spills or leaks of toxic or hazardous materials, other than minor and routine releases from motor vehicles, have not occurred (unless such material has been removed) and where detergents are not used; air conditioning and steam condensate; springs; uncontaminated

groundwater; and foundation or footing drains where flows are not contaminated with process materials such as solvents provided that the *permittee* has implemented an effective plan for minimizing the *discharge* of *pollutants* from all of the sources listed in this subparagraph.

Discharge Monitoring Report (DMR) - means a report submitted by the *owner or operator* to the *Department* summarizing the effluent monitoring results obtained by the *owner or operator* over periods of time as specified in the *SPDES* permit.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Effluent Limitation - means any restriction on quantities, quality, rates and concentrations of chemical, physical, biological, and other constituents of effluents that are discharged into waters of the *State*.

Effluent Limitation Guideline (ELG) - means toxic or pretreatment *effluent limitations* contained in 40 CFR Parts 405 to 471 (see 6 NYCRR 750-1.24 of this Part).

General *SPDES* permit - means a *SPDES* permit issued pursuant to 6 NYCRR Part 750-1.21 authorizing a category of *discharges*.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

Groundwater - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

High Volume Hydraulic Fracturing – means the stimulation of a well using 300,000 gallons or more of water as the primary carrier fluid or base fluid in the hydraulic fracturing fluid for well completion.

Hot Spot – Area where land use or activities generate highly contaminated runoff, with concentrations of *pollutants* in excess of those typically found in stormwater.

Impaired Water (or "Impaired Waterbody" or "Impaired Waterbodies") - a water is impaired if it does not meet its designated use(s). For purposes of this permit 'impaired' refers to threatened and impaired waters in categories 4a (those for which *TMDLs* have been established), 4b (those for which existing controls such as permits are expected to resolve the impairment), and 5 (those needing a *TMDL*) of a *State's* or tribe's integrated report on water quality. Impaired waters compilations are also sometimes referred to as 303(d) lists; 303(d) lists generally include only waters for which *TMDLs* have not yet been developed. States will generally have associated, but separate lists of impaired waters for which *TMDLs* have already been established.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as

patios, pools, and sheds

Individual *SPDES* Permit - means a *SPDES* "permit" issued to a single facility in one location in accordance with this Part (as distinguished from a general *SPDES* permit).

Industrial Activity - the 11 categories of industrial activities included in the definition of "stormwater *discharges* associated with *industrial activity*."

Industrial Stormwater - stormwater runoff associated with the definition of "stormwater *discharges* associated with *industrial activity*."

Industrial Waste - means any liquid, gaseous, solid or waste substance or a combination thereof resulting from any process of industry, manufacturing, trade, or business or from the development or recovery of any natural resources, which may cause or might reasonably be expected to cause pollution of the *waters of the State* in contravention of the standards adopted as provided herein.

Measurable Storm Event - a storm event with at least 0.1 inch of precipitation that produces runoff.

Method Detection Level - means the level at which the analytical procedure referenced is capable of determining with a 99 percent probability that the substance is present. The precision at this level is plus or minus 100 percent.

Minimize – means reduce and/or eliminate to the extent achievable using *control measures* (including *BMPs*) that are technologically available and economically practicable and achievable in the light of best industry practice.

Municipality - means any county, town, city, village, district corporation, special improvement district, sewer authority or agency thereof.

Municipal Separate Storm Sewer System (MS4)- a conveyance or system of conveyances (including roads
with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. Owned or operated by a *State*, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to *State* law) having jurisdiction over disposal of sewage, *industrial wastes*, stormwater, or other wastes, including special districts under *State* law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that *discharges* to waters of the United States;

2. Designed or used for collecting or conveying stormwater;

3. Which is not a combined sewer; and

4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

Natural Background – are *pollutants* that include those substances that are naturally occurring in soils or *groundwater*. Natural background *pollutants* do not include legacy *pollutants* from earlier activity on the site, or *pollutants* in run-on from neighboring sources which are not naturally occurring.

No exposure - all industrial materials or activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff.

Outfall - means the terminus of a sewer system, or the point of emergence of any waterborne sewage, *industrial waste* or other wastes or the effluent therefrom, into the waters of the *State*.

Owner or Operator - means the owner or operator of any facility or activity subject to regulation under 6 NYCRR Part 750. In accordance with 6 NYCRR Part 750-1.6(a), when a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit

Permittee - means the holder of a *SPDES* permit.

Person or Persons - means any individual, public or private corporation, political subdivision, government agency, *municipality*, partnership, association, firm, trust, estate or any other legal entity whatsoever.

Point Source - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be discharged.

Pollutant(s) - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the *waters of the State* in contravention of the standards or guidance values adopted as provided in Parts 700 et seq of this Title.

Primary Industrial Activity - The operation that generates the most revenue or employs the most personnel is the operation in which the facility is primarily engaged. In situations where the vast majority of on-site activity falls within one SIC code, that activity may be the *primary industrial activity*. The primary industrial determination is based on the value of receipts or revenues or, if such information is not available for a particular facility, the number of employees or production rate for each process may be compared.

Qualified Personnel - *Qualified personnel* are those who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and whocan also evaluate the effectiveness of *BMP*s.

A *Qualified Personnel* shall receive four (4) hours of *Department* endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other *Department*

endorsed entity. After receiving the initial training, the individual shall receive four (4) hours of training, every three (3) years.

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or other *Department* endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of *Department* endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other *Department* endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years. It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other *Department* endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics in order to prepare a SWPPP that conforms to the *Department*'s technical standard. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Reportable Quantity Release - a release of a hazardous substance at or above the established legal threshold that requires emergency notification. Refer to 40 CFR Parts110, 177, and 302 for complete definitions and reportable quantities for which notification is required.

Qualifying Storm Event – a storm event with at least 0.1 inch of precipitation (defined as a "measurable" event), providing the interval from the preceding measurable storm is at least 72 hours. The 72-hour storm interval is waived if the preceding measurable storm did not result in a stormwater *discharge* (e.g., a storm events in excess of 0.1 inches may not result in a stormwater *discharge* at some facilities), or if the *owner or operator* is able to document that less than a 72 hour interval is representative for local storm events during the sampling period.

Runoff Coefficient - the fraction of total rainfall that will appear at the conveyance as runoff.

Significant Materials - includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater *discharges*.

State - means the State of New York.

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the *ECL* and this Part for issuance of permits authorizing *discharges* to the waters of the *State*.

Stormwater - means that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the *State*.

Stormwater Discharges Associated with Industrial Activity - the *discharge* from any conveyance that is used for collecting and conveying *stormwater* and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include *discharges* from facilities or activities excluded from the *NPDES* program under Part 122. For the categories of industries identified in this section, the term includes, but is not limited to, *stormwater discharges* from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR Part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where *industrial activity* has taken place in the past and *significant materials* remain and are exposed to *stormwater*. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with *stormwater* drained from the above described areas. Industrial facilities include those that are federally, *State*, or municipally owned or operated that meet the description of the facilities listed in Appendix D of this permit. The term also includes those facilities designated under the provisions of 40 CFR 122.26(a)(1)(v).

Surface Waters of the State shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the *State* of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the *State* or within its jurisdiction. Waters of the *State* are further defined in 6 NYCRR Parts 800 to 941.

Technical Standards – means the New York State Stormwater Management Design Manual (2010) and New York State Standards and Specifications for Erosion and Sediment Control (2005).

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single *pollutant* from all contributing point and nonpoint sources. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for point souce *discharges*, load allocations (LAs) for nonpoint sources, and a margin of safety (MOS).

Trained Individual - is a person that has received four (4) hours of *Department* endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other *Department* endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of *Department* endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other *Department* endorsed entity).

Waters of the United States - means:

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;

2. All interstate waters, including interstate "wetlands";

3. All other waters, such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce, including any such waters:

    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes;

    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

    c. Which are or could be used for industrial purposes by industries in interstate commerce;

4. All impoundments of waters otherwise defined as *waters of the United States* under this definition;

5. Tributaries of waters identified in paragraphs (1) through (4) of this definition;

6. The territorial sea; and

7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs 1 through 6 of this definition.

Waters or Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the State of New York and all other bodies of surface or underground water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the *State* or within its jurisdiction. *Waters of the State* are further defined in 6 NYCRR Parts 800 to 941 of this Title.

Storm sewers are not *waters of the State* unless they are classified in Parts 800 to 941 of this Title. Nonetheless, a *discharge* to a storm sewer shall be regulated as a *discharge* at the point where the storm sewer *discharges* to waters of the *State*.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Act and *Environmental Conservation Law* (other than cooling ponds as defined in 40 CFR 423.11(m)(see section 750 - 1.24) which also meet the criteria of this definition are not waters of the *State*. This exclusion applies only to manmade bodies of water which neither were originally created in *waters of the State* (such as a disposal area in wetlands) nor resulted from impoundment of waters of the *State*.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

ACRONYMS

ACR – Annual Certification Report
BOD5 – Biochemical Oxygen Demand (5-day test)
BMP – Best Management Practice
BPT - Best Practicable Technology
CBS - Chemical Bulk Storage
COD – Chemical Oxygen Demand
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DMR – Discharge Monitoring Report
ECL - Environmental Conservation Law
ELG – Effluent Limitations Guidelines
EPA – U. S. Environmental Protection Agency
EPCRA – Emergency Planning and Community Right-to-know Act
MDL - Method Detection Limit
MGD – Million Gallons per Day
MS4 – Municipal Separate Storm Sewer System
MSGP – Multi-Sector General Permit
NOI– Notice of Intent
NOM – Notice of Modification
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NRC – National Response Center
NTU – Nephelometric Turbidity Unit
PBS - Petroleum Bulk Storage
PQL - Practical Quantitation Limit
RCRA – Resource Conservation and Recovery Act
RQ – Reportable Quantity
SIC – Standard Industrial Classification
SPCC – Spill Prevention, Control, and Countermeasure
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
TSS – Total Suspended Solids
USGS – United States Geological Survey

APPENDIX B - Sectors of Industrial Activity Covered by this Permit

SECTORS OF INDUSTRIAL ACTIVITY COVERED BY THIS PERMIT	
Activities Consistent with Descriptions and SIC Code or Activity Code	**Activity Represented**
Sector A: Timber Products	
2411	Log Storage and Handling (Wet deck storage areas are only authorized if no chemical additives are used in the spray water or applied to the logs).
2421	General Sawmills and Planning Mills
2426	Hardwood Dimension and Flooring Mills
2429	Special Product Sawmills, Not Elsewhere Classified
2431-2439 (except 2434 - see Sector W)	Millwork, Veneer, Plywood, and Structural Wood
2441, 2448, 2449	Wood Containers
2451, 2452	Wood Buildings and Mobile Homes
2491	Wood Preserving
2493	Reconstituted Wood Products
2499	Wood Products, Not Elsewhere Classified
Sector B: Paper and Allied Products	
2611	Pulp Mills
2621	Paper Mill
2631	Paperboard Mills
2652-2657	Paperboard Containers and Boxes
2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes
Sector C: Chemical and Allied Products	
2812-2819	Industrial Inorganic Chemicals
2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass
2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; In Vitro and In Vivo Diagnostic Substances; Biological Products, Except Diagnostic Substances
2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations
2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products
2861-2869	Industrial Organic Chemicals
2873-2879	Agricultural Chemicals
2891-2899	Miscellaneous Chemical Products
2911	Petroleum Refineries
3952 (limited to list)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors

SECTORS OF INDUSTRIAL ACTIVITY COVERED BY THIS PERMIT (Continued)	
Activities Consistent with Descriptions and SIC Code or Activity Code	**Activity Represented**
Sector D: Asphalt Paving and Roofing Materials and Lubricants	
2951, 2952	Asphalt Paving and Roofing Materials
2992, 2999	Miscellaneous Products of Petroleum and Coal
Sector E: Glass Clay, Cement, Concrete, and Gypsum Products	
3211	Flat Glass
3221, 3229	Glass and Glassware, Pressed or Blown
3231	Glass Products Made of Purchased Glass
3241	Hydraulic Cement
3251-3259	Structural Clay Products
3261-3269	Pottery and Related Products
3271-3275	Concrete, Gypsum and Plaster Products
3281	Cut Stone and Stone Products
3291-3299	Abrasive, Asbestos, and Miscellaneous Non-metallic Mineral Products
Sector F: Primary Metals	
3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills
3321-3325	Iron and Steel Foundries
3331-3339	Primary Smelting and Refining of Nonferrous Metals
3341	Secondary Smelting and Refining of Nonferrous Metals
3351-3357	Rolling, Drawing, and Extruding of Nonferrous Metals
3363-3369	Nonferrous Foundries (Castings)
3398, 3399	Miscellaneous Primary Metal Products
Sector G: Metal Mining (Ore Mining and Dressing)	
1011	Iron Ores
1021	Copper Ores
1031	Lead and Zinc Ores
1041, 1044	Gold and Silver Ores
1061	Ferroalloy Ores, Except Vanadium
1081	Metal Mining Services
1094, 1099	Miscellaneous Metal Ores
Sector H: [Reserved]	
Sector I: Oil and Gas Extraction and Refining	
1311	Crude Petroleum and Natural Gas
1321	Natural Gas Liquids
1381-1389	Oil and Gas Field Services

SECTORS OF INDUSTRIAL ACTIVITY COVERED BY THIS PERMIT (Continued)	
Activities Consistent with Descriptions and SIC Code or Activity Code	**Activity Represented**
Sector J: Mineral Mining and Dressing	
1411	Dimension Stone
1422-1429	Crushed and Broken Stone, Including Rip Rap
1442, 1446	Sand and Gravel
1455, 1459	Clay, Ceramic, and Refractory Materials
1474-1479	Chemical and Fertilizer Mineral Mining
1481	Nonmetallic Minerals Services, Except Fuels
1499	Miscellaneous Nonmetallic Minerals, Except Fuels
Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities	
HZ	Hazardous Waste Treatment Storage or Disposal
Sector L: Landfills and Land Application Sites	
LF	Landfills, Land Application Sites, and Non-Compliant Landfills
Sector M: Automobile Salvage Yards	
5015	Automobile Salvage Yards
Sector N: Scrap Recycling Facilities	
5093	Scrap Recycling Facilities, Including Transfer Stations Accepting Household Recyclables
4499 (limited to list)	Dismantling Ships, Marine Salvaging, and Marine Wrecking - Ships For Scrap
Sector O: Steam Electric Generating Facilities	
SE	Steam Electric Generating Facilities
Sector P: Land Transportation and/or Warehousing	
4011, 4013	Railroad Transportation
4111-4173	Local and Highway Passenger Transportation
4212-4231	Motor Freight Transportation and/or Warehousing
4311	United States Postal Service
5171	Petroleum Bulk Stations and Terminals
Sector Q: Water Transportation	
4412-4499(except 4499 facilities as specified in Sector N)	Water Transportation, Marinas, Yacht Clubs
Sector R: Ship and Boat Building or Repairing Yards	
3731, 3732	Ship and Boat Building or Repairing Yards
Sector S: Air Transportation	
4512-4581	Air Transportation Facilities

SECTORS OF INDUSTRIAL ACTIVITY COVERED BY THIS PERMIT (Continued)	
Activities Consistent with Descriptions and SIC Code or Activity Code	**Activity Represented**
Sector T: Treatment Works	
TW	Treatment Works
Sector U: Food and Kindred Products	
2011-2015	Meat Products
2021-2026	Dairy Products
2032-2038	Canned, Frozen and Preserved Fruits, Vegetables and Food Specialties
2041-2048	Grain Mill Products
2051-2053	Bakery Products
2061-2068	Sugar and Confectionery Products
2074-2079	Fats and Oils
2082-2087	Beverages
2091-2099	Miscellaneous Food Preparations and Kindred Products
2111-2141	Tobacco Products
Sector V: Textile Mills, Apparel, and Other Fabric Product Manufacturing, Leather and Leather Products	
2211-2299	Textile Mill Products
2311-2399	Apparel and Other Finished Products Made From Fabrics and Similar Materials
3131-3199 (except 3111 - see Sector Z)	Leather and Leather Products, except Leather Tanning and Finishing
Sector W: Furniture and Fixtures	
2434	Wood Kitchen Cabinets
2511-2599	Furniture and Fixtures
Sector X: Printing and Publishing	
2711-2796	Printing, Publishing, and Allied Industries
Sector Y: Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries	
3011	Tires and Inner Tubes
3021	Rubber and Plastics Footwear
3052, 3053	Gaskets, Packing, and Sealing Devices and Rubber and Plastics Hose and Belting
3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified
3081-3089	Miscellaneous Plastics Products
3931	Musical Instruments
3942-3949	Dolls, Toys, Games and Sporting and Athletic Goods
3951-3955 (except 3952 facilities specifiedin Sector C)	Pens, Pencils, and Other Artists' Materials
3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal.Miscellaneous Manufacturing Industries.
3991-3999	

SECTORS OF INDUSTRIAL ACTIVITY COVERED BY THIS PERMIT (Continued)	
Activities Consistent with Descriptions and SIC Code or Activity Code	**Activity Represented**
Sector Z: Leather Tanning and Finishing	
3111	Leather Tanning, Currying and Finishing
Sector AA: Fabricated Metal Products	
3411–3499	Fabricated Metal Products, Except Machinery and Transportation Equipment
3911–3915	Jewelry, Silverware, and Plated Ware
Sector AB: Transportation Equipment, Industrial or Commercial Machinery	
3511-3599 (except 3571-3579 - see Sector AC)	Industrial and Commercial Machinery (Except Computer and Office Equipment).
3711-3799 (except 3731, 3732 - see Sector R)	Transportation Equipment (Except Ship and Boat Building and Repairing)
Sector AC: Electronic, Electrical, Photographic, and Optical Goods	
3571-3579	Computer and Office Equipment
3612-3699	Electronic, Electrical Equipment and Components, Except Computer Equipment
3812-3873	Measuring, Analyzing and Controlling Instrument; Photographic and Optical Goods
Sectors AD & AE: Non-Classified Facilities/Stormwater Discharges Designated By the Department As Requiring Permits	
N/A	Other Stormwater Discharges Designated By the *Department* As Needing a Permit or Any Facility Discharging Stormwater Associated With *Industrial Activity* Not Described By Any of Sectors A-AC. Note: Facilities may not elect to be covered under Sector AD & AE. Only the *Department* may assign a facility to Sector AD & AE.

APPENDIX C – Sectors Subject to Benchmark Monitoring Requirements

INDUSTRIAL SECTORS SUBJECT TO BENCHMARK MONITORING		
Industry Sector [1]	**Industry Sub-sector**	**Benchmark Monitoring Parameters**
A	General Sawmills and Planing Mill	TSS, COD, Zinc, TN, Phosphorus
	Wood Preserving Facilities	Arsenic, Chromium, Copper
	Log Storage and Handling	TSS
	Hardwood Dimension and Flooring Mills	TSS, COD
B	Paperboard Mills	COD
C	Industrial Inorganic Chemicals	Aluminum, Iron, TN
	Plastics, Synthetic Resins, etc	Zinc
	Soaps, Detergents, Cosmetics, Perfumes	TN, Zinc
	Agricultural Chemicals	TN, Iron, Lead, Zinc, Phosphorus
	Petroleum Refining	Oil & Grease, Lead, Zinc, BTEX
D	Asphalt Paving and Roofing Materials	TSS
E	Clay Products	Aluminum
	Concrete Products	TSS, pH, Iron
F	Steel Works, Blast Furnaces, and Rolling .... and Finishing Mills	Aluminum, Zinc
	Iron and Steel Foundries	Aluminum, TSS, Copper, Iron, Zinc
	Nonferrous Rolling, Drawing & Extruding	Copper, Zinc
	Nonferrous Foundries (Castings)	Copper, Zinc
G [2]	Ore Mining and Dressing	TSS, COD, pH, turbidity, metals
H	[Reserved]	
I	Oil and Gas Extraction	TSS, Chlorides, pH, [4]
J	Sand and Gravel Mining	TSS, TN, Iron, Zinc, Phosphorus
	Dimension and Crushed Stone and Non-metallic Minerals (except fuels)	TSS
K	Hazardous Waste Treatment, Storage or ..... Disposal	TSS, COD, TN, Arsenic, Cadmium, Cyanide, Lead, Magnesium, Mercury, Selenium, Silver

1 - Table does not include parameters for compliance monitoring under *effluent limitations guidelines.*
2 - See Sector G (Part VIII.G) for additional monitoring discharges from waste rock and overburden piles from active ore mining or dressing facilities which includes TSS, COD, turbidity, pH, hardness, and metals.
3 - Monitoring requirement for airports with deicing activities utilizing more than 100 tons of urea or more than 100,000 gallons of glycol per year.
4 - BTEX is Benzene, Ethylbenze, Toluene and Xylene.

INDUSTRIAL SECTORS SUBJECT TO BENCHMARK MONITORING (Continued)		
L	Landfills, Land Application Sites, and Open.. Dumps	Iron, TSS, TN, Phosphorus
	Landfills, Land Application Sites and Open .. Dumps, Except Municipal Solid Waste Landfill Sites Closed in accordance with 40 CFR 258.60	Iron, TSS
M	Automobile Salvage Yards	TSS, Oil & Grease, Aluminum, Iron, Lead, BTEX [4]
N	Scrap Recycling/Waste Recycling Facilities .. and Facilities Engaged in Ship Dismantling, Marine Salvaging & Marine Wrecking for Scrap	TSS, COD, Oil & Grease, Aluminum, Cadmium, Copper, Chromium, Iron, Lead, Zinc
	Scrap & Waste Recycling Facilities which .... include Stormwater Discharges from Shredder Fluff Storage Areas	TSS, COD, Oil & Grease, Aluminum, Cadmium, Copper, Chromium, Iron, Lead, Zinc, Mercury, PCBs, BTEX [4]
O	Steam Electric Generating Facilities	Iron, Oil & Grease, PCBs
P	Land Transportation and/or Warehousing, including Transfer Stations with vehicle maintenance facilities	Oil & Grease, COD, BTEX [4]
Q	Water Transportation Facilities	Aluminum, Iron, Zinc, Lead
S	Airports with deicing activities [3]	COD, BOD, TN, pH
T	Treatment Works	COD
U	Grain Mill Products	TSS, TN, Phosphorus
	Fats and Oils Products	BOD, COD, TSS, TN, Phosphorus
Y	Rubber Products	Zinc
Z	Leather Tanning and Finishing	TN, Chromium
AA	Fabricated Metal Products Except Coating	TN, Aluminum, Iron, Zinc
	Fabricated Metal Coating and Engraving	TN, Zinc
AC	Electronic, Electrical Equipment and Components, Photographic & Optical Goods	TSS, Copper, Lead
AD	Non-classified Facilities Designated by the *Department*	TSS, COD, Oil & Grease, TN, Iron, Zinc
AE	Non-Classified Facilities Designated by the *Department* for DPW and Highway Maintenance Facilities	TSS, COD, Oil & Grease, BTEX [4]

1 - Table does not include parameters for compliance monitoring under *effluent limitations guidelines*.
2 - See Sector G (Part VIII.G) for additional monitoring discharges from waste rock and overburden piles from active ore mining or dressing facilities which includes TSS, COD, turbidity, pH, hardness, and metals.
3 - Monitoring requirement for airports with deicing activities utilizing more than 100 tons of urea or more than 100,000 gallons of glycol per year.
4 - BTEX is Benzene, Ethylbenze, Toluene and Xylene.

APPENDIX D - Industrial Activities Subject to Effluent Limitation Guidelines (Compliance Monitoring Requirements)

EFFLUENT LIMITATION GUIDELINES APPLICABLE TO DISCHARGES THAT MAY BE ELIGIBLE FOR PERMIT COVERAGE	
Effluent Limitation Guideline	**Sectors With Affected Facilities**
Runoff from material storage piles at cement manufacturing facilities (40 CFR Part 411 Subpart C (2002) (established February 23, 1977))	E
Contaminated runoff from phosphate fertilizer manufacturing facilities (40 CFR Part 418 Subpart A (2002) (established April 8, 1974))	C
Coal pile runoff at steam electric generating facilities (40 CFR Part 423 (2002) (established November 19, 1982))	O
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas (40 CFR Part 429, Subpart I (2002) (established January 26, 1981))	A
Mine dewatering discharges at crushed stone mines (40 CFR Part 436, Subpart B)	J
Mine dewatering discharges at construction sand and gravel mines (40 CFR Part 436, Subpart C)	J
Mine dewatering discharges at industrial sand mines (40 CFR Part 436, Subpart D)	J
Runoff from asphalt emulsion facilities (40 CFR Part 443 Subpart A (2002) (established July 24, 1975))	D
Runoff from landfills, (40 CFR Part 445, Subpart A and B (2002) (established February 2, 2000))	K & L

APPENDIX E - Additional Information for New Discharges

(See General Permit Part II.A)

Any facility with new *stormwater discharges associated with industrial activity* which require any other *Uniform Procedures Act* (http://www.dec.ny.gov/permits/6081.html) permit(s) (*Environmental Conservation Law*, 6 NYCRR Part 621) are not initially eligible for coverage under this general permit. The discharger must first complete a Short Environmental Assessment Form which can be found in Appendix C of 6 NYCRR Part 617 (http://www.dec.ny.gov/regs/4490.html) and submit it to the appropriate NYSDEC Regional Permit Administrator. Upon a review of the Short Environmental Assessment Form and the information specified below, the *Department* may authorize the applicant to submit a Notice of Intent (NOI) to obtain coverage under this general permit or, alternatively, require an application for an individual *SPDES* permit.

Additional Information

1. A site map showing topography (or indicating the outline of drainage areas served by the *outfall(s)* for which *discharge* authorization and permit coverage is being sought if a topographic map is unavailable) of the facility including: each of its drainage and *discharge* structures; the drainage area of each *stormwater outfall*; paved areas and buildings within the drainage area of each *stormwater outfall*; areas used for outdoor storage or disposal of significant materials; structural *control measure*(s) to reduce *pollutants* in *stormwater* runoff; material loading and access areas; areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each hazardous waste treatment, storage or disposal facility (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); wells where fluids from the facility are injected underground; and springs, and surface and/or *groundwater* bodies which will receive *stormwater discharges* from the facility.

2. An estimate of the area of impervious surfaces (including paved areas and building roofs) and the total area drained by each *outfall* and a narrative description of the following: *significant materials* that, in the three years prior to the submittal of this information, have been treated, stored or disposed of in a manner which will allow exposure to stormwater; methods of treatment, storage or disposal of such materials; materials management practices employed to *minimize* contact of these materials with stormwater runoff; materials loading and access areas; the location, manner and frequency of application of pesticides, herbicides, soil conditioners and fertilizers; the location and description of structural and non-structural *control measures* being used to reduce *pollutants* in stormwater runoff; and a description of the stormwater treatment, including the ultimate disposal of any solid or fluid wastes other than by *discharge*.

3. A certification that all *outfalls* that could contain *stormwater discharges associated with industrial activity* have been tested or evaluated for the presence of non-stormwater *discharges* which are not covered by an existing *SPDES* permit; tests for such non-stormwater *discharges* may include smoke tests, fluorometric, analysis of accurate schematics, as well as other appropriate tests. The certification shall include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during a test.

4. Existing information regarding reportable leaks or spills of toxic or hazardous *pollutants* at the facility that have occurred within the three years prior to the submittal of this information.

5. Estimates for the following parameters for all *outfalls*:

- Any *pollutant* limited in an effluent limitations guideline for which the facility is subject;
- Any *pollutant* listed in the facility's existing *SPDES* permit, if any;
- Oil and grease, pH, BOD5, COD, TSS, total phosphorus, total Kjeldahl nitrogen, and nitrate plus nitrite nitrogen;

- Any information on the *discharge* required under paragraph §122.21.21(g)(7)(iii) and (iv) of 40 CFR Part 122; and
- The flow rate and total amount of *discharge* for stormwater event(s) and the method of estimation.

Other information as the *Department* may reasonably require to determine whether coverage under this general permit or, alternatively, under an individual permit is required.

APPENDIX F - List of DEC Regional Offices

List of NYS DEC Regional Offices			
Region	**Covering the following counties:**	**DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators**	**DIVISION OF WATER (DOW) Water (SPDES) Program Regional Water Engineer**
1	Nassau and Suffolk	SUNY @ Stony Brook 50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0365	SUNY @ Stony Brook 50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	100 Hillside Ave., Suite 1W Whiteplains, NY 10603-2860 Tel. (914) 428-2505
4	Albany, Columbia , Delaware , Greene , Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 NYS Route 86 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-0220 Tel. (518) 623-1200
6	Herkimer, Jefferson, Lewis, Oneida and St. Lawrence	State Office Building 317 Washington Street Watertown, NY 13601-3787 Tel. (315) 785-2245	State Office Building 207 Genesee Street Utica, NY 13501-2885 Tel. (315) 793-2554
7	Broome , Cayuga , Chenango, Cortland, Madison, Onondaga, Oswego, Tioga and Tompkins	615 Erie Blvd. West Syracuse, NY 13204-2400 Tel. (315) 426-7438	615 Erie Blvd. West Syracuse, NY 13204-2400 Tel. (315) 426-7500
8	Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne and Yates	6274 East Avon-Lima Road Avon, NY 14414-9519 Tel. (585) 226-2466	6274 East Avon-Lima Rd. Avon, NY 14414-9519 Tel. (585) 226-2466
9	Allegany, Cattaraugus, Chautauqua, Erie, Niagara and Wyoming	270 Michigan Avenue Buffalo, NY 14203-2999 Tel. (716) 851-7165	270 Michigan Ave. Buffalo, NY 14203-2999 Tel. (716) 851-7070

APPENDIX G – Pollutant(s) of Concern for Impaired Waterbodies Reference Table

Pollutant(s) of Concern for Impaired Waterbodies Reference Table		
303(d) Pollutant of Concern	**Applicable Benchmark or Effluent Limit**	**Sector**
Acid/Base (pH)	pH	A, D, E, G, I, J, K, L, S
Ammonia	Total Nitrogen (TN)	A, C, J, K, L, S, U, Z, AA, AD
	Ammonia	K, L
Aquatic Toxicity	Aluminum	C, E, F, M, N, Q, AA
	Arsenic	A, G, K
	Cadmium	G, K, N
	Beryllium	G
	Chromium	A, K, N, Z
	Copper	A, F, G, N, AC
	Cyanide	K
	Iron	C, E, F, G, J, L, M, N, O, Q, AA, AD
	Lead	C, G, K, M, N, Q, AC
	Magnesium	K
	Manganese	G
	Mercury	G, K, N
	Nickel	G
	Selenium	G, K
	Silver	G, K
	Zinc	A, C, F, G, J, K, L, N, Q, Y, AA, AD
	Chlorides	I
	Total Nitrogen (TN)	A, C, J, K, L, S, U, Z, AA, AD
	Total Phosphorous (TP)	C, J, L, U
	Total Suspended Solids (TSS)	A, D, E, F, G, I, J, K, L, M, N, U, AC, AD, AE
Cadmium	Cadmium	G, K, N
Copper	Copper	A, F, N, AC
Cyanide	Cyanide	K

Pollutant(s) of Concern for Impaired Waterbodies Reference Table (Continued)		
303(d) Pollutant of Concern	**Applicable Benchmark or Effluent Limit**	**Sector**
Dissolved Oxygen/ Oxygen Demand	Biochemical Oxygen Demand (BOD)	K, L, S, U
	Chemical Oxygen Demand (COD)	A, B, G, K, N, P, S, T, U, AD, AE
	Total Nitrogen (TN)	A, C, J, K, L, S, U, Z, AA, AD
	Total Phosphorous (TP)	C, J, L, U
Floatables	Oil & Grease	C, D, M, N, O, P, AD, AE
Mercury	Mercury	G, K, N
Nitrogen	Total Nitrogen (TN)	A, C, J, K, L, S, U, Z, AA, AD
Nutrients	Total Nitrogen (TN)	A, C, J, K, L, S, U, Z, AA, AD
	Total Phosphorous (TP)	C, J, L, U
	Total Suspended Solids (TSS)	A, D, E, F, G, I, J, K, L, M, N, U, AC, AD, AE
PCBs	PCBs	N, O
Phosphorus	Total Phosphorous (TP)	C, J, L, U
	Total Suspended Solids (TSS)	A, D, E, F, G, I, J, K, L, M, N, U, AC, AD, AE
Priority Organics	Alpha Terpineol	K, L
	Aniline	K
	Benzoic Acid	K, L
	Naphthalene	K
	p-Cresol	K, L
	Phenol	K, L
	Pyridine	K
	Benzene	C, M, N4, P, AE
	Toluene	C, M, N4, P, AE
	Ethylbenzene	A, C, M, N4, P, AE
	Xylene	A, C, M, N4, P, AE
Salts	Chlorides	I
Silt/Sediment	Total Suspended Solids (TSS)	A, D, E, F, G, I, J, K, L, M, N, U, AC, AD, AE
Turbidity	Total Suspended Solids (TSS)	A, D, E, F, G, I, J, K, L, M, N, U, AC, AD, AE

Appendix B

Notice of Intent / Notice of Modifications

Acceptance Letter

Notice of Termination

2456480920

New York State Department of Environmental Conservation
Division of Water
Bureau of Water Permits, 4th Floor

625 Broadway, Albany, New York 12233-3505
Phone: (518) 402-8111 . Fax: (518) 402-9029
Website: www.dec.state.ny.us

NYR [ ][ ][ ][ ][ ][ ]

Notice of Intent

For Stormwater Discharges Associated with Industrial Activity under the State Pollutant Discharge Elimination System (SPDES) Multi-Sector General Permit GP-0-12-001 (MSGP)

All Sections must be completed unless otherwise noted. Incomplete forms will be returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit prior to submitting this Notice of Intent (NOI) Form. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

IMPORTANT:

-USE THIS NOI TO OBTAIN COVERAGE UNDER GP-0-12-001.
-TYPE OR PRINT IN BOXES. AVOID CONTACT WITH THE EDGE OF THE BOXES.
-FILL IN CIRCLES COMPLETELY AND DO NOT USE CHECK MARKS.
-OWNER/OPERATOR MUST SIGN FORM.

Owner/Operator Information

Enter the name of the legally responsible party and the address of the executive office

O/O Name: FRONTIER STONE, LLC

O/O Street Address: 4172 EAST LAKE ROAD

O/O City: WILSON

O/O State: NY

O/O Zip: 14172-

Contact Information

Enter the name and contact information for the individual responsible for communicating with DEC regarding the implementation of the MSGP on behalf of the owner/operator.

Contact First Name: DAVID

Contact Last Name: MAHAR

Contact Phone: 716-751-9670

Contact Fax: 716-751-9670

Contact eMail: MAHARTZ43@AOL.COM

Facility Information

Enter the complete street address of the physical location of the facility.

Facility Name
FRONTIER STONE QUARRY

Facility Street Address
SOUR SPRINGS ROAD

Facility City
MEDINA

State
NY

Facility Zip
14103 -

Facility County
ORLEANS

Name of Nearest Cross Street
FLETCHER CHAPEL ROAD

Distance to Nearest Cross Street (feet)
1500

Direction to Nearest Cross Street
● North ○ South ○ East ○ West

Mailing Information

Provide address where DMR should be mailed, if different from Owner/Operator Information on page 1.

Name

Street Address

City

State

Zip -

Provide address where SPDES fee (billing) should be mailed, if different from Owner/Operator Information on page 1.

Name

Street Address

City

State

Zip -

1. Does your facility meet all the eligibility requirements listed in Part I.C of the SPDES Multi-Sector General Permit to gain coverage under this general permit? ..... ● Yes ○ No

If No, contact the Department to discuss next steps. If Yes, go to question 2.

2. Does your facility conduct any activities listed in Part I.D of the SPDES Multi-Sector General Permit which would make your facility inelibible for coverage under this general permit? ..... ○ Yes ● No

If Yes, contact the Department to discuss next steps. If No, go to question 3.

3. Provide the name(s) of the nearest surface waterbody(ies) into which site runoff will discharge:

OAK ORCHARD CREEK

4(a). Does site runoff enter a Municipal Separate Storm Sewer System including roadside drains, swales, ditches, culverts, etc.? ..... ○ Yes ● No

4(b). If Yes, what is the name of the municipality/entity that owns the Municipal Separate Storm Sewer System

5(a). Has a Stormwater Pollution Prevention Plan (SWPPP) been prepared for this facility in accordance with the requirements of the SPDES Multi-Sector General Permit? Please be advised that you cannot obtain coverage under this permit without having first prepared a SWPPP. ..... ● Yes ○ No

5(b). How will you make your SWPPP available to the public?

○ Posting a copy online (Provide URL).

● Maintain copy at the facility address listed in the facility information section of the NOI

○ Maintain copy at the following location (Provide address).

Street Address

City

State

Zip -

6(a). Has the surface waterbody(ies) in question 3 been identified as an impaired waterbody on the CWA 303(D) list or in a watershed for which a Total Maximum Daily Load (TMDL) strategy has been approved? Information about impaired waters identified in the 303(d) list is found on the Department's public web site at: http://www.dec.ny.gov/chemical/31290.html. ..... ● Yes ○ No

6(b). If Yes, is the pollutant(s) causing the impairment a pollutant of concern included in the benchmarks and/or effluent limitations to which the facility is subject to in Part VIII of the SPDES Multi-Sector General Permit? A list of applicable pollutant(s) of concern for the SPDES Multi-Sector General Permit can be found in Appendix G of the permit. ..... ○ Yes ● No

6(c). If Yes, does your SWPPP include measures to address the pollutant(s) of concern as required by Part III.F.4 of the SPDES Multi-Sector General Permit? ..... ○ Yes ● No

7. Provide the geographic coordinates in decimal degrees for the latitude & longitude of the facility. The NYS DEC Stormwater Interactive Map on the DEC's website can be used to get coordinates. Go to: www.dec.ny.gov/imsmaps/stormwater/viewer.htm

4	3	.	1	5	8		-	7	8	.	3	6	7

Latitude Longitude

8(a). Has this facility been assigned a SPDES MSGP ID under previous versions of the MSGP? ..... ○ Yes ● No

8(b). If Yes, Provide the ID if known (Note: All SPDES MSGP IDs begin with NYR00:)

○ I don't know the facility's ID

○ The facility's existing ID is: | N | Y | R | 0 | 0 | | | | |

9. Identify all applicable Industrial Activities from the Industrial Sectors shown below that are located within areas subject to the stormwater discharges covered under this permit. Check all that apply to your facility.

Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
		Sector A: Timber Products	
B,C	○	2411	Log Storage and Handling (Wet deck storage areas are only authorized if no chemical additives are used in the spray water or applied to the logs).
B	○	2421	General Sawmills and Planning Mills
B	○	2426	Hardwood Dimension and Flooring Mills
B	○	2429	Special Product Sawmills, Not Elsewhere
B	○	2431-2439 (except 2434 - see sector W)	Millwork, Veneer, Plywood, and Structural Wood.
B	○	2441, 2448, 2449	Wood Containers
B	○	2451, 2452	Wood Buildings and Mobile Homes
B	○	2491	Wood Preserving
B	○	2493	Reconstituted Wood Products
B	○	2499	Wood Products, Not Elsewhere Classified
		Sector B: Paper and Allied Products	
	○	2611	Pulp Mills
	○	2621	Paper Mills
B	○	2631	Paperboard Mills
	○	2652-2657	Paperboard Containers and Boxes
	○	2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes
		Sector C: Chemical and Allied Products	
B	○	2812-2819	Industrial Inorganic Chemicals.
B	○	2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass.
	○	2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; In Vitro and In Vivo Diagnostic Substances; Biological Products, Except Diagnostic Substances.
B	○	2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations.
	○	2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products.
	○	2861-2869	Industrial Organic Chemicals.
B,C	○	2873-2879	Agricultural Chemicals.
	○	2891-2899	Miscellaneous Chemical Products.
	○	3952 (limited to list)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors.
B	○	2911	Oil Refineries
		Sector D: Asphalt Paving and Roofing Materials and Lubricants	
B,C	○	2951, 2952	Asphalt Paving and Roofing Materials
	○	2992, 2999	Miscellaneous Products of Petroleum and Coal
		Sector E: Glass Clay, Cement, Concrete, and Gypsum Products	
	○	3211	Flat Glass
	○	3221, 3229	Glass and Glassware, Pressed or Blown
	○	3231	Glass Products Made of Purchased Glass
C	○	3241	Hydraulic Cement
B	○	3251-3259	Structural Clay Products
B	○	3261-3269	Pottery and Related Products
B,C	○	3271-3275	Concrete, Gypsum and Plaster
	○	3281	Cut Stone and Stone Products
	○	3291-3299	Abrasive, Asbestos, and Miscellaneous Non-metallic Mineral Products

Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
		Sector F: Primary Metals	
B	O	3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills
B	O	3321-3325	Iron and Steel Foundries
	O	3331-3339	Primary Smelting and Refining of Nonferrous Metals
	O	3341	Secondary Smelting and Refining of Nonferrous Metals
B	O	3351-3357	Rolling, Drawing, and Extruding of Nonferrous
B	O	3363-3369	Nonferrous Foundries (Castings)
	O	3398, 3399	Miscellaneous Primary Metal Products
		Sector G: Metal Mining (Ore Mining and Dressing)	
B,C	O	1011	Iron Ores
B,C	O	1021	Copper Ores
B,C	O	1031	Lead and Zinc Ores
B,C	O	1041, 1044	Gold and Silver Ores
B,C	O	1061	Ferroalloy Ores, Except Vanadium
B,C	O	1081	Metal Mining Services
B,C	O	1094, 1099	Miscellaneous Metal Ores
		Sector H: Coal Mines and Coal Mining Related Facilities	
		Sector I: Oil and Gas Extraction and Refining	
B	O	1311	Crude Petroleum and Natural Gas
B	O	1321	Natural Gas Liquids
B	O	1381-1389	Oil and Gas Field Services
		Sector J: Mineral Mining and Dressing	
B	O	1411	Dimension Stone
B,C	●	1422-1429	Crushed and Broken Stone, Including Rip Rap
B,C	O	1442, 1446	Sand and Gravel
	O	1455, 1459	Clay, Ceramic, and Refractory Materials
	O	1474-1479	Chemical and Fertilizer Mineral Mining
B	O	1481	Nonmetallic Minerals Services, Except Fuels
B	O	1499	Miscellaneous Nonmetallic Minerals, Except Fuels
		Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities	
B,C	O	HZ	Hazardous Waste Treatment, Storage or Disposal
		Sector L: Land Fills and Land Application Sites	
B,C	O	LF	Landfills, Land Application Sites, and Open Dumps
		Sector M: Automobile Salvage Yards	
B	O	5015	Automobile Salvage Yards
		Sector N: Scrap Recycling Facilities	
	O	5093 N-1	Scrap Recycling Facilities. Source Separated Recycling Only
B	O	5093 N-2	Mixed Waste Stream of Non-Recyclable & Recyclable Wastes
B	O	5093 N-3	Scrap and Waste Recycling (Non-Liquid Wastes)
B,C	O	5093 N-4	Facilities With A Shredder
B	O	5093 N-5	Reclaiming & Recycling of Liquid Wastes
B	O	4499 (limited to list) N-6	Dismantling Ships, Marine Salvaging, and Marine Wrecking - Ships for Scrap

Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
		Sector O: Steam Electric Generating Facilities	
B,C	○	SE	Steam Electric Generating Facilities
		Sector P: Land Transportation and Warehousing	
B	○	4011, 4013	Railroad Transportation
B	○	4111-4173	Local and Highway Passenger Transportation
B	○	4212-4231	Motor Freight Transportation and Warehousing
B	○	4311	United States Postal Service
B	○	5171	Petroleum Bulk Stations and Terminals
		Sector Q: Water Transportation	
B	○	4412-4499 (except 4499 as specified in Sector N)	Water Transportation
		Sector R: Ship and Boat Building or Repairing Yards	
	○	3731, 3732	Ship and Boat Building or Repair Yards
		Sector S: Air Transportation	
B	○	4512-4581	Air Transportation Facilities
		Sector T: Treatment Works	
B	○	TW	Treatment Works
		Sector U: Food and Kindred Products	
	○	2011-2015	Meat Products
	○	2021-2026	Dairy Products
	○	2032-2038	Canned, Frozen and Preserved Fruits, Vegetables and Food Specialties
B	○	2041-2048	Grain Mill Products
	○	2051-2053	Bakery Products
	○	2061-2068	Sugar and Confectionery Products
B	○	2074-2079	Fats and Oils
	○	2082-2087	Beverages
	○	2091-2099	Miscellaneous Food Preparations and Kindred Products
	○	2111-2141	Tobacco Products
		Sector V: Textile Mills, Apparel, and Other Fabric Product Manufacturing, Leather and Leather Pruducts	
	○	2211-2299	Textile Mill Products
	○	2311-2399	Apparel and Other Finished Products Made From Fabrics and Similiar Materials
	○	3131-3199 (except 3111- see sector Z)	Leather and Leather Products, except Leather Tanning and Finishing
		Sector W: Furniture and Fixtures	
	○	2434	Wood Kitchen Cabinets
	○	2511-2599	Furniture and Fixtures
		Sector X: Printing and Publishing	
	○	2711-2796	Printing, Publishing, and Allied Industries

Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
		Sector Y: Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries	
B	O	3011	Tires and Inner Tubes
B	O	3021	Rubber and Plastics Footwear
B	O	3052, 3053	Gaskets, Packing, and Sealing Devices and rubber and Plastics Hose and Belting
B	O	3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified
	O	3081-3089	Miscellaneous Plastics Products
	O	3931	Musical Instruments
	O	3942-3949	Dolls, Toys, Games and Sporting and Athletic Goods
	O	3951-3955	Pens, Pencils, and Other Artists' Materials
	O	3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal
	O	3991-3999	Miscellaneous Manufacturing Industries
		Sector Z: Leather Tanning and Finishing	
B	O	3111	Leather Tanning, Currying and Finishing
		Sector AA: Fabricated Metal Products	
B	O	3411-3499	Fabricated Metal Products, Except Machinery and Transportation Equipment
B	O	3911-3915	Jewelry, Silverware, and Plated Ware
		Sector AB: Transportation Equipment, Industrial or Commercial Machinery	
	O	3511-3599 (except 3571-3579 see Sector AC)	Industrial and Commercial Machinery (Except Computer and Office Equipment)
	O	3711-3799 (except 3731 & 3732 see Sector R)	Transportation Equipment (Except Ship and Boat Building and Repairing)
		Sector AC: Electronic, Electrical, Photographic, and Optical Goods	
B	O	3571-3579	Computer and Office Equipment
B	O	3612-3699	Electronic, Electrical Equipment and Components, Except Computer Equipment
B	O	3812-3873	Measuring, Analyzing and Controlling Instrument; Photographic and Optical Goods
		Sector AD & AE: Non-Classified Facilities/Storm Water Discharges Designated By the Board As Requiring Permits	
B	O	Sector AD	Other Storm Water Discharges Designated By the Department As Needing a Permit or Any Facility Discharging Storm Water Associated With Industrial Activity Not Described By Any of Sectors A-AC. Note: Facilities may not elect to be covered under Sector AD. Only the Department may assign a facility to Sector AD.
B	O	Sector AE	

Notes: B - Benchmark Monitoring Required
C - Compliance Monitoring for Point Source Category Effluent Limitations

10. For each stormwater discharge associated with industrial activity at your facility identify the outfall number (e.g., 001, 002, etc.); the four digit Standard Industrial Classification (SIC) codes, Section N Subsector, or 2-letter Industrial Activity Codes that best represent the principal products or services rendered by the facility for that drainage area; and the acreage of industrial activity exposed to stormwater for each outfall (round to nearest tenth of an acre):

	Outfall No.	Industrial Activities (SIC or 2-letter Codes) A	N	B	N	C	N	Acreage
1	001	1442						43.7
2								
3								
4								
5								
6								
7								
8								
9								
							Total Acreage	43.7

(Note: SIC information can be obtained at the following web sites: http://www.osha.gov/pls/imis/sicsearch.html and http://www.softshare.com/tables/sic/. The 2-letter Industrial Activity Codes are: **HZ** - hazardous waste treatment, storage or disposal facilities; **LF** - landfills/disposal facilities that receive or have received any industrial waste; **SE** - steam electric power generating facilities; or **TW** - treatment works for treating domestic sewage.)

11. Does this facility have coal piles that are exposed to precipitation? ..... ○ Yes ● No

12. Does this facility discharge have salt piles that are exposed to precipitation? ..... ○ Yes ● No

13. Does this facility discharge stormwater from secondary containment areas for liquid bulk storage or transfer areas? ..... ○ Yes ● No

14. Is the facility subject to any of the following EPA Point Source Category Effluent Limitations?

- Runoff from material storage piles at cement manufacturing facilities (40 CFR Part 411 Subpart C)? ○ Yes ● No
  If Yes, list Outfall numbers.

- Contaminated runoff from phosphate fertilizer manufacturing facilities (40 CFR Part 418 Subpart A)? ..... ○ Yes ● No
  If Yes, list Outfall numbers.

- Coal Pile runoff at steam electric power generating facilities (40 CFR Part 423)? ..... ○ Yes ● No
  If Yes, list Outfall numbers.

- Discharges resulting from spraydown or intentional wetting of logs at wet deck storage areas (40 CFR Part 429 Subpart I)? ..... ○ Yes ● No

  If Yes, list Outfall numbers.

- Mine dewatering discharges at crushed stone, construction sand and gravel, and industrial sand mines (40 CFR Part 436)? ..... ● Yes ○ No

  If Yes, list Outfall numbers.

001						

- Runoff from asphalt emulsion facilities (40 CFR Part 443 Subpart A)? ..... ○ Yes ● No

  If Yes, list Outfall numbers.

- Runoff from landfills (40 CFR 445 Subpart A and B)? ..... ○ Yes ● No

  If Yes, list Outfall numbers.

Certification

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 inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of 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.

DAVID — O/O Signature First Name (please print or type)

J — MI

Date

MAHAR — O/O Signature Last Name (please print or type)

Signature

Appendix C

USEPS Stormwater Fact Sheets for Sector J

INDUSTRIAL STORMWATER

FACT SHEET SERIES

Sector J: Mineral Mining and Processing Facilities

U.S. EPA Office of Water
EPA-833-F-06-025
December 2006

What is the NPDES stormwater permitting program for industrial activity?

Activities, such as material handling and storage, equipment maintenance and cleaning, industrial processing or other operations that occur at industrial facilities are often exposed to stormwater. The runoff from these areas may discharge pollutants directly into nearby waterbodies or indirectly via storm sewer systems, thereby degrading water quality.

In 1990, the U.S. Environmental Protection Agency (EPA) developed permitting regulations under the National Pollutant Discharge Elimination System (NPDES) to control stormwater discharges associated with eleven categories of industrial activity. As a result, NPDES permitting authorities, which may be either EPA or a state environmental agency, issue stormwater permits to control runoff from these industrial facilities.

What types of industrial facilities are required to obtain permit coverage?

This fact sheet specifically discusses stormwater discharges that have been exposed to significant materials from active and inactive mineral mining and processing facilities as defined by Standard Industrial Classification (SIC) Major Group 14. Facilities and products in this group fall under the following categories, all of which require coverage under an industrial stormwater permit:

- Potash, Soda, and Borate Minerals (SIC Code 1474)
- Phosphate Rock (SIC Code 1475)
- Chemical and Fertilizer Mineral Mining (SIC Code 1479)
- Dimension Stone (SIC Code 1411)
- Crushed and Broken Limestone (SIC Code 1422)
- Crushed and Broken Granite (SIC Code 1423)
- Crushed and Broken Stone (SIC Code 1429)
- Construction Sand and Gravel (SIC Code 1442)
- Industrial Sand and Gravel (SIC Code 1446)
- Kaolin and Ball Clay (SIC Code 1455)
- Clay, Ceramic, and Refractory Minerals (SIC Code 1459)
- Miscellaneous Nonmetallic Minerals, Except Fuels (SIC Code 1499).

Contact your permitting authority for any additional requirements or limitations, as industrial stormwater permit coverage may or may not cover or be required for certain discharges from mineral mining and processing facilities.

What does an industrial stormwater permit require?

Common requirements for coverage under an industrial stormwater permit include development of a written stormwater pollution prevention plan (SWPPP), implementation of control measures, and submittal of a request for permit coverage, usually referred to as the Notice of Intent or NOI. The SWPPP is a written assessment of potential sources of pollutants in stormwater runoff and control measures that will be implemented at your facility to minimize the discharge of these pollutants in runoff from the site. These control measures include site-specific best management practices (BMPs), maintenance plans, inspections, employee training, and reporting. The procedures detailed in the SWPPP must be implemented by the facility and updated as necessary, with a copy of the SWPPP kept on-site. The industrial stormwater permit also requires collection of visual, analytical, and/or compliance monitoring data to determine the effectiveness of implemented BMPs. For more information on EPA's industrial stormwater permit and links to State stormwater permits, go to **www.epa.gov/npdes/stormwater** and click on "Industrial Activity."

What pollutants are associated with activities at my facility?

Pollutants conveyed in stormwater discharges from active and inactive mineral mining and processing facilities will vary. There are a number of factors that influence to what extent industrial activities and significant materials can affect water quality.

- Geographic location
- Hydrogeology
- Topography
- Mineralogy of the extracted resource and the surrounding rock
- How the mineral was extracted (e.g., quarrying/open face, dredging, solution, or underground mining operations)
- Type of ground cover (e.g., vegetation, crushed stone, or dirt)
- Outdoor activities (e.g., material storage, loading/unloading, vehicle maintenance)
- Size of the operation
- Type, duration, and intensity of precipitation events

The activities, pollutant sources, and pollutants detailed in Table 1 are commonly found at mineral mining and processing facilities.

Table 1. Common Activities, Pollutant Sources, and Associated Pollutants at Mineral Mining and Processing Facilities

Activity	Pollutant Source	Pollutant
Site Preparation	Road construction	Dust, total suspended solids (TSS), total dissolved solids (TDS), turbidity
	Removal of overburden	
	Removal of waste rock to expose the mineral body	
Mineral Extraction	Blasting activities	Dust, TSS
Mineral Processing Activities	Rock sorting	Dust, TSS, TDS, turbidity, fines
	Rock crushing	Dust, TSS, TDS, turbidity, fines
	Rock washing	TSS, TDS, turbidity, pH
	Raw material storage	Dust, TSS, TDS, turbidity
	Waste rock storage	Dust, TSS, TDS, turbidity, pH
	Raw material loading	Dust, TSS, TDS, turbidity
	Processing materials unloading	Diesel/gas fuel, oil, lime
	Raw or waste material transportation	Dust, TSS, TDS, turbidity

Table 1. Common Activities, Pollutant Sources, and Associated Pollutants at Mineral Mining and Processing Facilities (continued)

Activity	Pollutant Source	Pollutant
Other Activities	Sedimentation pond upsets	TSS, TDS, turbidity, pH
	Sedimentation pond sludge removal and disposal	Dust, TSS, TDS, turbidity, pH
	Air emission control cleaning	Dust, TSS, TDS, turbidity
Equipment/Vehicle Maintenance	Fueling activities	Diesel/gas fuel, oil
	Parts cleaning	Solvents, oil, heavy metals, acid/alkaline wastes
	Waste disposal of oily rags, oil and gas filters, batteries, coolants, degreasers	Oil, heavy metals, solvents, acids
	Fluid replacement including hydraulic fluid, oil, transmission fluid, radiator fluids, and grease	Oil, arsenic, lead, cadmium, chromium, benzene, TCA, TCE, PAHs, solvents
Reclamation Activities	Site preparation for stabilization	Dust, TSS, TDS, turbidity
	Fertilizers	Nitrogen, phosphorus

What BMPs can be used to minimize contact between stormwater and potential pollutants at my facility?

A variety of BMP options may be applicable to eliminate or minimize the presence of pollutants in stormwater discharges from mineral mining and processing facilities. You will likely need to implement a combination or suite of BMPs to address stormwater runoff at your facility. Your first consideration should be for pollution prevention BMPs, which are designed to prevent or minimize pollutants from entering stormwater runoff and/or reduce the volume of stormwater requiring management. Prevention BMPs can include regular cleanup, collection and containment of debris in storage areas, and other housekeeping practices, spill control, and employee training. It may also be necessary to implement treatment BMPs, which are engineered structures, intended to treat stormwater runoff and/or mitigate the effects of increased stormwater runoff peak rate, volume, and velocity. Treatment BMPs are generally more expensive to install and maintain and include oil-water separators, wet ponds, and proprietary filter devices.

Discharges from mining operations are in some ways dissimilar to other types of industrial facilities. Mining facilities are often in remote locations and may operate only seasonally or intermittently, yet need year-round controls because significant materials remain exposed to precipitation when reclamation is not completed. These characteristics make resource intensive end-of-pipe management controls less desirable.

EPA believes that the most appropriate means of stormwater management at mineral mining and processing facilities are source reduction BMPs. Source reduction BMPs are methods by which discharges of contaminants are controlled with little or no required maintenance. Examples of source reduction controls include diversion dikes, vegetative covers, and berms. These practices are typically low in cost and relatively easy to implement. In some instances, more resource intensive treatment BMPs, including sedimentation ponds, may be necessary depending upon the type of discharge, types and concentrations of contaminants, and volume of flow.

BMPs must be selected and implemented to address the following:

Good Housekeeping Practices

Good housekeeping is a practical, cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater. It includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees

in good housekeeping techniques. Common areas where good housekeeping practices should be followed include trash containers and adjacent areas, material storage areas, vehicle and equipment maintenance areas, and loading docks. Good housekeeping practices must include a schedule for regular pickup and disposal of garbage and waste materials and routine inspections of drums, tanks, and containers for leaks and structural conditions. Practices also include containing and covering garbage, waste materials, and debris. Involving employees in routine monitoring of housekeeping practices has proven to be an effective means of ensuring the continued implementation of these measures.

Minimizing Exposure

Where feasible, minimizing exposure of potential pollutant sources to precipitation is an important control option. Minimizing exposure prevents pollutants, including debris, from coming into contact with precipitation and can reduce the need for BMPs to treat contaminated stormwater runoff. It can also prevent debris from being picked up by stormwater and carried into drains and surface waters. Examples of BMPs for exposure minimization include covering materials or activities with temporary structures (e.g., tarps) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Even the simple practice of keeping a dumpster lid closed can be a very effective pollution prevention measure.

Erosion and Sediment Control

BMPs must be selected and implemented to limit erosion on areas of your site that, due to topography, activities, soils, cover, materials, or other factors are likely to experience erosion. Erosion control BMPs such as seeding, mulching, and sodding prevent soil from becoming dislodged and should be considered first. Sediment control BMPs such as silt fences, sediment ponds, and stabilized entrances trap sediment after it has eroded. Sediment control BMPs should be used to back-up erosion control BMPs.

Management of Runoff

Your SWPPP must contain a narrative evaluation of the appropriateness of stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff so as to reduce the discharge of pollutants. Appropriate measures are highly site-specific, but may include, among others, vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures. For mine sites requiring additional sources of water for processing operations, rainfall events and stormwater run-on can be managed for use in dust suppression, processing, and washing activities.

A combination of preventive and treatment BMPs will yield the most effective stormwater management for minimizing the offsite discharge of pollutants via stormwater runoff. Though not specifically outlined in this fact sheet, BMPs must also address preventive maintenance records or logbooks, regular facility inspections, spill prevention and response, and employee training.

All BMPs require regular maintenance to function as intended. Some management measures have simple maintenance requirements, others are quite involved. You must regularly inspect all BMPs to ensure they are operating properly, including during runoff events. As soon as a problem is found, action to resolve it should be initiated immediately.

Implement BMPs, such as those listed below in Table 2 for the control of pollutants at mineral mining and processing facilities, to minimize and prevent the discharge of pollutants in stormwater. Identifying weaknesses in current facility practices will aid the permittee in determining appropriate BMPs that will achieve a reduction in pollutant loadings. BMPs listed in Table 2 are broadly applicable to mineral mining and processing facilities; however, this is not a complete list and you are recommended to consult with regulatory agencies or a stormwater engineer/consultant to identify appropriate BMPs for your facility.

Table 2. BMPs for Potential Pollutant Sources at Mineral Mining and Processing Facilities

Pollutant Source	BMPs
Site preparation: General	❑ Install temporary or permanent discharge diversions to prevent uncontaminated (or less contaminated) flows from contacting sources of pollutants. Examples of BMPs include: - Install dikes, curbs, and berms for discharge diversions. - Use check dams, rock outlet protection, level spreaders, stream alternation and drop structures for runoff dispersion. ❑ Install temporary or permanent diversions to direct contaminated flows to sediment ponds or other treatment facilities. Examples of BMPs include: - Install conveyance systems such as channels, gutters, culverts, rolling dips and road sloping, and/or roadway water deflectors. - Install gabions, riprap, native rock retaining walls, straw bale barriers, sediment traps/catch basins, and vegetated buffer strips for sediment control and collection.
Site preparation: Haul and access roads	❑ Construction of haul roads should be supplemented by BMPs that divert runoff from road surfaces, minimize erosion, and direct flow to appropriate channels for discharge to treatment areas. Examples of BMPs include: - Install dikes, curbs, and berms for discharge diversions. - Install conveyance systems such as channels, gutters, culverts, rolling dips and road sloping, and/or roadway water deflectors. - Use check dams, rock outlet protection, level spreaders, stream alternation and drop structures for runoff dispersion. - Install gabions, riprap, native rock retaining walls, straw bale barriers, sediment traps/catch basins, and vegetated buffer strips for sediment control and collection. - Keep as much vegetation as possible when building roads and seed as necessary. Stabilize soil via willow cutting establishment. ❑ Place as far as possible from natural drainage areas, lakes, ponds, wetlands, or floodplains ❑ Width and grade of roads should be minimal and should be designed to match the natural contours of the area. ❑ Frequently inspect all stabilization and structural erosion control measures and perform all necessary maintenance and repairs.
Mineral extraction: Pits/quarries or underground mines	❑ Install dikes, curbs, and berms for discharge diversions. ❑ Install conveyance systems such as channels and gutters. ❑ Use serrated slopes, benched slopes, contouring, and stream alteration to direct uncontaminated discharges away from a pit or quarry. ❑ Install sediment settling ponds, straw bale barrier, and siltation berms. ❑ Keep as much vegetation as possible when excavating and seed as necessary to minimize exposed soils.
Mineral extraction and processing: Overburden, waste rock, and raw material piles	❑ Install dikes, curbs, and berms for discharge diversions. ❑ Install conveyance systems such as channels and gutters. ❑ Overburden, topsoil, waste rock, raw material, or intermediate and final product stockpiles should be located away from surface waters and other sources of water, as well as geologically unstable areas. ❑ Use serrated slopes, benched slopes, contouring, and stream alteration around piles for sediment control and collection. ❑ Install plastic matting, plastic netting, erosion control blankets, mulch straw, compaction, sediment/settling ponds, silt fences, and siltation berms for sediment control and collection.

Table 2. BMPs for Potential Pollutant Sources at Mineral Mining and Processing Facilities (continued)

Pollutant Source	BMPs
Mineral extraction and processing: Overburden, waste rock, and raw material piles (continued)	❑ Stabilize and recontour (if necessary) piles. ❑ Vegetate as many piles as possible (involves topsoiling, seedbed preparation, and/or seeding).
Reclamation	❑ Install dikes, curbs, and berms for discharge diversions. ❑ Install conveyance systems such as channels and gutters. ❑ Use check dams, rock outlet protection, level spreaders, stream alternation, drop structures, serrated slopes, benched slopes, contouring, and stream alteration for runoff dispersion. ❑ Install gabions, riprap, native rock retaining walls, straw bale barriers, sediment traps/catch basins, biotechnical stabilization, silt fences, siltation berms, brush sediment barriers and vegetated buffer strips for sediment control and collection. ❑ Recontouring and vegetation should be performed to stabilize soils and prevent erosion in mined out portions or inactive areas of the site as active mining moves to new areas (includes topsoiling, seedbed preparation, seeding, willow cutting establishment). ❑ If a quarry is being converted into a reservoir or recreational area, disturbed areas above the quarry rim must still be reclaimed. ❑ Use overburden and topsoil stockpiles to fill in a pit or quarry (when practical).
Equipment/vehicle maintenance	❑ Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. ❑ If operations are uncovered, perform them on a concrete pad that is impervious and contained. Use berms, curbs, or similar means to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area. ❑ Collect the stormwater runoff from the cleaning area and provide treatment or recycling. Discharge vehicle wash or rinse water to the sanitary sewer (if available and allowed by sewer authority), wastewater treatment, a land application site, or recycle on-site. DO NOT discharge washwater to a storm drain or to surface water. ❑ Eliminate floor drains that are connected to the storm or sanitary sewer; if necessary, install a sump that is pumped regularly. Collected wastes should be properly treated or disposed of by a licensed waste hauler. ❑ Use drip pans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. ❑ Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled. ❑ Promptly transfer used fluids to the proper container; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers. ❑ Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers properly. ❑ Store batteries and other significant materials inside. ❑ Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries). ❑ Maintain an organized inventory of materials. ❑ Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials. ❑ Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents for dry cleanup whenever possible. ❑ Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system.

Table 2. BMPs for Potential Pollutant Sources at Mineral Mining and Processing Facilities (continued)

Pollutant Source	BMPs
Equipment/vehicle maintenance (continued)	❑ Clean without using liquid cleaners whenever possible. ❑ Do all cleaning at a centralized station so the solvents stay in one area. ❑ If parts are dipped in liquid, remove them slowly to avoid spills. ❑ Do not pour liquid waste into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections. ❑ Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of oil leaks/spills. ❑ Check vehicles closely for leaks and use pans to collect fluid when leaks occur. ❑ Inspect the maintenance area regularly for proper implementation of control measures. ❑ Train employees on proper waste control and disposal procedures.
Fueling activities	❑ Conduct fueling operations (including the transfer of fuel from tank trucks) on an impervious or contained pad or under a roof or canopy where possible. Covering should extend beyond spill containment pad to prevent rain from entering. ❑ When fueling in uncovered area, use a concrete pad (asphalt is not chemically resistant to the fuels being handled). ❑ Use drip pans where leaks or spills of fuel can occur and where making and breaking hose connections. ❑ Use fueling hoses with check valves to prevent hose drainage after filling. ❑ Use spill and overflow protection devices. ❑ Keep spill cleanup material readily available. Clean up spills and leaks immediately. ❑ Minimize/eliminate run-on into fueling areas with diversion dikes, berms, curbing, surface grading or other equivalent measures. ❑ Collect stormwater runoff and provide treatment or recycling. ❑ Use dry cleanup methods for fuel area rather than hosing down the fuel area. Follow procedures for sweeping up absorbents as soon as spilled substances have been absorbed. ❑ Perform inspection and preventive maintenance on fuel storage tanks to detect potential leaks before they occur. ❑ Inspect the fueling area to detect problems before they occur. ❑ Train personnel on proper fueling procedures. ❑ Provide curbing or posts around fuel pumps to prevent collisions from vehicles. ❑ Discourage "topping off" of fuel tanks.

What if activities and materials at my facility are not exposed to precipitation?

The industrial stormwater program requires permit coverage for a number of specified types of industrial activities. However, when a facility is able to prevent the exposure of ALL relevant activities and materials to precipitation, it may be eligible to claim no exposure and qualify for a waiver from permit coverage.

If you are regulated under the industrial permitting program, you must either obtain permit coverage or submit a no exposure certification form, if available. Check with your permitting authority for additional information as not every permitting authority program provides no exposure exemptions.

Where do I get more information?

For additional information on the industrial stormwater program see **www.epa.gov/npdes/stormwater/msgp.**

A list of names and telephone numbers for each EPA Region or state NPDES permitting authority can be found at **www.epa.gov/npdes/stormwatercontacts.**

References

Information contained in this Fact Sheet was compiled from EPA's past and current Multi-Sector General Permits and from the following sources:

- Idaho Department of Environmental Quality, Air Quality Division. "Air Quality in Idaho: Supplemental Fugitive Dust Control Information."
  www.deq.idaho.gov/air/prog_issues/pollutants/dust_control_plan.pdf
- Idaho Department of Lands in conjunction with Other State and Federal Agencies. Best Management Practices for Mining in Idaho.
  www.idl.idaho.gov/Bureau/Minerals/bmp_manual1992/bmp_index.htm
- Orange County, California, Watershed & Coastal Resources Division. "Stormwater program."
  www.ocwatersheds.com/StormWater/documents_bmp_existing_development.asp#ind
- Pierce County Public Works and Utilities. "Best Management Practices for Commercial and Industrial Activities."
  www.co.pierce.wa.us/xml/services/home/environ/water/cip/swmmanual/stakeholders/SWMM%20V4-C4_1.pdf
- U.S. EPA. 1992. Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. EPA 832-R-92-006.
  www.epa.gov/npdes/stormwater
- U.S. EPA, Office of Science and Technology. 1999. Preliminary Data Summary of Urban Stormwater Best Management Practices. EPA-821-R-99-012.
  www.epa.gov/OST/stormwater/
- U.S. EPA, Office of Wastewater Management. *NPDES Stormwater Multi-Sector General Permit for Industrial Activities (MSGP).*
  www.epa.gov/npdes/stormwater/msgp

Appendix D

Spill Reporting Form

Spill Report Record

Procedures for notification of the appropriate facility personnel, emergency response agencies, and regulatory agencies. Any spills must be reported in accordance with 6 NYCRR Part 750-2.7; this facility is not required to have a SPCC Plan.

The facility has not experienced any reportable spills or leaks in an area that is exposed to precipitation, or conveyance at the facility for a period of at least **three years** prior to the 2012 MSGP revision, December 31, 2012.

Site Name: _____

Spill Date: _____ Initials of Reporter: _____

Location: _____

Description and Corrective Actions Taken: _____

_____

_____

Spill Date: _____ Initials of Reporter: _____

Location: _____

Description and Corrective Actions Taken: _____

_____

_____

Spill Date: _____ Initials of Reporter: _____

Location: _____

Description and Corrective Actions Taken: _____

_____

_____

Appendix E

Sector J
Erosion and Sentiment Control Requirements

Blue Book Lite "Common Erosion and Sediment Control Standards"

Erosion and Sediment Control Plans

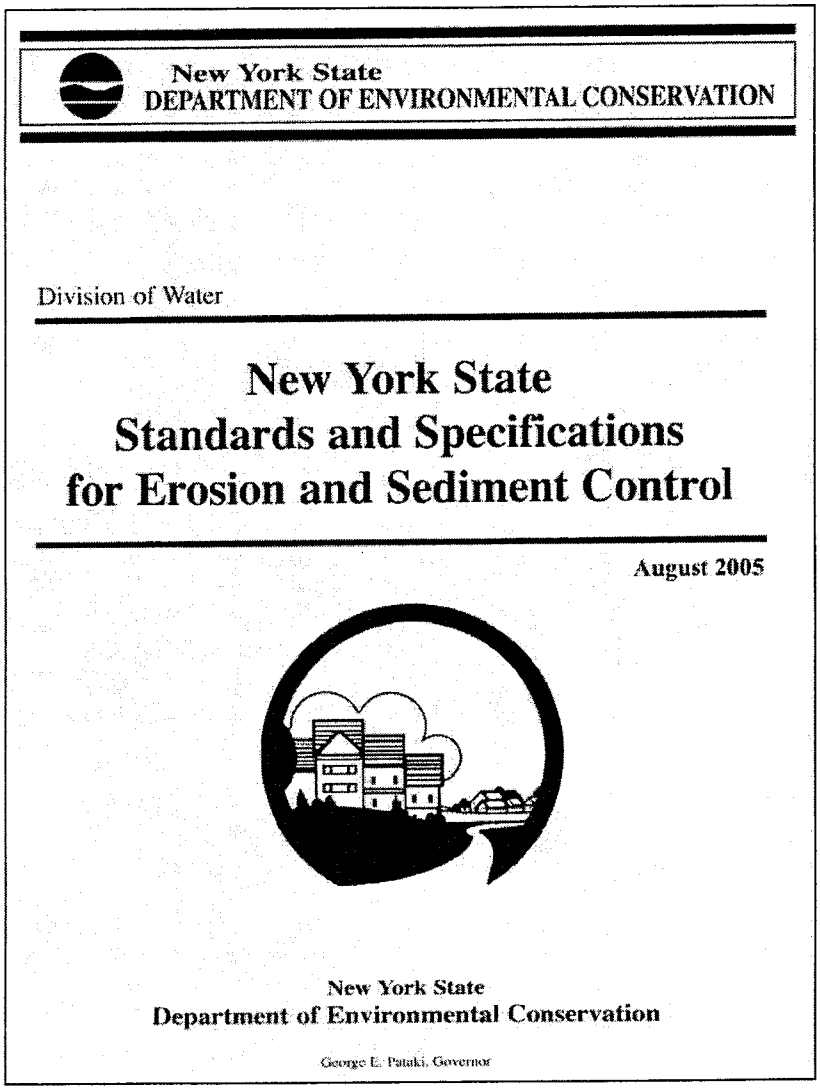
During mining activities that will result in a soil disturbance with the potential for stormwater discharge to surface waters of the State, an erosion and sediment control (ESC) plan will be developed. The ESC shall include details of temporary and permanent structural and vegetative measures that will be used to control erosion and sedimentation. The design, installation, inspection, maintenance and repair of erosion and sediment controls shall conform to the New York Standards and Specifications for Erosion and Sediment Control, 2005 and New York State Revegetation Procedures Manual: Surface Mining Reclamation, or their equivalents.

ESC Inspections: During the time of soil disturbance, a "qualified person" will conduct site inspections in the affected area as follows:

- All erosion and sediment control practices in areas with potential for stormwater discharge to surface water, to ensure integrity and effectiveness to ensure that practices are constructed as indicated in the SWPPP.
- All areas of disturbance in areas with potential for stormwater discharge to surface water that have not achieved final stabilization;
- All points of discharge to natural surface water bodies located within, or immediately adjacent to, the property boundaries of the mine.
- All points of discharge.

Required ESC Inspection Frequency: For sites where soil disturbance activities are on-going, the qualified personnel shall conduct a site inspection at least once every seven (7) calendar days. Where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization has been applied to all disturbed areas or if runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen), the qualified personnel shall conduct a site inspection at least once every thirty (30) calendar days. ESC Inspection Reports Form can be found in the appendixes of the erosion control plan.

BLUE-BOOK "LITE"



Common Erosion and Sediment Control Standards For Code Municipal Enforcement Officers and Inspectors

For a complete copy of the Blue Book, please visit the NYS DEC website at:
http://www.dec.ny.gov/chemical/29066.html

New York State Department of Environmental Conservation

For use at *Construction Site Stormwater Inspections for Code Enforcement Officers - Part 2*

NYS Department of Environmental Conservation Endorsed Stormwater Training

NYS Department of State Code Enforcement Educational Program #49-5653

June 2007

Blue-Book "Lite"

Table of Contents

The *Blue Book "Lite"* is a compilation of the more commonly used erosion and sediment control practices from the unabridged *New York State Standards and Specifications for Erosion and Sediment Control*, the so-called "Blue Book." These were compiled for training purposes because construction stormwater site inspectors need to be familiar with the standards and specifications from the "Blue Book," and these would be more frequently encountered during inspections. The numbers in the Table (left column) represent the pages where the content (right column) would be found in the "Blue Book." Go to http://www.dec.ny.gov/chemical/29066.html to view or download the full document on the New York State Department of Environmental Conservation website.

The following sections from the August 2005 "Blue Book" prepared by:

Introduction and Sections 1, 2 and 5 -
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INTRODUCTION

Purpose

The purpose of this manual is to provide minimum standards and specifications for meeting criteria set forth by the New York State Department of Environmental Conservation (NYS DEC) for stormwater discharges associated with construction activity. The standards and specifications provide criteria on minimizing erosion and sediment impacts from construction activity involving soil disturbance. They show how to use soil, water, plants, and products to protect the quality of our environment. These standards and specifications were developed in cooperation with the USDA Natural Resources Conservation Service, New York State Soil and Water Conservation Committee (NYSSWCC), NYS DEC and other state and local agencies for use by planners, design engineers, developers, contractors, landscape architects, property owners, and resource managers. Proper use of these standards will protect the waters of the state from sediment loads during runoff events.

Scope and Authority

The standards and specifications apply to lands within New York State where housing, industrial, institutional, recreational, or highway construction, and other land disturbances are occurring or imminent. They are statewide in scope and, in some cases, are somewhat generalized due to variations in climate, topography, geology, soils, and plant requirements. Feasible ways to minimize erosion and sedimentation are varied and complex. Following these standards and specifications is presumed to be in compliance with the SPDES general permit for construction activities. Alternative methods may be explored on a case specific basis and shall be discussed with NYS DEC regional staff.

The Environmental Protection Agency delegated stormwater responsibility for the National Pollutant Discharge Elimination System (NPDES) Permit to New York on October 1, 1992. New York State issued its first General Permit for stormwater discharges from construction activities on August 1, 1993. This was issued pursuant to Article 17, Titles 7, 8 and Article 70 of Environmental Conservation Law. At a minimum, an erosion and sediment control plan must be prepared for any construction activity that disturbs one or more acres.

Erosion and Sediment Hazards Associated with Development

Many people may be adversely affected by development on relatively small areas of land. Uncontrolled erosion and sediment from these areas may cause considerable economic damage to individuals and society in general. Stream pollution and damages to public facilities and private homes are examples. Hazards associated with land disturbance include:

1. A large increase of soil exposed to erosion from wind and water;
2. Increased water runoff, soil movement, sediment accumulation and peak flows caused by:
   a. Removal of plant cover;
   b. A decrease in the area of soil which can absorb water because of construction of streets, buildings, sidewalks, and parking lots;
   c. Changes in drainage areas caused by grading operations, diversions, and streets;
   d. Changes in volume and duration of water concentrations caused by altering steepness, distance, and surface roughness;
   e. Soil compaction by heavy equipment, which can reduce the water intake of soils as much as 90 percent of the original rate; and,
   f. Prolonged exposure of unprotected sites and disturbed areas to poor weather conditions.
3. Altering the groundwater regime that may adversely affect drainage systems, slope stability, survival of existing vegetation and establishment of new plants;
4. Exposing subsurface materials that are too rocky, too acid, or otherwise unfavorable for establishing plants;
5. Obstructing stream flow with new buildings, dikes, and land fills;
6. Improper timing and sequencing of construction and development activities; and,
7. Abandonment of sites before completion of construction.

How to Use This Manual

The standards and specifications listed in this manual have been developed over time to reduce the impact of soil loss from construction sites to receiving water bodies and adjacent properties. This manual provides designers with details on how to plan a site for erosion and sediment control and how to select, size, and design specific practices to meet these resource protection objectives. The appendices at the end of this manual contain additional information as guidance for site plan design and review, construction implementation, and site inspection. Review and inspection checklists are provided to aid planners and designers in meeting the standards requirements.

BASIC PRINCIPLES OF EROSION AND SEDIMENT CONTROL

The Erosion and Sedimentation Processes

The standards, specifications, and planning guidelines presented in this document are intended to be utilized when development activities change the natural topography and vegetative cover of an area. Erosion and sediment control plans must be designed and constructed to minimize erosion and sediment problems associated with soil disturbance. To understand how erosion and sediment rates are increased requires an understanding of the processes themselves.

Soil erosion is the removal of soil by water, wind, ice, or gravity. This document deals primarily with the types of soil erosion caused by rainfall and surface runoff. Raindrops strike the soil surface at a velocity of approximately 25-30 feet per second and can cause splash erosion. Raindrop erosion causes particles of soil to be detached from the soil mass and splash into the air. After the soil particles are dislodged, they can be transported by surface runoff, which results when the soil becomes too saturated to absorb falling rain or when the rain falls at an intensity greater than the rate at which the water can enter the soil. Scouring of the exposed soil surface by runoff can cause further erosion. Runoff can become concentrated into rivulets or well-defined channels up to several inches deep. This advanced stage is called rill erosion. If rills and grooves remain unrepaired, they may develop into gullies when more concentrated runoff flows downslope.

Sediment deposition occurs when the rate of surface flow is insufficient for the transport of soil particles. The heavier particles, such as sand and gravel, transport less readily than the lighter silt and clay particles. Previously deposited sediment may be suspended by runoff from another storm and transported farther downslope. In this way, sediment is carried intermittently downstream from its upland point of origin.

Factors That Influence Erosion

The erosion potential of a site is determined by five factors; soil erodibility, vegetative cover, topography, climate, and season. Although the factors are interrelated as determinants of erosion potential, they are discussed separately for easy understanding.

1. **Soil Erodibility** – The vulnerability of a soil to erosion is known as erodibility. The soil structure, texture, and percentage of organic matter influence its erodibility. The most erodible soils generally contain high proportions of silt and very fine sand. The presence of clay or organic matter tends to decrease soil erodibility. Clays are sticky and tend to bind soil particles together. Organic matter helps to maintain stable soil structure (aggregates).

2. **Vegetative Cover** – Vegetation protects soil from the erosive forces of raindrop impact and runoff scour in several ways. Vegetation (top growth) shields the soil surface from raindrop impact while the root mass holds soil particles in place. Grass buffer strips can be used to filter sediment from the surface runoff. Grasses also slow the velocity of runoff, and help maintain the infiltration capacity of a soil. The establishment and maintenance of vegetation are the most important factors in minimizing erosion during development.

3. **Topography** – Slope length and steepness greatly influence both the volume and velocity of surface runoff. Long slopes deliver more runoff to the base of slopes and steep slopes increase runoff velocity. Both conditions enhance the potential for erosion to occur.

4. **Climate** – Climate also affects erosion potential in an area. Rainfall characteristics such as frequency, intensity, and duration directly influence the amount of runoff that is generated. As the frequency of rainfall increases, water has less chance to drain through the soil between storms. The soil will remain saturated for longer periods of time and stormwater runoff volume may be potentially greater. Therefore, erosion risks are high where rainfall is frequent, intense, or lengthy.

5. **Season** – Seasonal variation in temperature and rainfall defines periods of high erosion potential during the year. High erosion potential may exist in the spring when the surface soil first thaws and the ground underneath remains frozen. A low intensity rainfall may cause substantial erosion because the frozen subsoil prevents water infiltration. In addition, the erosion potential increases during the summer months due to more frequent, high intensity rainfall.

STEPS IN THE SELECTION AND DESIGN OF CONTROL MEASURES

The following text relates to the planning flow charts on pages 2.6, 2.7 and 2.8.

In the erosion and sediment control process, site designs must be prepared to address erosion control and then sediment control. Erosion control is accomplished by controlling runoff and then stabilizing soil. After erosion control has been planned, sediment control can then be developed.

Step 1: Identify Control Methods—Three basic methods are used to control soil movement on construction sites: runoff control, soil stabilization, and sediment control. **CONTROLLING EROSION SHALL BE THE FIRST LINE OF DEFENSE.** Runoff control and soil stabilization can be used to control erosion. Controlling erosion is very effective for small-disturbed areas such as single lots or small areas of a disturbance.

Sediment control may be necessary on large developments where mass grading is planned, where it is harder or impractical to control erosion, and where sediment particles are relatively large. A minimum of cost for erosion and sediment control is usually accomplished by using a combination of vegetative and structural erosion control and sedimentation control measures.

Step 2: Identify Resources and Potential Problem Areas—Resources need to be identified prior to initiating an ESC plan. These resources include, but are not limited to, receiving waters, tributaries to public water supplies, beaches and other concentrated recreational areas, wetlands, trees, vegetative buffers, steep slopes and cultural resources. Areas where erosion is to be controlled will usually fall into categories of slopes, graded areas or drainage ways. Slopes include graded rights-of-way, stockpile areas, and all cut or fill slopes. Graded areas include all stripped areas other than slopes. Drainage ways are areas where concentrations of water flow naturally or artificially, and the potential for gully erosion is high. Problem areas where sediment is to be controlled fall into categories of large or small drainage areas. Small areas are usually 1 acre or less while large areas are greater than 1 acre.

Step 3: Identify Required Strategy—The third step in erosion and sediment control planning is to follow the planning matrix from the problem area to the strategy that can be taken to solve the problem. Strategies can be used individually or in combination. For example, if there is a cut slope to be protected from erosion, the strategies may be to protect the ground surface, divert water from the slope, or shorten it. Any combination of these strategies can be used. If no rainfall except that which falls on the slope has the potential to cause erosion, and if the slope is relatively short, protecting the soil surface is often all that is required to solve the problem.

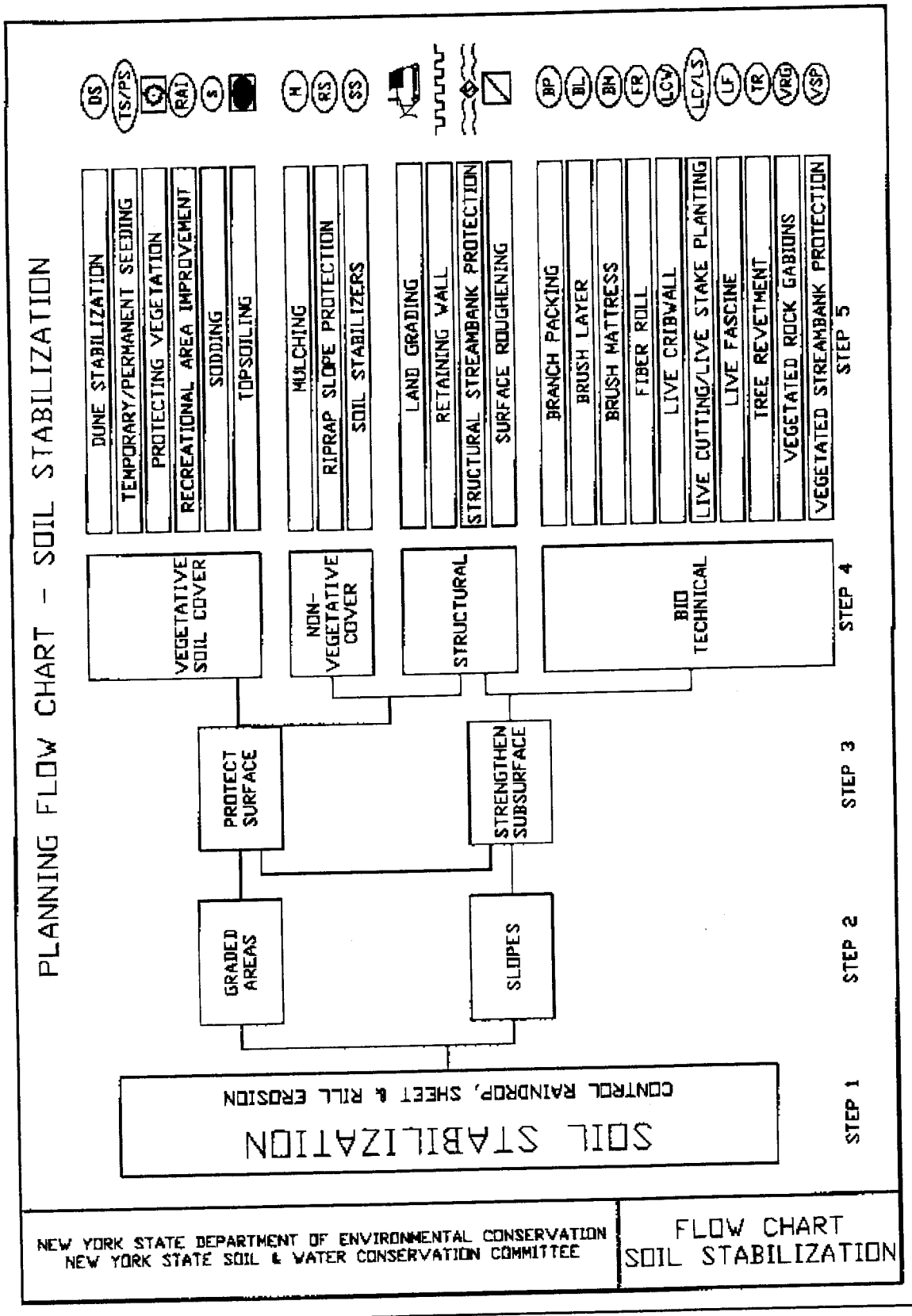
Step 4: Identify Control Measure Group—Once required strategies are identified, the planning flow chart leads to the group or groups of control measures that will accomplish one strategy. Control measures within each group have similar purpose, scope, application, design, criteria, standard plans, and construction specifications. Therefore, any measure within a group may solve the problem in question.

Step 5: Design Specific Control Measures—The final step in erosion and sediment control planning is accomplished by completing final design. This involves applying any control measure within a group to solve the specific erosion and sediment control problem. From descriptions given to the right of each control measure in the ESC planning matrix (Table 2.1), the one measure which is most economical, practical, efficient, and adaptable to the site should be chosen.

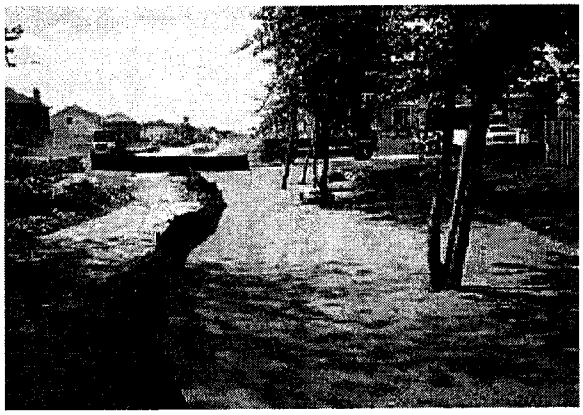
Step 6: Winter Operations—If construction activities continue during winter , access points should be enlarged and stabilized to provide for snow stockpiling. In addition, a snow management plan should be prepared with adequate storage and control of meltwater. A minimum 25 foot buffer shall be maintained from perimeter controls such as silt fence. In high resource protection areas, silt fence shall be replaced with perimeter dikes, swales, or other practices resistant to the forces of snow loads. Keep drainage structures open and free of snow and ice dams. Inspection and maintenance are necessary to ensure the function of these practices during runoff events.

Once the specific control measure has been selected, the plan key symbol given in the flow chart must be placed on the erosion and sediment control site plan to show where the control measure will be used. Standardized design, plan, and construction specification sheets must then be completed for each control measure. This completes the planning for erosion control and soil stabilization as part of the total natural resource plan.

Figure 2.2
Planning Flow Chart—Soil Stabilization



STANDARD AND SPECIFICATIONS FOR PERMANENT CRITICAL AREA PLANTINGS



Definition

Establishing grasses with other forbs and/or shrubs to provide perennial vegetative cover on disturbed, denuded, slopes subject to erosion.

Purpose

To reduce erosion and sediment transport.

Conditions Where Practice Applies

This practice applies to all disturbed areas void of, or having insufficient, cover to prevent erosion and sediment transport. See additional standards for special situations such as sand dunes and sand and gravel pits.

Criteria

All water control measures will be installed as needed prior to final grading and seedbed preparation. Any severely compacted sections will require chiseling or disking to provide an adequate rooting zone, to a minimum depth of 12". The seedbed must be prepared to allow good soil to seed contact, with the soil not too soft and not too compact. Adequate soil moisture must be present to accomplish this. If surface is powder dry or sticky wet, postpone operations until moisture changes to a favorable condition. If seeding is accomplished within 24 hours of final grading, additional scarification is generally not needed, especially on ditch or stream banks. Remove all stones and other debris from the surface that are greater than 4 inches, or that will interfere with future mowing or maintenance.

Soil amendments should be incorporated into the upper 2 inches of soil when feasible. **The soil should be tested to determine the amounts of amendments needed.** Apply ground agricultural limestone to attain a pH of 6.0 in the upper 2 inches of soil. If soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 600 lbs. per acre of 5-10-10 or equivalent. If manure is used, apply a quantity to meet the nutrients of the above fertilizer. This requires an appropriate manure analysis prior to applying to the site. Do not use manure on sites to be planted with birdsfoot trefoil or in the path of concentrated water flow.

Seed mixtures may vary depending on location within the state and time of seeding. Generally, warm season grasses should only be seeded during early spring, April to May. These grasses are primarily used for vegetating excessively drained sands and gravels. See Standard and Specification for Sand and Gravel Mine Reclamation. Other grasses may be seeded any time of the year when the soil is not frozen and is workable. When legumes such as birdsfoot trefoil are included, spring seedings are preferred. See Table 3.1 "Permanent Critical Area Planting Mixture Recommendations" for additional seed mixtures.

General Seed Mix:
[1] add inoculant immediately prior to seeding

	Variety	lbs./acre	lbs/1000 sq. ft.
Birdsfoot trefoil[1] OR	Empire/Pardee	8[2]	0.20
Common white clover[1]	Common	8	0.20
PLUS			
Tall fescue	KY-31/Rebel	20	0.45
PLUS			
Redtop OR	Common	2	0.05
Ryegrass (perennial)	Pennfine/Linn	5	0.10

[2] Mix 4 lbs each of Empire and Pardee OR 4 lbs of Birdsfoot and 4 lbs white clover per acre.

Time of Seeding: The optimum timing for the general seed mixture is early spring. Permanent seedings may be made any time of year if properly mulched and adequate moisture is provided. Late June through early August is not a good time to seed, but may facilitate covering the land without additional disturbance if construction is completed. Portions of the seeding may fail due to drought and heat. These areas may need reseeding in late summer/fall or the following spring.

Method of seeding: Broadcasting, drilling, cultipack type

seeding, or hydroseeding are acceptable methods. Proper soil to seed contact is key to successful seedings.

Mulching: Mulching is essential to obtain a uniform stand of seeded plants. Optimum benefits of mulching new seedings are obtained with the use of small grain straw applied at a rate of 2 tons per acre, and anchored with a netting or tackifier. See the mulch standard and specification for choices and requirements.

Irrigation: Watering may be essential to establish a new seeding when a drought condition occurs shortly after a new seeding emerges. Irrigation is a specialized practice and care must be taken not to exceed the application rate for the soil or subsoil. When disconnecting irrigation pipe, be sure pipes are drained in a safe manor, not creating an erosion concern.

STANDARD AND SPECIFICATIONS FOR MULCHING

Definition

Applying coarse plant residue or chips, or other suitable materials, to cover the soil surface.

Purpose

The primary purpose is to provide initial erosion control while a seeding or shrub planting is establishing. Mulch will conserve moisture and modify the surface soil temperature and reduce fluctuation of both. Mulch will prevent soil surface crusting and aid in weed control. Mulch is also used alone for temporary stabilization in non-growing months.

Conditions Where Practice Applies

On soils subject to erosion and on new seedings and shrub plantings. Mulch is useful on soils with low infiltration rates by retarding runoff.

Criteria

Site preparation prior to mulching requires the installation of necessary erosion control or water management practices and drainage systems.

Slope, grade and smooth the site to fit needs of selected mulch products.

Remove all undesirable stones and other debris to meet the needs of the anticipated land use and maintenance required.

Apply mulch after soil amendments and planting is accomplished or simultaneously if hydroseeding is used.

Select appropriate mulch material and application rate or material needs. Determine local availability.

Select appropriate mulch anchoring material.

NOTE: The best combination for grass/legume establishment is straw (cereal grain) mulch applied at 2 ton/ acre (90 lbs./1000sq.ft.) and anchored with wood fiber mulch (hydromulch) at 500 – 750 lbs./acre (11 – 17 lbs./1000 sq. ft.). The wood fiber mulch must be applied through a hydroseeder immediately after mulching.

Table 3.7
Guide to Mulch Materials, Rates, and Uses

Mulch Material	Quality Standards	per 1000 Sq. Ft.	per Acre	Depth of Application	Remarks
Wood chips or shavings	Air-dried. Free of objectionable coarse material	500-900 lbs.	10-20 tons	2-7"	Used primarily around shrub and tree plantings and recreation trails to inhibit weed competition. Resistant to wind blowing. Decomposes slowly.
Wood fiber cellulose (partly digested wood fibers)	Made from natural wood usually with green dye and dispersing agent	50 lbs.	2,000 lbs.	—	Apply with hydromulcher. No tie down required. Less erosion control provided than 2 tons of hay or straw.
Gravel, Crushed Stone or Slag	Washed; Size 2B or 3A—1 1/2"	9 cu. yds.	405 cu. yds.	3"	Excellent mulch for short slopes and around plants and ornamentals. Use 2B where subject to traffic. (Approximately 2,000 lbs./cu. yd.). Frequently used over filter fabric for better weed control.
Hay or Straw	Air-dried; free of undesirable seeds & coarse materials	90-100 lbs. 2-3 bales	2 tons (100-120 bales)	cover about 90% surface	Use small grain straw where mulch is maintained for more than three months. Subject to wind blowing unless anchored. Most commonly used mulching material. Provides the best micro-environment for germinating seeds.
Jute twisted yarn	Undyed, unbleached plain weave. Warp 78 ends/yd., Weft 41 ends/ yd. 60-90 lbs./roll	48" x 50 yds. or 48" x 75 yds.	—	—	Use without additional mulch. Tie down as per manufacturers specifications. Good for center line of concentrated water flow.
Excelsior wood fiber mats	Interlocking web of excelsior fibers with photodegradable plastic netting	8" x 100" 2-sided plastic, 48" x 180" 1-sided plastic	—	—	Use without additional mulch. Excellent for seeding establishment. Tie down as per manufacturers specifications. Approximately 72 lbs./roll for excelsior with plastic on both sides. Use two sided plastic for centerline of waterways.
Compost	Up to 3" pieces, moderately to highly stable	3-9 cu. yds.	134-402 cu. yds.	1-3"	Coarser textured mulches may be more effective in reducing weed growth and wind erosion.
Straw or coconut fiber, or combination	Photodegradable plastic net on one or two sides	Most are 6.5 ft. x 3.5 ft.	81 rolls	—	Designed to tolerate higher velocity water flow, centerlines of waterways, 60 sq. yds. per roll.

STANDARD AND SPECIFICATIONS FOR STABILIZATION WITH SOD

Definition

Stabilizing silt producing areas by establishing long term stands of grass with sod.

Purpose

To stabilize the soil; reduce damage from sediment and runoff to downstream areas; enhance natural beauty.

Conditions Where Practice Applies

On exposed soils that have a potential for causing off site environmental damage where a quick vegetative cover is desired. Moisture, either applied or natural, is essential to success.

Design Criteria

1. Sod shall be bluegrass or a bluegrass/red fescue mixture or a perennial ryegrass for average sites. (CAUTION: Perennial ryegrass has limited cold tolerance and may winter kill.) Use turf type cultivars of tall fescue for shady, droughty, or otherwise more critical areas. For variety selection, contact Cornell Cooperative Extension Turf Specialist.

2. Sod shall be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/4 inch. Measurement for thickness shall exclude top growth and thatch.

3. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically from a firm grasp on the upper 10 percent of the section.

4. Sod shall be free of weeds and undesirable coarse weedy grasses. Wild native or pasture grass sod shall not be used unless specified.

5. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.

6. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be inspected and approved by the contracting officer or his designated representative prior to its installation.

Site Preparation

Fertilizer and lime application rates shall be determined by soil tests. Under unusual circumstances where there is insufficient time for a complete soil test and the contracting officer agrees, fertilizer and lime materials may be applied in amounts shown in subsection 2 below. Slope land such as to provide good surface water drainage. Avoid depressions or pockets.

1. Prior to sodding, the surface shall be smoothed and cleared of all trash, debris, and of all roots, brush, wire, grade stakes and other objects that would interfere with planting, fertilizing or maintenance operations.

2. **The soil should be tested to determine the amounts of amendments needed.** Where the soil is acid or composed of heavy clays, ground limestone shall be spread to raise the pH to 6.5. If the soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 20 lbs. of 5-10-10 (or equivalent) and mix into the top 3 inches of soil with the required lime for every 1,000 square feet. Soil should be moist prior to sodding. Arrange for temporary storage of sod to keep it shaded and cool.

Sod Installation

1. For the operation of laying, tamping, and irrigating for any areas, sod shall be completed within eight hours. During periods of excessively high temperature, the soil shall be lightly moistened immediately prior to laying the sod.

2. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to, and tightly wedged against, each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots. On sloping areas where erosion may be a problem, sod shall be laid with the long edges parallel to the contour and with staggered joints.

3. Secure the sod by tamping and pegging, or other approved methods. As sodding is completed in any one section, the entire area shall be rolled or tamped to ensure solid contact of roots with the soil surface.

4. Sod shall be watered immediately after rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Keep sod moist for at least two weeks.

Sod Maintenance

1. In the absence of adequate rainfall, watering shall be performed daily, or as often as deemed necessary by the inspector, during the first week and in sufficient quantities to maintain moist soil to a depth of 4 inches. Watering should be done in the morning. Avoid excessive watering during applications.

2. After the first week, sod shall be watered as necessary to maintain adequate moisture and ensure establishment.

3. The first mowing should not be attempted until sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2 and 3 inches unless otherwise specified. Avoid heavy mowing equipment for several weeks to prevent rutting.

4. If the soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply fertilizer three to four weeks after sodding, at a rate of 1 pound nitrogen/1,000 sq.ft. Use a complete fertilizer with a 2-1-1 ratio.

5. Weed Control: Target herbicides for weeds present. Consult current Cornell Pest Control Recommendations for Commercial Turfgrass Management or consult the local office of Cornell Cooperative Extension.

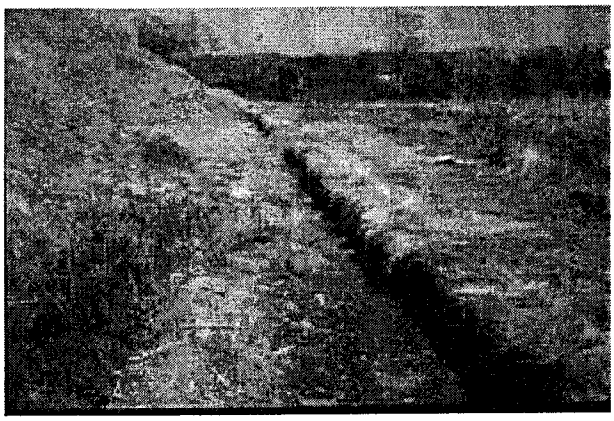
6. Disease Control: Consult the local office of the Cornell Cooperative Extension.

Additional References

1. Home Lawns, Establishment and Maintenance, CCE Information Bulletin 185, Revised November 1994. Cornell University, Ithaca, NY.

2. Installing a Sod Lawn. CCE Suffolk County, NY. Thomas Kowalsick February 1994, Revised January 1999. www.cce.cornell.edu/counties/suffolk/grownet

STANDARD AND SPECIFICATIONS FOR STRAW BALE DIKE



Definition

A temporary barrier of straw, or similar material, used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a bale dike is to reduce runoff velocity and effect deposition of the transported sediment load. Straw bale dikes have an estimated design life of three (3) months.

Conditions Where Practice Applies

The straw bale dike is used where:

1. No other practice is feasible.
2. There is no concentration of water in a channel or other drainage way above the barrier.
3. Erosion would occur in the form of sheet erosion.
4. Length of slope above the straw bale dike does not exceed these limits.

Constructed Slope	Percent Slope	Slope Length (ft.)
2:1	50	25
3:1	33	50
4:1	25	75

Where slope gradient changes through the drainage area, steepness refers to the steepest slope section contributing to the straw bale dike.

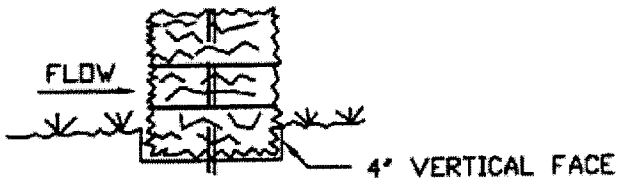
The practice may also be used for a single family lot if the slope is less than 15 percent. The contributing drainage areas in this instance shall be less than one quarter of an acre per 100 feet of fence and the length of slope above the dike shall be less than 200 feet.

Design Criteria

The above table is adequate, in general, for a one-inch rainfall event. Larger storms could cause failure of this practice. Use of this practice in sensitive areas for longer than one month should be specifically designed to store expected runoff. All bales shall be placed on the contour with cut edge of bale adhering to the ground. See Figure 5A.7 on page 5A.18 or details.

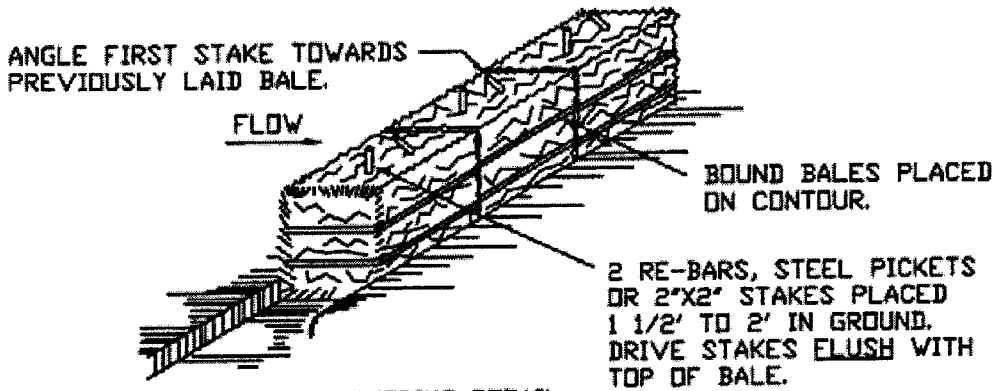
Figure 5A.7
Straw Bale Dike

SYMBOL



BEDDING DETAIL
NOT TO SCALE

DRAINAGE AREA NO MORE THAN 1/4 ACRE PER 100 FEET OF STRAW BALE DIKE FOR SLOPES LESS THAN 25%.



ANCHORING DETAIL
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULLNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

STRAW BALE DIKE

STANDARD AND SPECIFICATIONS FOR SILT FENCE

Definition

A temporary barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a silt fence is to reduce runoff velocity and effect deposition of transported sediment load. Limits imposed by ultraviolet stability of the fabric will dictate the maximum period the silt fence may be used (approximately one year).

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope lengths contributing runoff to a silt fence placed on a slope are:

Slope Steepness	Maximum Length (ft.)
2:1	25
3:1	50
4:1	75
5:1 or flatter	100

2. Maximum drainage area for overland flow to a silt fence shall not exceed ¼ acre per 100 feet of fence, with maximum ponding depth of 1.5 feet behind the fence; and

3. Erosion would occur in the form of sheet erosion; and

4. There is no concentration of water flowing to the barrier.

Design Criteria

Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff. All silt fences shall be placed as close to the areas as possible, but at least 10 feet from the toe of a slope to allow for maintenance and roll down. The area beyond the fence must be undisturbed or stabilized.

Sensitive areas to be protected by silt fence may need to be reinforced by using heavy wire fencing for added support to prevent collapse.

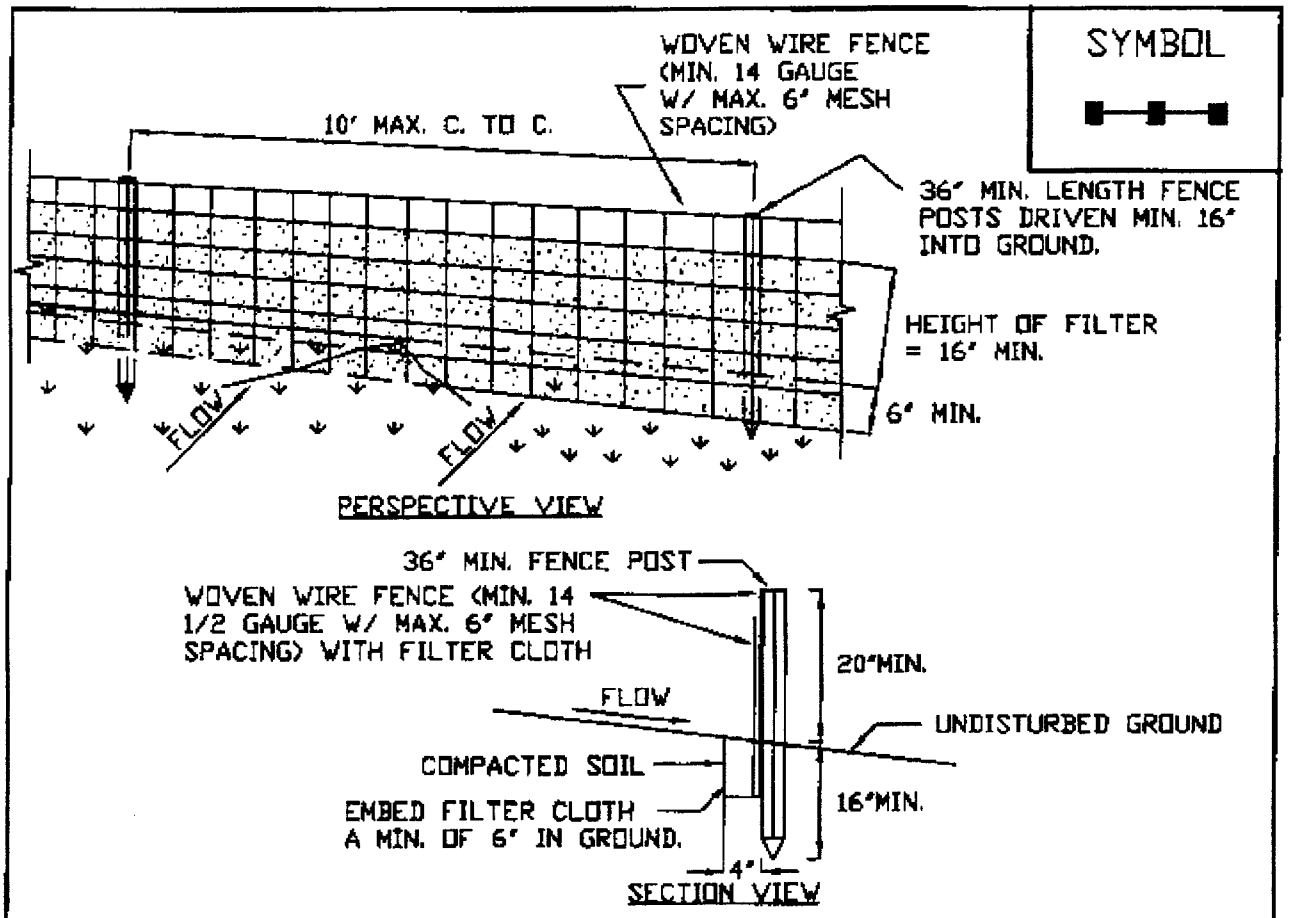
Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. A detail of the silt fence shall be shown on the plan. See Figure 5A.8 on page 5A.21 for details.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	90	ASTM D1682
Elongation at Failure (%)	50	ASTM D1682

Figure 5A.8
Silt Fence



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	SILT FENCE

STANDARD AND SPECIFICATIONS FOR CHECK DAM

Definition

Small barriers or dams constructed of stone, bagged sand or gravel, or other durable material across a drainage way.

Purpose

To reduce erosion in a drainage channel by restricting the velocity of flow in the channel.

Condition Where Practice Applies

This practice is used as a temporary or emergency measure to limit erosion by reducing velocities in small open channels that are degrading or subject to erosion and where permanent stabilization is impractical due to short period of usefulness and time constraints of construction.

Design Criteria

Drainage Area: Maximum drainage area above the check dam shall not exceed two (2) acres.

Height: Not greater than 2 feet. Center shall be maintained 9 inches lower than abutments at natural ground elevation.

Side Slopes: Shall be 2:1 or flatter.

Spacing: The check dams shall be spaced as necessary in the channel so that the crest of the downstream dam is at the elevation of the toe of the upstream dam. This spacing is equal to the height of the check dam divided by the channel slope.

Therefore:

$S = h/s$

Where:

S = spacing interval (ft.)
h = height of check dam (ft.)
s = channel slope (ft./ft.)

Example:

For a channel with a 4% slope and 2 ft. high stone check dams, they are spaced as follows:

$$S = \frac{2 \text{ ft.}}{.04 \text{ ft/ft.}} = 50 \text{ ft.}$$

Stone size: Use a well graded stone matrix 2 to 9 inches in size (NYS – DOT Light Stone Fill meets these requirements).

The overflow of the check dams will be stabilized to resist erosion that might be caused by the check dam. See Figure 5A.9 on page 5A.24 for details.

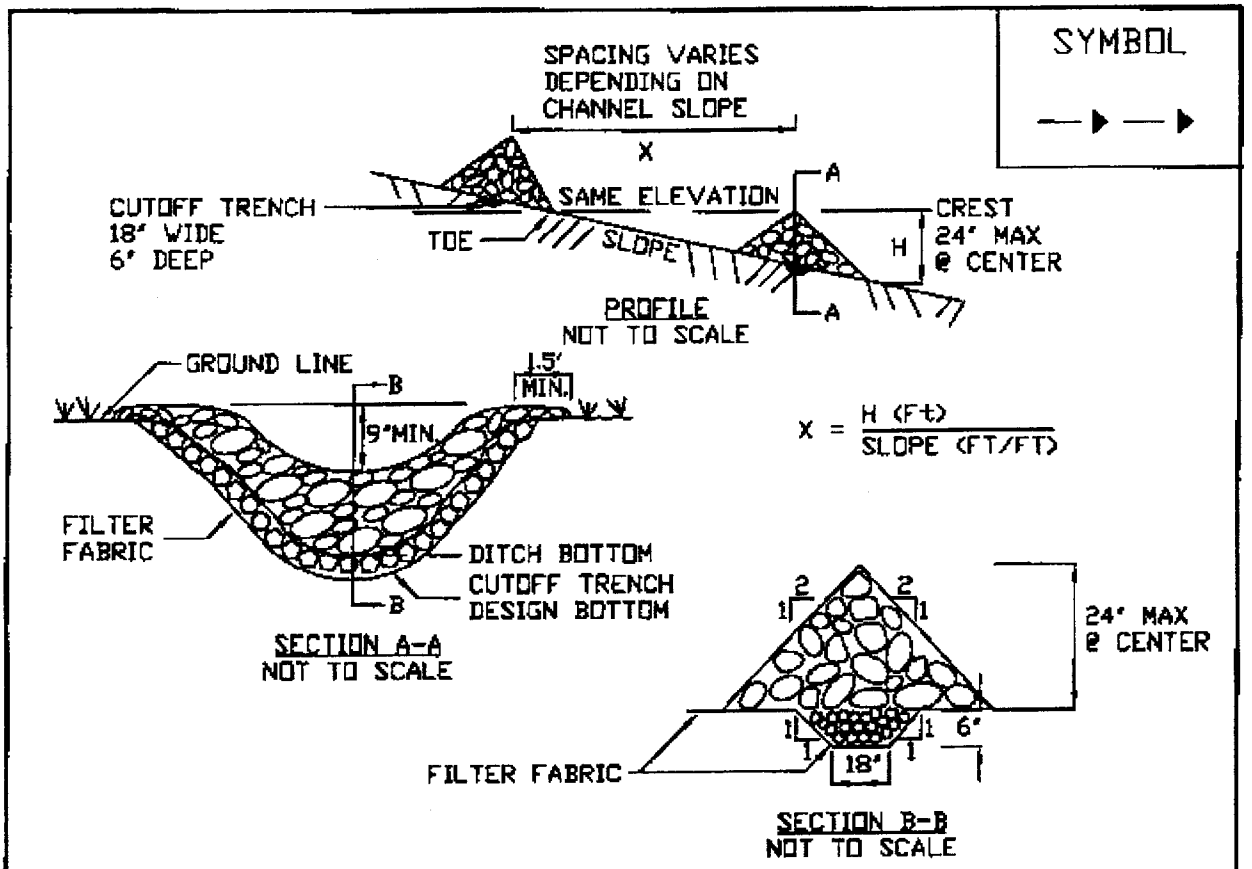
Check dams should be anchored in the channel by a cutoff trench 1.5 ft. wide and 0.5 ft. deep and lined with filter fabric to prevent soil migration.

Maintenance

The check dams should be inspected after each runoff event. Correct all damage immediately. If significant erosion has occurred between structures, a liner of stone or other suitable material should be installed in that portion of the channel.

Remove sediment accumulated behind the dam as needed to allow channel to drain through the stone check dam and prevent large flows from carrying sediment over the dam. Replace stones as needed to maintain the design cross section of the structures.

Figure 5A.9
Check Dam



CONSTRUCTION SPECIFICATIONS

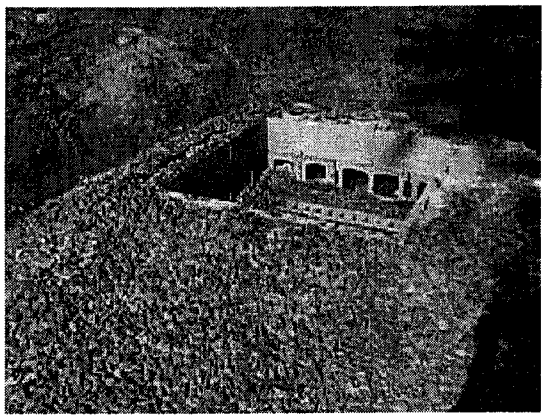
1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

CHECK DAM

STANDARD AND SPECIFICATIONS FOR STORM DRAIN INLET PROTECTION



Definition

A temporary, somewhat permeable barrier, installed around inlets in the form of a fence, berm or excavation around an opening, trapping water and thereby reducing the sediment content of sediment laden water by settling.

Purpose

To prevent heavily sediment laden water from entering a storm drain system through inlets.

Conditions Where Practice Applies

This practice shall be used where the drainage area to an inlet is disturbed, it is not possible to temporarily divert the storm drain outfall into a trapping device, and watertight blocking of inlets is not advisable. **It is not to be used in place of sediment trapping devices.** This may be used in conjunction with storm drain diversion to help prevent siltation of pipes installed with low slope angle.

Types of Storm Drain Inlet Practices

There are four (4) specific types of storm drain inlet protection practices that vary according to their function, location, drainage area, and availability of materials:

I. Excavated Drop Inlet Protection
II. Fabric Drop Inlet Protection
III. Stone & Block Drop Inlet Protection
IV. Curb Drop Inlet Protection

Design Criteria

Drainage Area – The drainage area for storm drain inlets shall not exceed one acre. The crest elevations of these practices shall provide storage and minimize bypass flow.

Type I – Excavated Drop Inlet Protection

See details for Excavated Drop Inlet Protection in Figure 5A.11 on page 5A.29.

Limit the drainage area to the inlet device to 1 acre. Excavated side slopes shall be no steeper than 2:1. The minimum depth shall be 1 foot and the maximum depth 2 feet as measured from the crest of the inlet structure. Shape the excavated basin to fit conditions with the longest dimension oriented toward the longest inflow area to provide maximum trap efficiency. The capacity of the excavated basin should be established to contain 900 cubic feet per acre of disturbed area. Weep holes, protected by fabric and stone, should be provided for draining the temporary pool.

Inspect and clean the excavated basin after every storm. Sediment should be removed when 50 percent of the storage volume is achieved This material should be incorporated into the site in a stabilized manner.

Type II – Fabric Drop Inlet Protection

See Figure 5A.12 for details on Filter Fabric Drop Inlet Protection on page 5A.30.

Limit the drainage area to 1 acre per inlet device. Land area slope immediately surrounding this device should not exceed 1 percent. The maximum height of the fabric above the inlet crest shall not exceed 1.5 feet unless reinforced.

The top of the barrier should be maintained to allow overflow to drop into the drop inlet and not bypass the inlet to unprotected lower areas. Support stakes for fabric shall be a minimum of 3 feet long, spaced a maximum 3 feet apart. They should be driven close to the inlet so any overflow drops into the inlet and not on the unprotected soil. Improved performance and sediment storage volume can be obtained by excavating the area.

Inspect the fabric barrier after each rain event and make repairs as needed. Remove sediment from the pool area as

necessary with care not to undercut or damage the filter fabric. Upon stabilization of the drainage area, remove all materials and unstable sediment and dispose of properly. Bring the adjacent area of the drop inlet to grade, smooth and compact and stabilize in the appropriate manner to the site.

If straw bales are used in lieu of filter fabric, they should be placed tight with the cut edge adhering to the ground at least 3 inches below the elevation of the drop inlet. Two anchor stakes per bale shall be driven flush to bale surface. Straw bales will be replaced every 4 months until the area is stabilized.

Type III – Stone and Block Drop Inlet Protection

See Figure 5A.13 for details on Stone and Block Drop Inlet Protection on page 5A.31.

Limit the drainage area to 1 acre at the drop inlet. The stone barrier should have a minimum height of 1 foot and a maximum height of 2 feet. Do not use mortar. The height should be limited to prevent excess ponding and bypass flow.

Recess the first course of blocks at least 2 inches below the crest opening of the storm drain for lateral support. Subsequent courses can be supported laterally if needed by placing a 2x4 inch wood stud through the block openings perpendicular to the course. The bottom row should have a few blocks oriented so flow can drain through the block to dewater the basin area.

The stone should be placed just below the top of the blocks on slopes of 2:1 or flatter. Place hardware cloth of wire mesh with ½ inch openings over all block openings to hold stone in place.

As an optional design, the concrete blocks may be omitted and the entire structure constructed of stone, ringing the outlet ("doughnut"). The stone should be kept at a 3:1 slope toward the inlet to keep it from being washed into the inlet. A level area 1 foot wide and four inches below the crest will further prevent wash. Stone on the slope toward the inlet should be at least 3 inches in size for stability and 1 inch or smaller away from the inlet to control flow rate. The elevation of the top of the stone crest must be maintained 6 inches lower than the ground elevation down slope from the inlet to ensure that all storm flows pass over the stone into the storm drain and not past the structure. Temporary diking should be used as necessary to prevent bypass flow.

The barrier should be inspected after each rain event and repairs made where needed. Remove sediment as necessary to provide for accurate storage volume for subsequent rains. Upon stabilization of contributing drainage area, remove all materials and any unstable soil and dispose of properly.

Bring the disturbed area to proper grade, smooth, compact and stabilized in a manner appropriate to the site.

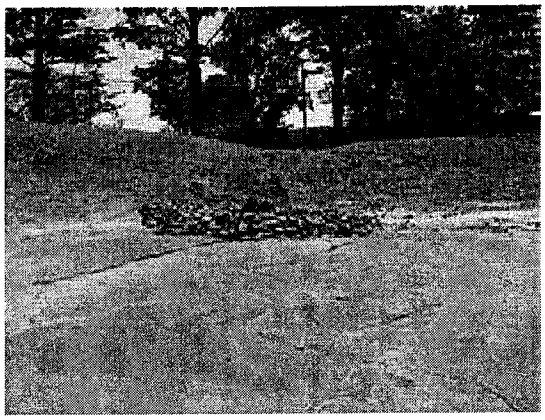
Type IV – Curb Drop Inlet Protection

See Figure 5A. 14 for details on Curb Drop Inlet Protection on page 5A.32.

The drainage area should be limited to 1 acre at the drop inlet. The wire mesh must be of sufficient strength to support the filter fabric and stone with the water fully impounded against it. Stone is to be 2 inches in size and clean. The filter fabric must be of a type approved for this purpose with an equivalent opening size (EOS) of 40-85. The protective structure will be constructed to extend beyond the inlet 2 feet in both directions. Assure that storm flow does not bypass the inlet by installing temporary dikes (such as sand bags) directing flow into the inlet. Make sure that the overflow weir is stable. Traffic safety shall be integrated with the use of this practice.

The structure should be inspected after every storm event. Any sediment should be removed and disposed of on the site. Any stone missing should be replaced. Check materials for proper anchorage and secure as necessary.

STANDARD AND SPECIFICATIONS FOR SEDIMENT TRAP



Definition

A temporary sediment control device formed by excavation and/or embankment to intercept sediment laden runoff and retain the sediment.

Purpose

The purpose of the structure is to intercept sediment-laden runoff and trap the sediment in order to protect drainage ways, properties, and rights-of-way below the sediment trap from sedimentation.

Conditions Where Practice Applies

A sediment trap is usually installed in a drainage way, at a storm drain inlet, or other points of collection from a disturbed area.

Sediment traps should be used to artificially break up the natural drainage area into smaller sections where a larger device (sediment basin) would be less effective.

Design Criteria

If any of the design criteria presented here cannot be met, see Standard and Specification for Sediment Basin on page 5A.49.

Drainage Area

The drainage area for sediment traps shall be in accordance with the specific type of sediment trap used (Type I through V).

Location

Sediment traps shall be located so that they can be installed prior to grading or filling in the drainage area they are to protect. Traps must not be located any closer than 20 feet from a proposed building foundation if the trap is to function during building construction. Locate traps to obtain maximum storage benefit from the terrain and for ease of cleanout and disposal of the trapped sediment.

Trap Size

The volume of a sediment trap as measured at the elevation of the crest of the outlet shall be at least 3,600 cubic feet per acre of drainage area. The volume of a constructed trap shall be calculated using standard mathematical procedures. The volume of a natural sediment trap may be approximated by the equation: Volume (cu.ft.) = 0.4 x surface area (sq.ft.) x maximum depth (ft.).

Trap Cleanout

Sediment shall be removed and the trap restored to the original dimensions when the sediment has accumulated to ½ of the design depth of the trap. Sediment removed from the trap shall be deposited in a protected area and in such a manner that it will not erode.

Embankment

All embankments for sediment traps shall not exceed five (5) feet in height as measured at the low point of the original ground along the centerline of the embankment. Embankments shall have a minimum four (4) foot wide top and side slopes of 2:1 or flatter. The embankment shall be compacted by traversing with equipment while it is being constructed. The embankment shall be stabilized with seed and mulch as soon as it is completed

The elevation of the top of any dike directing water to any sediment trap will equal or exceed the maximum height of the outlet structure along the entire length of the trap.

Excavation

All excavation operations shall be carried out in such a manner that erosion and water pollution shall be minimal. Excavated portions of sediment traps shall have 1:1 or flatter slopes.

Outlet

The outlet shall be designed, constructed, and maintained in such a manner that sediment does not leave the trap and that erosion at or below the outlet does not occur.

Sediment traps must outlet onto stabilized (preferable undisturbed) ground, into a watercourse, stabilized channel, or into a storm drain system. Distance between inlet and outlet should be maximized to the longest length practicable.

Trap Details Needed on Erosion and Sediment Control Plans

Each trap shall be delineated on the plans in such a manner that it will not be confused with any other features. Each trap on a plan shall indicate all the information necessary to properly construct and maintain the structure. If the drawings are such that this information cannot be delineated on the drawings, then a table shall be developed. If a table is developed, then each trap on a plan shall have a number and the numbers shall be consecutive.

The following information shall be shown for each trap in a summary table format on the plans.

1. Trap number
2. Type of trap
3. Drainage area
4. Storage required
5. Storage provided (if applicable)
6. Outlet length or pipe sizes
7. Storage depth below outlet or cleanout elevation
8. Embankment height and elevation (if applicable)

Type of Sediment Traps

There are five (5) specific types of sediment traps which vary according to their function, location, or drainage area.

I. Pipe Outlet Sediment Trap
II. Grass Outlet Sediment Trap
III. Catch Basin Sediment Trap
IV. Stone Outlet Sediment Trap
V. Riprap Outlet Sediment Trap

I. Pipe Outlet Sediment Trap

A Pipe Outlet Sediment Trap consists of a trap formed by embankment or excavation. The outlet for the trap is through a perforated riser and a pipe through the embankment. The outlet pipe and riser shall be made of steel, corrugated metal or other suitable material. The top of the embankment shall be at least 1 ½ feet above the crest of the riser. The top 2/3 of the riser shall be perforated with one (1) inch nominal diameter holes or slits spaced six (6) inches vertically and horizontally placed in the concave portion of the corrugated pipe.

No holes or slits will be allowed within six (6) inches of the top of the horizontal barrel. All pipe connections shall be watertight. The riser shall be wrapped with ½ to ¼ inch hardware cloth wire then wrapped with filter cloth with a sieve size between #40-80 and secured with strapping or connecting band at the top and bottom of the cloth. The cloth shall cover an area at least six (6) inches above the highest hole and six (6) inches below the lowest hole. The top of the riser pipe shall not be covered with filter cloth. The riser shall have a base with sufficient weight to prevent flotation of the riser. Two approved bases are:

1. A concrete base 12 in. thick with the riser embedded 9 in. into the concrete base, or

2. One quarter inch, minimum, thick steel plate attached to the riser by a continuous weld around the circumference of the riser to form a watertight connection. The plate shall have 2.5 feet of stone, gravel, or earth placed on it to prevent flotation. In either case, each side of the square base measurement shall be the riser diameter plus 24 inches.

Pipe outlet sediment traps shall be limited to a five (5) acre maximum drainage area. Pipe outlet sediment traps may be interchangeable in the field with stone outlet or riprap sediment traps provided that these sediment traps are constructed in accordance with the detail and specifications for that trap.

Select pipe diameter from the following table:

Minimum Sizes

Barrel Diameter[1] (in.)	Riser Diameter[1] (in.)	Maximum Drainage Area (ac.)
12	15	1
15	18	2
18	21	3
21	24	4
21	27	5

[1] Barrel diameter may be same size as riser diameter.

See details for Pipe Outlet Sediment Trap ST-I in Figure 5A.16 (1) and 5A.16 (2) on pages 5A.38 and 5A.39.

II. Grass Outlet Sediment Trap

A Grass Outlet Sediment Trap consists of a trap formed by excavating the earth to create a holding area. The trap has a discharge point over natural existing grass. The outlet crest width (feet) shall be equal to four (4) times the drainage area (acres) with a minimum width of four (4) feet. The outlet shall be free of any restrictions to flow. The outlet lip must remain undisturbed and level. The volume of this trap shall be computed at the elevation of the crest of the outlet. Grass outlet sediment traps shall be limited to a five (5) acre maximum drainage area.

STANDARD AND SPECIFICATIONS FOR SEDIMENT BASIN

Class	1	2
Max. Drainage Area (acres)	100	100
Max. Height[1] of Dam (ft.)	10	15
Min. Embankment Top Width	8	10
Embankment Side Slopes	2:1 or Flatter	2 ½:1 or Flatter
Anti-Seep Control Required	Yes	Yes

[1] Height is measured from the low point of original ground at the downstream toe of the dam to the top of the dam.

Definition

A temporary barrier or dam constructed across a drainage way or at other suitable locations to intercept sediment laden runoff and to trap and retain the sediment.

Scope

This standard applies to the installation of temporary sediment basins on sites where: (a) failure of the structure would not result in loss of life, damage to homes or buildings, or interruption of use or service of public roads or utilities; (b) the drainage area does not exceed 100 acres; and (c) the basin is to be removed within 36 months after the beginning of construction of the basin.

Permanent (to function more than 36 months) sediment basins, or temporary basins exceeding the classification requirements for class 1 and 2, or structures that temporarily function as a sediment basin but are intended for use as a permanent pool shall be classified as permanent structures and shall conform to criteria appropriate for permanent structures. These structures shall be designed and constructed to conform to NRCS Standard And Specification No. 378 for Ponds in the National Handbook of Conservation Practices and the New York State Department of Environmental Conservation, "Guidelines for the Design of Dams." The total volume of permanent sediment basins shall equal to or exceed the capacity requirements for temporary basins contained herein.

Classification of Temporary Sediment Basins

For the purpose of this standard, temporary sediment basins are classified as follows:

Purpose

The purpose of a sediment basin is to intercept sediment-laden runoff and reduce the amount of sediment leaving the disturbed area in order to protect drainage ways, properties, and rights-of-way below the sediment basin.

Conditions Where Practice Applies

A sediment basin is appropriate where physical site conditions or land ownership restrictions preclude the installation of other erosion control measures to adequately control runoff, erosion, and sedimentation. However, it is strongly encouraged to use a basin in addition to other ESC measures if practicable. It may be used below construction operations which expose critical areas to soil erosion. The basin shall be maintained until the disturbed area is protected against erosion by permanent stabilization.

Design Criteria

Compliance with Laws and Regulations

Design and construction shall comply with state and local laws, ordinances, rules and regulations, including permits.

Location

The sediment basin should be located to obtain the maximum storage benefit from the terrain and for ease of cleanout of the trapped sediment. It should be located to minimize interference with construction activities and

STANDARD AND SPECIFICATIONS FOR DUST CONTROL

Definition

The control of dust resulting from land-disturbing activities.

Purpose

To prevent surface and air movement of dust from disturbed soil surfaces that may cause off-site damage, health hazards, and traffic safety problems.

Conditions Where Practice Applies

On construction roads, access points, and other disturbed areas subject to surface dust movement and dust blowing where off-site damage may occur if dust is not controlled.

Design Criteria

Construction operations should be scheduled to minimize the amount of area disturbed at one time. Buffer areas of vegetation should be left where practical. Temporary or permanent stabilization measures shall be installed. No specific design criteria is given; see construction specifications below for common methods of dust control.

Water quality must be considered when materials are selected for dust control. Where there is a potential for the material to wash off to a stream, ingredient information must be provided to the local permitting authority.

Construction Specifications

A. **Non-driving Areas** – These areas use products and materials applied or placed on soil surfaces to prevent airborne migration of soil particles.

Vegetative Cover – For disturbed areas not subject to traffic, vegetation provides the most practical method of dust control (see Section 3).

Mulch (including gravel mulch) – Mulch offers a fast effective means of controlling dust. This can also include rolled erosion control blankets.

Spray adhesives – These are products generally composed of polymers in a liquid or solid form that are mixed with water to form an emulsion that is sprayed on the soil surface with typical hydroseeding equipment. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations for the specific soils on the site. In no case should the application of these adhesives be made on wet soils or if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators and others working with the material.

B. **Driving Areas** – These areas utilize water, polymer emulsions, and barriers to prevent dust movement from the traffic surface into the air.

Sprinkling – The site may be sprayed with water until the surface is wet. This is especially effective on haul roads and access routes.

Polymer Additives – These polymers are mixed with water and applied to the driving surface by a water truck with a gravity feed drip bar, spray bar or automated distributor truck. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations. Incorporation of the emulsion into the soil will be done to the appropriate depth based on expected traffic. Compaction after incorporation will be by vibratory roller to a minimum of 95%. The prepared surface shall be moist and no application of the polymer will be made if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators working with the material.

Barriers – Woven geotextiles can be placed on the driving surface to effectively reduce dust throw and particle migration on haul roads. Stone can also be used for construction roads for effective dust control.

Windbreak – A silt fence or similar barrier can control air currents at intervals equal to ten times the barrier height. Preserve existing wind barrier vegetation as much as practical.

STANDARD AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ENTRANCE

Definition

A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area.

Purpose

The purpose of stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

Conditions Where Practice Applies

A stabilized construction entrance shall be used at all points of construction ingress and egress.

Design Criteria

See Figure 5A.35 on page 5A.76 for details.

Aggregate Size: Use a matrix of 1-4 inch stone, or reclaimed or recycled concrete equivalent.

Thickness: Not less than six (6) inches.

Width: 12-foot minimum but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.

Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

Geotextile: To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.

Criteria for Geotextile

The geotextile shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydro-carbons, mildew, rot resistant, and conform to the fabric properties as shown:

Fabric Properties[3]	Light Duty[1] Roads Grade Subgrade	Heavy Duty[2] Haul Roads Rough Graded	Test Method
Grab Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Brust Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 modified
Equivalent Opening Size	40-80	40-80	US Std Sieve CW-02215
Aggregate Depth	6	10	--

[1]Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and an occasional multi-axle truck. Acceptable materials are Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent.

[2]Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevira Spunbond 1135, Mirafi 600X, or equivalent.

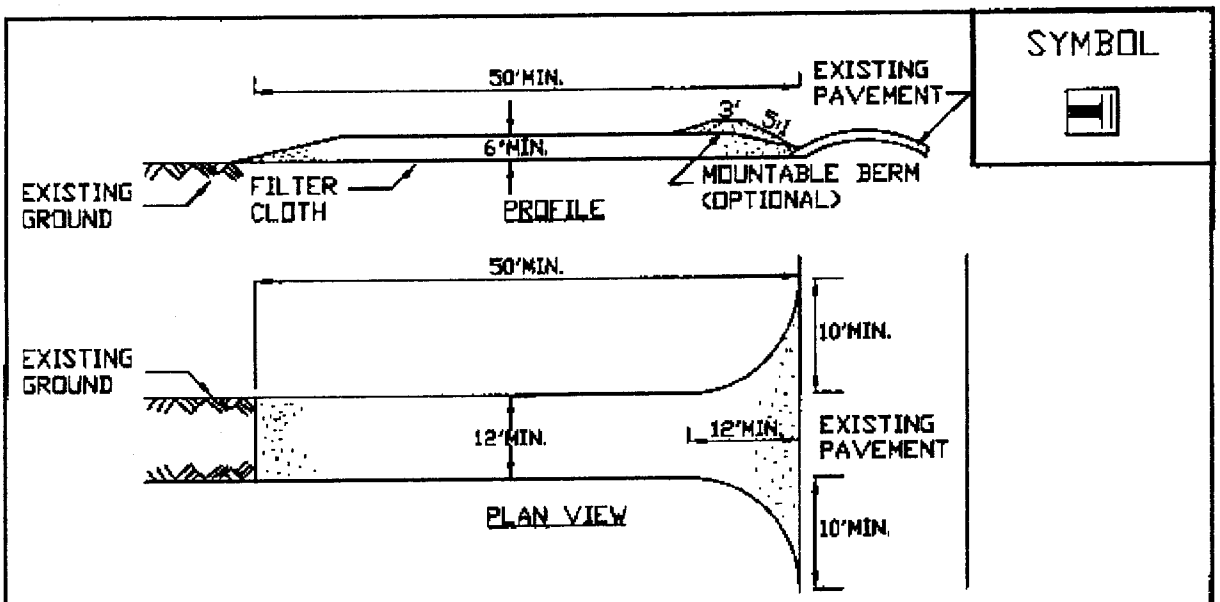
[3]Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.

Maintenance

The entrance shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately.

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

Figure 5A.35
Stabilized Construction Entrance



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

STABILIZED CONSTRUCTION ENTRANCE

STANDARD AND SPECIFICATIONS FOR GRASSED WATERWAY

Definition

A natural or man-made channel of parabolic or trapezoidal cross-section that is below adjacent ground level and is stabilized by suitable vegetation. The flow channel is normally wide and shallow and conveys the runoff down the slope.

Purpose

The purpose of a grassed waterway is to convey runoff without causing damage by erosion.

Conditions Where Practice Applies

Grass waterways are used where added vegetative protection is needed to control erosion resulting from concentrated runoff.

Design Criteria

Capacity

The minimum capacity shall be that required to confine the peak rate of runoff expected from a 10-year frequency rainfall event or a higher frequency corresponding to the hazard involved. This requirement for confinement may be waived on slopes of less than one (1) percent where out-of-bank flow will not cause erosion or property damage.

Peak rates of runoff values used in determining the capacity requirements shall be computed by TR-55, Urban Hydrology for Small Watersheds, or other appropriate methods.
Where there is base flow, it shall be handled by a stone center, subsurface drain, or other suitable means since sustained wetness usually prevents adequate vegetative cover. The cross-sectional area of the stone center or subsurface drain size to be provided shall be determined by using a flow rate of 0.1 cfs/acre or by actual measurement of the maximum base flow.

Velocity

Please see Table 5B.1, Diversion Maximum Permissible Design Velocities, for seed, soil, and velocity variables.

Cross Section

The design water surface elevation of a grassed waterway receiving water from diversions or other tributary channels shall be equal to or less than the design water surface elevation in the diversion or other tributary channels.

The top width of parabolic waterways shall not exceed 30 feet and the bottom width of trapezoidal waterways shall not exceed 15 feet unless multiple or divided waterways, stone center, or other means are provided to control meandering of low flows.

Structural Measures

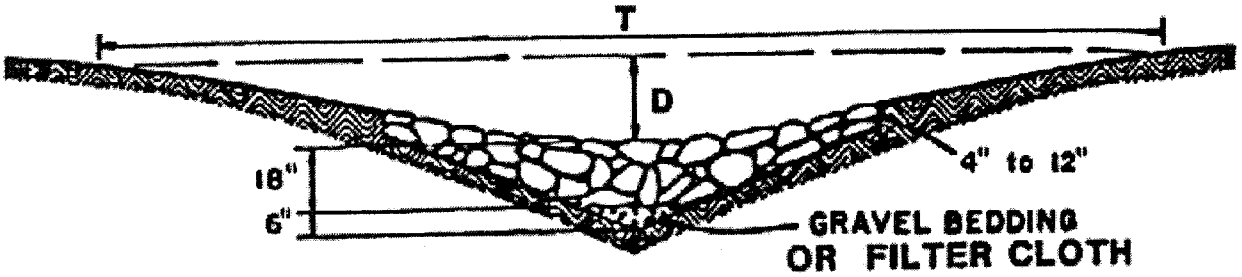
In cases where grade or erosion problems exist, special control measures may be needed such as lined waterways (5B.17), or grade stabilization measures (5B.31). Where needed, these measures will be supported by adequate design computations. For typical cross sections of waterways with riprap sections or stone centers, refer to Figure 5B.8 on page 5B.13.

The design procedures for parabolic and trapezoidal channels are available in the NRCS Engineering Field Handbook; Figure 5B.9 on page 5B.14 also provides a design chart for parabolic waterway.

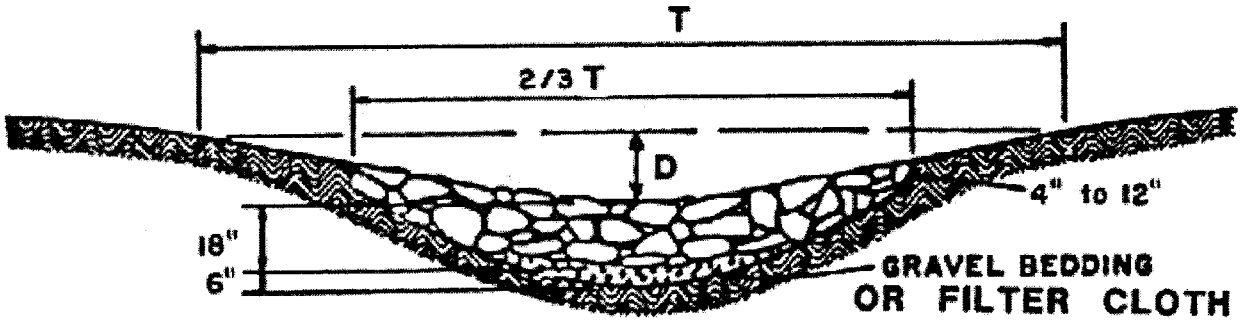
Outlets

Each waterway shall have a stable outlet. The outlet may be another waterway, a stabilized open channel, grade stabilization structure, etc. In all cases, the outlet must discharge in such a manner as not to cause erosion. Outlets shall be constructed and stabilized prior to the operation of the waterway.

Figure 5B.8
Typical Waterway Cross Sections



Waterway with stone center drain. "V" section shaped by motor grader.

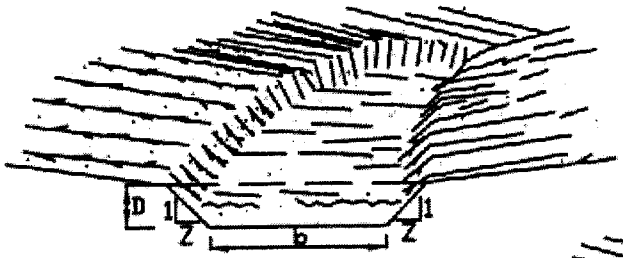


Waterway with stone center drain. Rounded section shaped by bulldozer.

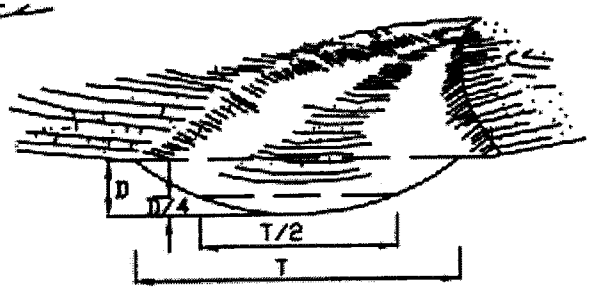
Figure 5B.10
Grassed Waterway

SYMBOL

GL



TRAPEZIODAL CROSS SECTION



PARABOLIC CROSS SECTION

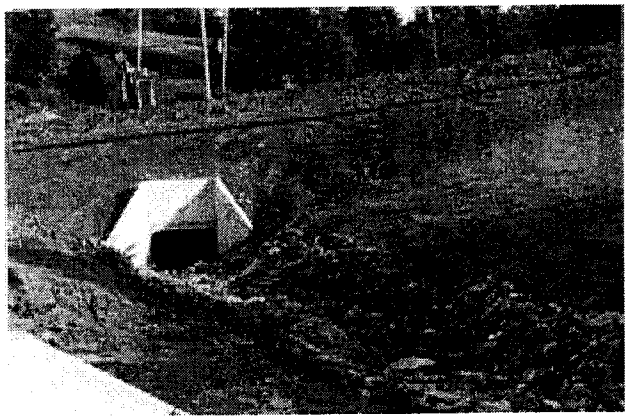
CONSTRUCTION SPECIFICATIONS

1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE WATERWAY.
2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETE WATERWAY.
4. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
5. STABILIZATION SHALL BE DONE ACCORDING TO THE APPROPRIATE STANDARD AND SPECIFICATIONS FOR VEGETATIVE PRACTICES.
   A. FOR DESIGN VELOCITIES OF LESS THAN 3.5 FT. PER. SEC., SEEDING AND MULCHING MAY BE USED FOR THE ESTABLISHMENT OF THE VEGETATION. IT IS RECOMMENDED THAT, WHEN CONDITIONS PERMIT, TEMPORARY WATERWAYS OR OTHER MEANS SHOULD BE USED TO PREVENT WATER FROM ENTERING THE WATERWAY DURING THE ESTABLISHMENT OF THE VEGETATION.
   B. FOR DESIGN VELOCITIES OF MORE THAN 3.5 FT. PER. SEC., THE WATERWAY SHALL BE STABILIZED WITH SOD, WITH SEEDING PROTECTED BY JUTE OR EXCELSIOR MATTING OR WITH SEEDING AND MULCHING INCLUDING TEMPORARY DIVERSION OF THE WATER UNTIL THE VEGETATION IS ESTABLISHED.
   C. STRUCTURAL - VEGETATIVE PROTECTION
   SUBSURFACE DRAIN FOR BASE FLOW SHALL BE CONSTRUCTED AS SHOWN ON THE STANDARD DRAWING AND AS SPECIFIED IN THE STANDARD AND SPECIFICATIONS FOR SUBSURFACE DRAIN.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

GRASSED WATERWAY

STANDARD AND SPECIFICATIONS FOR LINED WATERWAY OR OUTLET



Definition

A waterway or outlet with a lining of concrete, stone, or other permanent material. The lined section extends up the side slopes to the designed depth. The earth above the permanent lining may be vegetated or otherwise protected.

Purpose

To provide for the disposal of concentrated runoff without damage from erosion or flooding, where grassed waterways would be inadequate due to high velocities.

Scope

This standard applies to waterways or outlets with linings of cast-in-place concrete, flagstone mortared in place, rock riprap, gabions, or similar permanent linings. It does not apply to irrigation ditch or canal linings, grassed waterways with stone centers or small lined sections that carry prolonged low flows, or to reinforced concrete channels. The maximum capacity of the waterway flowing at design depth shall not exceed 100 cubic feet per second.

Conditions Where Practice Applies

This practice applies where the following or similar conditions exist:

1. Concentrated runoff is such that a lining is required to control erosion.
2. Steep grades, wetness, prolonged base flow, seepage, or piping that would cause erosion.
3. The location is such that damage from use by people or animals precludes use of vegetated waterways or outlets.
4. Soils are highly erosive or other soil and climate conditions preclude using vegetation.
5. High value property or adjacent facilities warrant the extra cost to contain design runoff in a limited space.

Design Criteria

Capacity

1. The minimum capacity shall be adequate to carry the peak rate of runoff from a 10-year, 24-hour storm. Velocity shall be computed using Manning's equation with a coefficient of roughness "n" as follows:

Lined Material	"n"
Concrete (Type):	
Trowel Finish	0.015
Float Finish	0.019
Gunite	0.019
Flagstone	0.022
Riprap	Determine from Figure 5B.11 on page 5B.19
Gabion	0.030

2. Riprap gradation and filter (bedding) are generally designed in accordance with criteria set forth in the National Cooperative Highway Research Program Report 108, available from the University Microfilm International, 300 N. Ree Road, Ann Arbor, Michigan 48016, Publication No. PB-00839; or the Hydraulic Engineering Circular No. 11, prepared by the U.S. Bureau of Public Roads, available from Federal Highway Administration, 400 7th Street, S.W., Washington, D.C. 20590, HNG-31, or the procedure in the USDA-NRCS's Engineering Field Manual, Chapter 16.

Velocity

1. Maximum design velocity shall be as shown below. Except for short transition sections, flow with a channel gradient within the range of 0.7 to 1.3 of this

Appendix F

Employee Training Records

Annual SWPPP Training Documentation

Date: _____

Attendee	Initial

Subjects and Issues: _____

Recommendations and Suggestions: _____

Appendix G

Certification of Non-Stormwater Discharges

Non-Stormwater Discharge Certification

Observations of Outfall 001 were made on _____. A visual and audio evaluation of drainage points for non-stormwater discharges revealed no flow from the discharge points. The evaluation showed that there were no significant sources of non-stormwater at the site. All Stormwater impoundments were also observed for flow escapement.

I hereby certify that in my professional judgment, the discharge from the site consists only of stormwater, or other non-stormwater discharges allowed under the SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities.

David Mahar, President
Frontier Stone, LLC, Frontier Quarry Facility
Town of Shelby, New York.

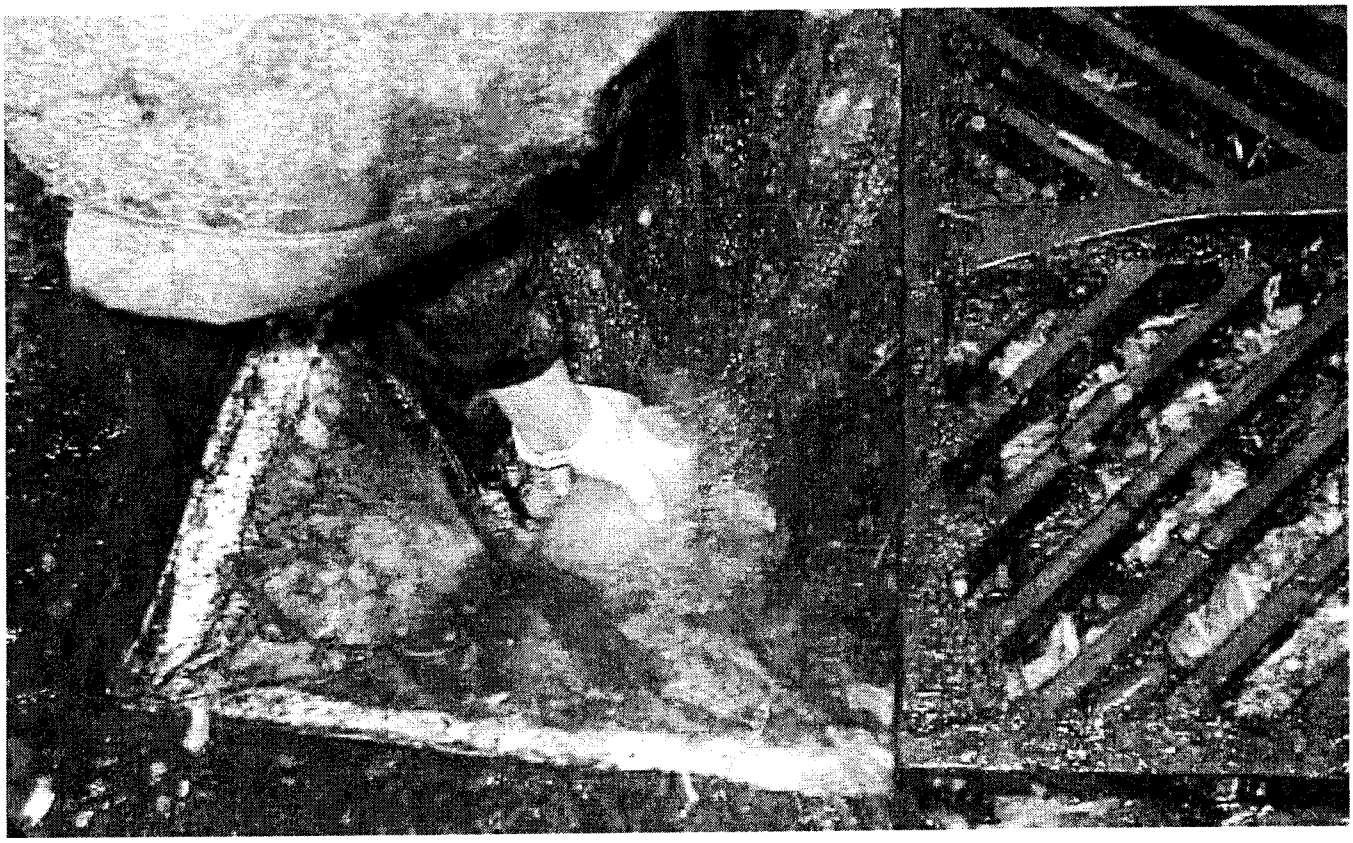
Signature: _____ Date: _____

Appendix H

Stormwater Sampling Guidance

Stormwater Sampling Field Data Form

How to do Stormwater Sampling
A guide for industrial facilities



Washington State
Department of Ecology

December 2002 (rev. March 2010)

Publication #02-10-071

DEPARTMENT OF
ECOLOGY
State of Washington

Acknowledgements

The Water Quality Program would like to thank the following individuals for contributing their hard work and technical knowledge to the 2010 update.

From the Department of Ecology:
Jeff Killelea
Stephen Golding
Elaine Tomita
Julie Lowe
Dewey Weaver
Kurt Baumgarten
Kevin Hancock
Marc Pacifico
Tom Leonard

From Environmental Compliance Tools LLC:
Robin Sandell

Table of Contents

Introduction

The purpose of this guide is to help those who operate facilities do their own sampling.

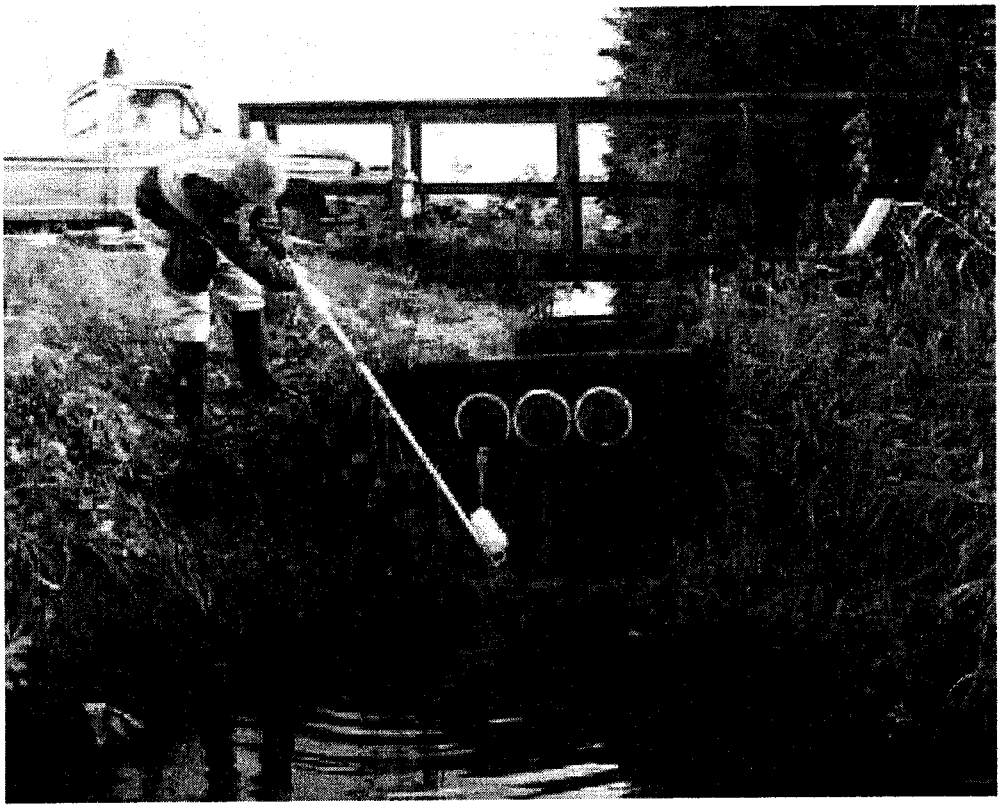
The Industrial Stormwater General Permit requires that your facility conduct at least quarterly sampling of stormwater and report the sampling results to Ecology. These requirements are outlined in the permit under Section S4. General Sampling Requirements. This guide supports the sampling portion of the general permit but does not substitute for it.

The purpose of this guide is to help those who operate facilities do their own sampling by describing the steps and procedures to be followed. This guidance will lead you to be able to sample in a way that will provide you and Ecology with meaningful results.

Sources of pollutants that may enter surface water, sediments, or ground water can be identified by sampling stormwater discharges. The results of sampling will be helpful when developing your Stormwater Pollution Prevention Plan (SWPPP), determining if your existing plan is adequate, and when implementing or assessing best management practices (BMPs).

Some effort is required up front to prepare for sampling in a way that will meet requirements and provide useful data. What follows is a step-by-step procedure of what you need to do to gather and report data that will represent the quality of stormwater leaving your facility. The steps are organized to guide you through the stormwater sampling process from start to finish.

This guidance is an update to "How to do Stormwater Sampling" which was originally developed by Ecology's Environmental Assessment Program in 2002. The update was made in accordance with the new Industrial Stormwater General Permit which became effective on January 1, 2010.



Advance Planning for Stormwater Sampling

Deciding what to Sample

Before beginning your sampling, you'll need to determine the specific pollutants (water quality parameters) you are required to sample and test for. All facilities must monitor for turbidity, pH, zinc, copper, and the presence of a visible oil sheen. Your parameters are based on:

- The standard set of parameters for all facilities, (turbidity, pH, zinc, copper and visible oil sheen).
- The industrial activities at your site, often classified by your facility's Standard Industrial Code (SIC Code).
- Whether your facility discharges to an impaired (303 (d) listed) water body.
- Any requirements that apply to facilities that discharge to water bodies with a water cleanup plan or Total Maximum Daily Load (TMDL).

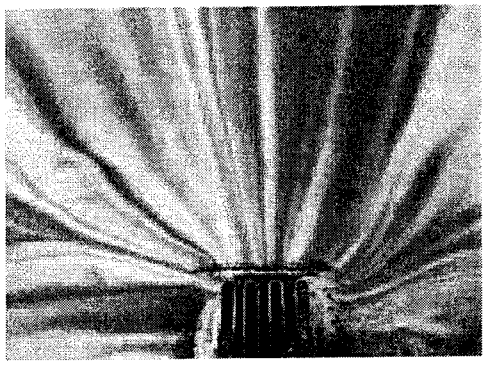
Ecology has listed the required parameters for your facility on your Discharge Monitoring Report (DMR) form.

Visible oil sheen, zinc, copper, turbidity, and pH

If there is a visible oil sheen at the point of discharge from your facility, you need to make note of it on your DMR form. A rainbow colored sheen on the surface of stormwater may indicate the presence of oil. However, not all sheens on the water are oil sheens. Some sheens result from natural processes, such as rotting vegetation or the bacterial breakdown of iron. How do you tell the difference between an oil sheen and a naturally occurring sheen? Try to break up the sheen with a stick. An oil sheen will swirl, elongate, and reform. A sheen resulting from a natural process will typically break up into irregular platelets that do not reform and have a mirror-like appearance.

Turbidity can be measured directly in the field using a handheld meter, or sampled and analyzed in the lab. You must measure pH in the field using either a calibrated pH meter or pH paper rather than sending it to a lab. This is due to the short holding time for pH. You can get pH paper from a distributor of scientific/laboratory supplies or through the same laboratory that will be doing your sample analysis. Zinc, copper, and other parameters required by the permit (other than turbidity and pH) are measured by sending bottled samples to a laboratory for analysis.

All facilities must monitor for turbidity, pH, zinc, copper, and a visible oil sheen.



This is an example of an oil sheen at a storm drain

Selecting a laboratory to test your sample

Having identified the parameters you will need tested, the next step is to select a laboratory to perform the tests. You are required to select a lab accredited by Ecology. The lab must be accredited for each analytical method required by the permit for each parameter. Accreditation assures Ecology that the lab is able to do quality testing using the analytical methods specified under Monitoring Requirements in your permit. You can search for an accredited lab on Ecology's website: *www.ecy.wa.gov/programs/eap/labs/search.html*

Contact the lab well ahead of time.

Ask questions - your lab can help you.

Contacting the lab in advance

You should contact the lab well ahead of time. They will be providing you with the sampling bottles you'll need. For some water quality parameters, such as Total Petroleum Hydrocarbons (TPH), it is not only desirable but necessary to collect the sample directly into a specially-cleaned container, so you will need to have bottles from the lab on hand before you sample. You can also ask your lab to send narrow-range pH paper (with a resolution not greater than ± 0.5 SU) along with your sample bottles.

Please note that not all facilities are required to collect TPH samples. Refer to page 26 of the permit for a list of industrial activities for which the permit requires TPH samples.

Discuss with the lab the analytical methods they will use, as specified in the sample parameter tables included in S5. A and S5. B of the general permit (pages 24 and 25). The lab will provide you helpful information and explanations that go beyond the scope of this guide. If you must meet effluent limits listed in "*S5.C, Stormwater Discharges Subject to Effluent Limitation Guidelines*" you should carefully review them with the lab.

Typical Sampling Information

Parameter	Bottle Type	Minimum Sample Required	Holding Time	Preservation
Turbidity	500 mL wide-mouthed poly	100 mL	48 hours	Cool to 4° C
Total Zinc	1liter (L) bottle cleaned according to protocol	500 mL	6 months	HNO_3 to pH<2 Cool to 4° C
Copper, Total Recoverable	500 mL HDPE	Dependent on the lab	6 months	HNO_3 to pH<2

Issues you may want to cover with the lab include:

◆ **Confirmation that the lab is accredited** for the testing methods the permit requires.

◆ **The type and size of bottle** that will be supplied for each water quality parameter to be sampled and tested.

◆ **How full** to fill the bottle.

◆ **Any safety concerns** with materials supplied by the lab.

◆ **What you need to know about preserving your samples:** Make a note of the parameters for which bottles will have preservative inside. For some tests, a preservative is necessary. The preservative is a substance that stabilizes certain chemicals at the time of sampling so that a valid test can be done later. It is critical that you use the correct bottles because tests requiring preservative will not be valid without the correct preservative. In some cases, the wrong preservative will interfere with a test. It is important not to lose the preservative that comes in the bottles supplied by the lab. The table to the left provides information for preserving zinc, turbidity, and copper samples.

◆ **The kind of labels** the lab will supply for the bottles and how the labels should be filled out. The labels or tags you use to identify the samples you take must be waterproof, and if you write on them, the writing must be waterproof also.

◆ **Get a Chain of Custody (COC) form** from the lab and go over how to complete these before sampling the first time.

◆ **A description of forms** or other paperwork to submit to the lab with the samples and how to fill them out.

◆ **Whether the lab will supply pH paper** as well as sample bottles, tags or labels for the bottles, and blank forms.

◆ **How bottles** and other supplies from the lab will be delivered to you.

◆ **The holding times** for each water quality parameter to be sampled and tested. A holding time is the maximum time allowed between taking the sample and doing the lab analysis. If you exceed holding time, the sample analysis is not acceptable.

◆ **How and when you will deliver samples to the lab.** Plan with the lab how you will get the samples to them in time to begin analysis before the parameter with the shortest holding time reaches that holding time. The fastest way to deliver samples to the lab may be in person, but it may be possible to ship samples (cooled in picnic coolers) and still meet holding times. If you deliver samples in person, you can pick up bottles and supplies for the next quarter at the same time. The table (*page 3*) shows typical sampling information for the three water quality parameters that must be monitored under the Industrial Stormwater General Permit. The information you obtain from your lab may differ from this. In many cases, the preservatives listed in the table come pre-measured in the sampling bottles and there is no need to check pH. Ask your lab about this.

◆ **How to read the lab reports for the sample results.** Sampling requirements tend to use scientific words and units of measure. Temperature is measured in degrees Celsius, "*C*". Typical United States thermometers measure temperature in Fahrenheit, "*F*," and 4° C is about 39° F. For your purposes, "*Cooling to 4° C*" means putting the samples on crushed ice or packed with blue ice in an ice chest so they will be kept just above freezing. Metric units are used to measure weight, volume and distance. Liquid volumes use liters, "*L*" and milliliters, "*mL*," not "*quarts*" and "*cups*". Chemicals have their own scientific notation. Nitric acid for example is HNO_3. Be sure to have the lab explain any words or expressions that you do not understand.

Deciding How You Will Take The Sample

Section S4.B.1(d) on page 22 of the Industrial Stormwater General Permit states that a grab, time-proportionate, or flow proportionate sample may be taken. A grab sample is a single sample "grabbed" by filling up a container, either by hand or with the container attached to a pole. It is the simplest type of sample to collect and it is expected that most permit holders will choose to collect grab samples. Ecology provides standard operating procedures (SOP) for obtaining grab samples, along with other sampling guidance, at *http://www.ecy.wa.gov/programs/eap/quality.html.*

As we will discuss in the next section, Total Petroleum Hydrocarbons (TPH) samples must be collected as grab samples. Some permit holders may choose to better represent water quality parameters other than TPH by collecting time-proportionate or flow-proportionate samples. These samples consist of a number of subsamples taken at intervals rather than a single grab sample. Time-proportionate or flow-proportionate sampling can accurately define pollutant loading during various times of discharge throughout a storm event and determine whether or not higher pollution is occurring during first flush of the storm.

A time-proportionate sample is one made up of a number of small samples (subsamples) of equal volume collected at regular time intervals combined into a single large sample. A flow-proportionate sample is one made up of a number of subsamples where each subsample is collected in such a way as to represent a given amount of stormwater discharge. Time-proportionate and flow-proportionate samples provide the advantage of including a number of smaller samples (subsamples) in the sample so that the stormwater discharge is better

Practice sampling before you do the real thing.

represented than with a grab sample. Time-proportionate and flow proportionate samples can be collected either by hand or with automated equipment. Automated equipment can provide unstaffed sample collection outside of normal business hours. Additional information regarding requirements for automated stormwater sampling is available online at *http://www.ecy.wa.gov/programs/eap/qa/Agency/ECY_SOP_Automated Sampling_v1_0.pdf.* Collecting time-proportionate or flow-proportionate samples by hand is somewhat difficult and collecting them with automated equipment involves additional expenses, such as the installation of a flow meter for automated sampling.

Collecting total petroleum hydrocarbons (TPH) samples

In addition to the requirement for all permit holders to monitor for a visible oil sheen, the general permit requires that facilities with the following industrial activities and Standard Industrial Classification (SIC) codes collect TPH samples: Primary Metals(33xx), Metals Mining (10xx), Automobile Salvage and Scrap Recycling (5015and 5093), Metals Fabricating (34xx), Hazardous Waste Treatment, Storage and Disposal Facilities and Dangerous Waste Recyclers subject to the provisions of Resource Conservation and Recovery Act (RCRA) Subtitle C. Because of the particular way TPH samples must be collected, this requirement may govern your overall approach to sampling.

Total Petroleum Hydrocarbons (TPH) samples must be collected directly into the bottle you send to the lab.

For some parameters other than TPH, it is possible to sample in difficult situations by filling a container and transferring it to the sample bottle to be sent to the lab. TPH samples, however, must be collected from the stormwater source directly. The sample cannot be transferred from another container because oil and grease tends to stick to the inside surfaces of containers. Since you must sample directly into the TPH bottle (grab sample), taking grab samples may be the easiest way to collect additional samples for the other parameters. Take samples by collecting stormwater directly from the discharge into the bottles supplied by the lab, filling each bottle one after another.

Because TPH samples cannot be transferred between containers, a sample cannot be formed from separate grab samples combined together. If more than one TPH sample is desired from a sampling site during a storm event, additional TPH grab samples must be collected and analyzed separately.

Because TPH samples must be collected directly and not through the tubing of an automatic sampler, those using automatic samplers will still have to grab TPH samples by hand. This is also true for facilities that must sample for fecal coliform.

Determining which discharges to sample

The first step in selecting sampling points is to consider the areas draining your facility. The site map in your SWPPP should show the drainage areas. Areas of particular concern are those where raw materials or finished product are exposed to rainfall and/or runoff, and areas where leaking fluids such as petroleum products and hydraulic fluids have the potential to enter stormwater runoff.

The next step is to determine where the runoff from each drainage area is discharged from your facility. If there are separate drainage areas with separate discharge points, stormwater sampled at one discharge sampling point may not represent the facility's stormwater quality overall.

Section S4.B.2 on page 22 of the Industrial Stormwater General Permit describes the requirements for selecting sampling points:

S4.B.2. Sample Location(s)

◆ The Permittee shall designate sampling location(s) at the point(s) where it discharges stormwater associated with industrial activity offsite.

◆ The Permittee is not required to sample onsite discharges to ground (e.g., infiltration, etc.) or sanitary sewer discharges under this permit, unless specifically required by Ecology (*Condition G12, page 45*).

◆ The Permittee shall sample each distinct point of discharge offsite except as otherwise exempt from monitoring as a "substantially identical outfall" per S3.B.5.b *(pages 20 and 21)*. The Permittee is required to monitor only one of the "substantially identical outfalls" if two or more outfalls discharge substantially identical effluents (based on similar industrial activities and site conditions).

◆ The exception to sampling each point of discharge in S4.B.2.c *(page 22)* does not apply to any point of discharge subject to numeric effluent limitations as described in Conditions S5.C *(page 27)*, S6.C *(pages 30 and 31)*, and S6.D *(pages 32 and 33)*.

As a general matter, your stormwater discharge samples will be taken where your facility's stormwater is discharged offsite. If your facility discharges stormwater collected over areas that are used for similar activities and have similar site conditions, and there is reason to believe pollutant types will be similar in such areas, a single sampling point can be used to represent several discharge points. The Industrial Stormwater General Permit allows you to sample at only one outfall when multiple outfalls at your facility have similar industrial activities, best management practices (BMPs), exposed materials, and impervious surfaces that could affect stormwater percolation into the ground. Outfalls that have these similar characteristics are called "substantially identical outfalls," and you are required to monitor only one of the "substantially identical outfalls" rather than all of them. Refer to Condition S3.B.5 on pages 20 and 21 of the permit for how to determine if the "substantially identical outfall" exception applies to some of your discharge points, and be sure that your SWPPP includes documentation of how sampling locations were chosen.

If your facility has multiple discharge points from areas with different industrial activities, BMPs, exposed materials, or impervious surfaces, the discharge points would not be considered substantially identical outfalls, and therefore you would need to sample all of the outfalls. For example, if one portion of the site is used to store raw materials and discharges separately from another portion of the site where vehicle maintenance (e.g., fueling, lubrication, etc.) takes place, the stormwater discharge points would not be substantially identical and both discharge points would need to be sampled.

Making a determination of whether some of your discharge points can be considered "substantially identical outfalls" would require careful consideration of Condition S3.B.5.b of the Industrial Stormwater General Permit. If you determine that some of your discharge points do not need to be sampled, the Sampling Plan in your SWPPP needs to include documentation of why each discharge point is not sampled per Condition S4.B.2.c, including:

a) The location of which discharge points the Permittee does not sample because the pollutant concentrations are substantially identical to a discharge point being sampled.

b) General industrial activities conducted in the drainage area of each discharge point.

Take time to get ready for sampling.

Manhole access can be a good sample point if it can be accessed safely and the stormwater is solely from your facility. Do not climb into the manhole. Use a sample bottle attached to a pole to take the sample.

Base flow here refers to any water in the ditch that is not a direct result of stormwater runoff. Ground water seepage into the ditch, for example, would add base flow.

c) Best management practices conducted in the drainage area of each outfall.

d) Exposed materials located in the drainage area of each discharge point that are likely to be significant contributors of pollutants to stormwater discharges.

e) Impervious surfaces in the drainage area that could affect the percolation of stormwater runoff into the ground (e.g., asphalt, crushed rock, grass, etc.).

f) Reasons why the Permittee expects the discharge points to discharge substantially identical effluents.

Selecting sampling points

◆ Pipes discharging your facility's stormwater offsite.

◆ Ditches carrying your facility's stormwater offsite.

◆ Manhole access to storm sewers carrying your facility's stormwater, so you can lower a sample bottle attached to a pole into the manhole. In general, manhole access on your property may be simpler and safer than access off property and more readily verifiable as carrying only your facility's stormwater.

These three types of sampling points are usually not too difficult to access and the flow within them tends to be fast enough, with enough turbulence, to allow you to collect well mixed, representative samples. In some cases, portions of industrial stormwater runoff leave a site as sheet flow. Specific approaches to sampling of pipes, ditches, manholes, grated storm drains, and sheet flow will be covered in the final section of this guide manual.

Make sure your sampling points will provide for sampling only the stormwater that comes from your facility. If the stormwater in a pipe (storm sewer) contains other discharges, move your sampling point upstream to a point where the flow is from your facility only. Also check to see that there is no base flow in the storm sewer during dry periods. Report in your SWPPP the presence of any base flow and measure or estimate its flow rate. If it is not possible to sample only flow from your facility, document the reason for this and provide information concerning the source of the flow you are sampling.

If possible, the stormwater your facility samples should not be a mixture of your facility's stormwater with other water. Some examples of situations where a sample would be of a mixture of water sources, and you should not sample are listed below:

Examples of mixed water sources situations in which you should not sample:

◆ **A ditch** that carries additional stormwater from properties upstream. In this case, the stormwater from your facility is mixed with other water and you should find a location or locations where only your facility's stormwater can be sampled.

◆ **A stormwater sewer** or pipe (culvert) discharges to a creek or other receiving water, the pipe being partially submerged where it discharges into the receiving water. In this case, this final discharge point will not be able to be used as a sampling point because the stormwater flow is mixed with the receiving water.

◆ **A manhole** that carries stormwater, not only from your facility but from other stormwater sources as well. If you are grabbing a sample from a manhole but from the point where a storm sewer from your facility ends at a municipal manhole, make sure that the flow in that pipe is entirely from your facility, that the pipe is not submerged or partly submerged and that you are otherwise not prevented from collecting stormwater from your facility only. If you are not sure that a storm sewer carries only flow from your facility, the

municipality may have storm sewer plans to help you determine this. Contact the municipality beforehand to discuss sampling from the manhole and associated safety issues, particularly for manholes in areas with vehicular traffic.

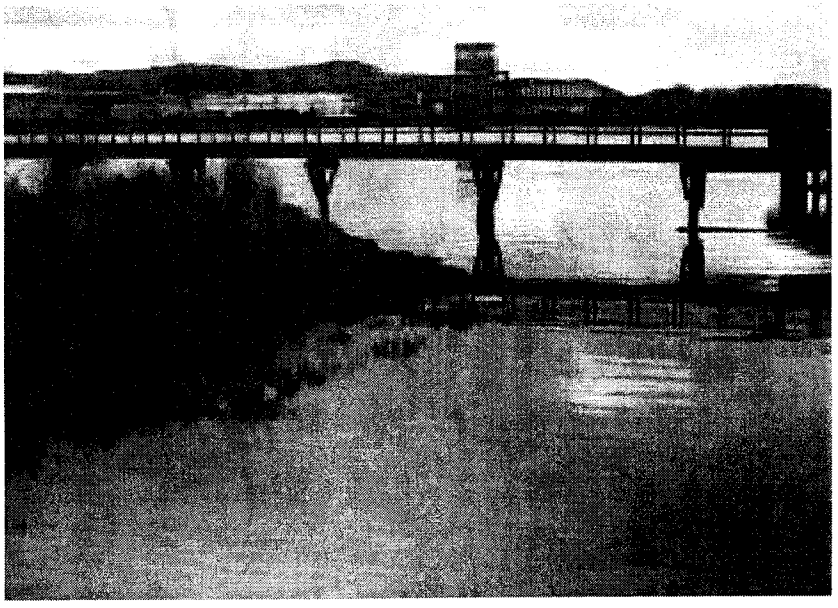
It is important to sample flow from only your facility if possible because otherwise it cannot be determined what the sample actually represents. If you discharge stormwater to a stormwater conveyance system that includes stormwater from other sources, you need to sample before your stormwater commingles with stormwater from other sources. However, if stormwater runs onto your property in an uncontrolled fashion (for example, sheet flow) from adjacent property, into areas of industrial activity on your site so that it becomes a part of the stormwater discharge from your site, this should be included in your sample of stormwater discharge. If you are concerned about this offsite source, you may want to sample that stormwater where it enters your property. If the results show significant pollution, you may want to provide Ecology with a narrative description of the contributing site and sample results to document the relative contribution of the other property or upstream source.

It is a good idea to observe the sampling point(s) you have chosen during actual stormwater runoff conditions to see how readily stormwater can be sampled there. Keep in mind that changing tides and flow conditions in receiving waters, including flood stages may occur during storm events. This may cause a pipe that is discharging your facility's stormwater to become submerged or partly submerged, preventing you from sampling during some conditions.

Obtaining supplies for sampling

The supplies you will want to have on hand before sampling include:

- Sampling bottles from the lab, including a few extra of each type.
- When needed, a pole to hold sample bottles and filament strapping tape.
- Powder-free disposable nitrile or latex gloves . These are sold by medical and laboratory suppliers. Do not use powdered gloves as the powder may contain metals that could contaminate metals samples such as zinc.
- Foul-weather gear.
- One or more coolers, depending on the number of samples to be stored and transported or shipped.
- A bound notebook to serve as a field book for keeping records concerning sampling. Notebooks with waterproof pages are available for these field notes at office supply stores. The information to be included in the notes will be described in the *"Keeping Records"* section of this guide. You may find it helpful to create a standardized form containing the information in this as well.



Planning Just Prior to Stormwater Sampling

Sample during the first 12 hours of a stormwater discharge

Now that the bulk of the planning for sampling is complete, there are a few things to keep in mind before deciding to actually begin sampling.

Being prepared

It is important to assemble everything that will be needed for the sampling event ahead of time because opportunities to sample during storm events often come with little advance notice. Complete the identification tags and Lab Services Required form. Place the tags, lab form, field notebook, permanent ink pen, meter, and pH paper in the cooler with the sample bottles. Have resealable plastic bags or other means on hand to keep the pH paper dry. If you are using a turbidity meter or pH meter, be prepared to protect them from the rain. Have foul-weather gear ready and available. It will be necessary to keep sufficient ice onsite or plan to purchase ice that day.

Choosing when to sample

The permit requires that you sample the discharge from each designated location at least once per quarter:

- 1st Quarter = *January, February, and March*
- 2nd Quarter = *April, May, and June*
- 3rd Quarter = *July, August, and September*
- 4th Quarter = *October, November, and December*

You will need to sample the "first fall storm event" each year. The permit defines the "first fall storm event" as the first time after October 1st that precipitation occurs and results in a stormwater discharge from the facility. Please note that you are not required to sample storm events that outside of normal business hours or in unsafe conditions.

Collect samples within the first 12 hours of stormwater discharge. If you

are not able to collect a sample within the first 12 hours, collect the sample as soon as possible. In the sampling records, keep documentation explaining why you could not collect samples within the first 12 hours.

If your facility is located in an area that is covered by a standing snow pack for days at a time during a year of normal precipitation, you may alternatively sample a snowmelt event during the winter or spring quarter.

Check weather forecasts

Keeping up with the weather forecast and planning so that sampling can be carried out on short notice are the keys to successful sampling.

Local forecasts, including televised satellite and radar images can give an indication of the expected intensity of coming storms. The National Weather Service is an excellent source of information on upcoming storms. It also includes local current radar and satellite images. Their website is: *http://www.wrh.noaa.gov/index.php*.

A number of commercial websites, such as *http://www.weather.com/* and *http://www.accuweather.com/* also provide weather information and forecasts.

When evaluating a weather forecast, consider indications of expected intensity, for example "90% chance" rather than "30% chance" and "rain" rather than "showers." Over the telephone, National Weather Service personnel can often provide estimates of anticipated rainfall amounts. In addition to intensity, consider the predicted duration of the storm. It will be very helpful to spend time observing rain events at your site with attention to how rain intensity relates to stormwater discharges from your site, before you begin sampling.

Once the decision has been made to attempt to sample a storm event, the personnel who will be sampling should be notified and they should prepare to sample. If it does rain, they should be at the sampling sites before stormwater begins discharging so they can document the time of discharge and be ready to sample.

Take notes! Writing down your observations at the time of sampling is important.

Conducting Sampling at Your Facility

Have your sampling kit ready to go.

After you have selected a storm event and it begins raining, the personnel conducting the sampling should prepare their equipment and go to the sampling site(s). They will be collecting grab samples at the sampling site(s), placing the samples in picnic coolers containing ice, and keeping notes in a field book. Sampling for the first time may require working out some difficulties, but after performing these duties once, future sampling will not be as difficult.

Checklist for sampling

Because stormwater sampling is not a daily part of the workload of a facility, it is a good idea to keep a checklist of things to have prepared before sampling and to do during sampling. You can make the checklist by jotting down the things you did for the first sampling event to remember for subsequent sampling events. If necessary, update this checklist based on the experience you gain with each sampling event.

How to fill sample bottles

This section and an illustrated appendix at the end of this guide describe how to collect a sample properly. Collecting a grab sample can be as simple as holding a bottle under the stormwater falling from a pipe and filling the bottle properly. Still, the person doing the sampling must use care in applying the principles outlined below so that the sample will be representative of the water being sampled. Additional information regarding grab sampling is available in Ecology's standard operating procedures (SOPs) for grab sampling online at *http://www.ecy.wa.gov/programs/eap/qa/Agency/ECY_SOP_GrabSampling_v1_0.pdf.*

Simple principles of good grab sample collection:

◆ **Wear disposable powder-free gloves** when sampling.

◆ **Grab samples with the stormwater entering directly into bottles** supplied by your lab rather than by transferring the samples from a container that may not be clean. Metal contamination of ordinary containers is common and household detergents often contain phosphorus, a tested parameter for some industries. Again, transferring the sample from another container is not an option for TPH samples under any circumstances.

◆ **When holding the sample bottle** your lab has provided, keep your hands away from the opening in order to prevent contaminating the sample.

◆ **Always hold the bottle with its opening facing upstream** (into the flow of water) so that the water enters directly into the bottle and does not first flow over the bottle or your hands.

◆ **Sample where the water has a moderate flow** and, if possible, some turbulence, so that the stormwater discharge will be well-mixed and the sample will be representative. Sampling in still water should be avoided. Include in your field book a note about the sample location and how briskly the water appears to be moving.

◆ **Sample from a central portion of the stormwater flow**, avoiding touching the bottom of channels or pipes so as not to stir up solid particles.

◆ **Do not rinse or overfill the bottles.** The bottles supplied by your lab for some parameters (ammonia and phosphorus) will include small

amounts of liquid preservative (generally a few drops). Fill the bottle to about ½ inch of the top (not quite full) to ensure that no preservative is lost.

◆ **As soon as the sample is collected,** cap the bottle and label it. It is important that the bottles are labeled correctly so that the lab will be able to identify samples by sample site and ensure proper preservation for each parameter. It is a good idea to place sample bottles in reclosable bags. Place the samples in a picnic cooler partially filled with ice. Plan to maintain ice in the picnic cooler until the samples arrive at the lab. Remember to make certain that the samples will be delivered to the lab soon enough for the lab to meet holding times.

TPH sampling raises additional concerns:

◆ **Oil and grease floats on water** so TPH sampling requires special attention. TPH samples must be collected directly into the sample bottles supplied by the lab because oil and grease tends to stick to the sides of containers. Do not rinse the sampling bottles beforehand or pour the sample from another container. Do not fill the bottle completely and do not pour out some of the sample if the bottle is overfilled by mistake. If you do overfill a bottle, use a new bottle instead to collect your sample. Because you only get one try at filling a TPH bottle, it is a good idea to have plenty of extra bottles on hand.

◆ **TPH samples should be collected** as the stormwater falls from a pipe or from a running, turbulent stream of flow when possible so the source will be well mixed. When the samples must be collected from a water surface, the person holding the bottle should plunge it below the surface in a sweeping arc and then bring it upwards through the water surface again, so the water surface is broken twice by the mouth of the bottle. Be sure to note in your field book how you collected your samples as this is especially important for the TPH sample.

Keeping records

Section S9 on page 37 of the general permit specifies requirements for reporting and recordkeeping. In order to comply with the requirement that lab reports include sampling date and sampling location, you will need to supply this information to the lab when submitting samples. You can do this by using the sample location as the field station identification on your labels or sample tags.

You should purchase a notebook for use in the field. Water resistant "rite in the rain" notebooks serve the purpose well.

Section S4.B3.on page 22 of the permit requires that you record the date, exact place, method, time of sampling or measurement, and the name of the individual who performed the sampling or measurement (the section also specifies some requirements for lab recordkeeping). Record following information for each stormwater sample taken and make it available for Ecology review:

a) Sample date.

b) Sample time.

c) A notation describing if the Permittee collected the sample within the first 12 hours of stormwater discharge events.

d) An explanation of why the Permittee could not collect a sample within the first 12 hours of a stormwater discharge event, if it was not possible.

e) Sample location (using SWPPP identifying number).

f) Method of sampling, and method of sample preservation, if applicable.

g) Name of the individual who performed the sampling.

Take notes! Writing down your observations at the time of sampling is important.

Get the best sample you can.

Although not required, it would also be beneficial to record the following information:

◆ Weather preceding the sampling event:
- how many days/weeks/months since last significant rainfall.
- estimate of time it began raining.
- estimate of time that discharge began at the sampling point.
- amount (inches) and/or intensity of precipitation.
- whether discharge includes ice or snowmelt runoff.

◆ How you collected the sample, example, "from a ditch by hand" or "from a manhole with the bottles on a pole".

◆ The number and types (parameters) of samples collected.

◆ Field measurement results, such as pH or visible oil sheen.

◆ Any unusual circumstances that may affect the sample results.

Entries in the field book should be made with ink. If you make an error in the field book, cross it out rather than whiting out or erasing. Number the pages of the field book consecutively. To ensure that the bound field book is a complete record, do not rip pages from it.

When the sampled storm doesn't meet the required criteria

There may be times when, despite your best efforts, you are unable to collect grab samples during the first 12 hours of a storm event. When this happens, the general permit states that the permittee must still collect and submit a stormwater sampling result, and must include an explanation with the sampling records (e.g., record in field notebook).

Special Sampling Considerations

Safety should be the primary consideration in sampling. Samples should never be collected in a way that compromises the safety of the sampler. In cases where there is a physical hazard, such as a trip hazard or when sampling near deep water bodies, samplers should work in pairs. Do not wade in water where the estimated depth in feet times the velocity in feet per second is equal to or greater than 8, as swift currents can lead to drowning accidents. Be aware of the slip hazard common near the banks of water bodies and decide whether a bank is too steep to negotiate safely. Safety comes down to individual judgment. Never put yourself in a position you consider to be unsafe. Collecting grab samples of stormwater is basically a simple process but an important one since getting good results depends on proper sampling. Samples can be collected easily in some locations, but not all stormwater discharges are as readily sampled as the flow in a ditch or from a pipe falling into a receiving water. Below are some situations you may encounter and suggested approaches for handling them. Because TPH samples must be collected directly into the bottle supplied by the lab we will consider only methods for collecting samples directly by hand or with a bottle attached to a pole. When sampling in these or other situations, keep in mind the steps outlined in the section, *How to Fill Sample Bottles*. Additional information is available in Ecology's standard operating procedures (SOPs) for stormwater sampling available online at *http://www.ecy.wa.gov/programs/eap/quality.html*.

Sampling as stormwater discharges from a pipe into a receiving water

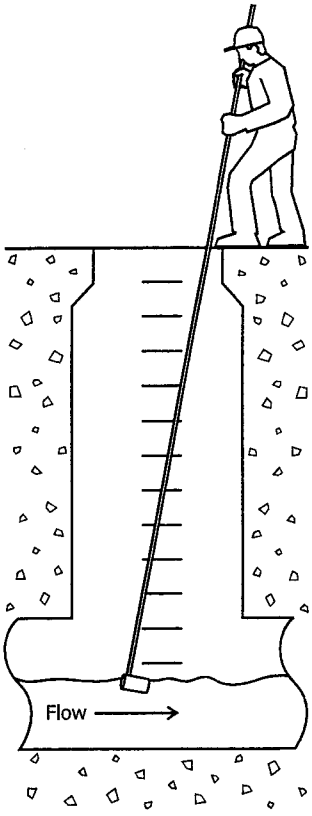
If stormwater is being discharged from your facility through a pipe into a ditch, creek, or other receiving water, it can be readily sampled as it falls from the pipe before it reaches the receiving water if the discharge pipe is safely accessible and not submerged. Hold the bottles with the bottle opening facing upstream into the flow and be sure not to overfill them. You may need to fasten the collection bottles to a pole to reach the pipe. Attaching a bottle to a pole is described in the section below, *Sampling from a Manhole.*

Sampling from a manhole

When sampling from the manhole of a municipal storm sewer, remember to contact the municipality beforehand. Be sure to discuss safety concerns when talking to the municipality about sampling. Open a manhole with a hook or pick axe, exercising care not to drop the manhole cover on hands or feet. **You should not, under any circumstances, enter the manhole unless trained to safely enter confined spaces**, but you can sample the flow in a manhole from above ground by taping the sampling bottles, one at a time, to a pole and lowering the pole into the manhole.

Each bottle can be fastened to the pole by holding the bottle against it and wrapping tape tightly around the bottom and the top of the bottle as you hold the bottle firmly to the pole. Filament strapping tape works well for this purpose as it is waterproof and strong. If the flow in the storm sewer is shallow, the bottle may have to be positioned horizontally with the bottle's opening somewhat higher than its bottom. When sampling in a manhole, be

Don't take risks. Know how to sample safely.



When sampling from a manhole, use a pole to safely sample from above ground. Avoid touching the sides of the manhole or pipes with the bottle to prevent contamination. Place the opening of the bottle upstream so that the flow enters the bottle directly.

careful not to scrape the bottle against the sides of the pipe to avoid picking up extras solids in your sample.

Collecting into bottles for TPH samples with a pole is done by plunging the bottle on the pole below the water surface and back upwards. This must be done as a single motion and only once. Because you only get one try at getting a good TPH grab sample, it may take some practice and extra bottles to collect the amount of sample you need without overfilling the bottle.

Collecting samples, other than TPH, into bottles with preservative can be done by quickly plunging the pole into the flow repeating if necessary until the bottle is most but not all of the way full. If you overfill the bottle, remove it, tape a clean bottle to the pole, and try again. Be sure, when collecting samples with a pole, to follow clean principles by keeping the pole downstream of the bottle while sampling.

Sampling from a drainage ditch or swale

If a drainage ditch carries stormwater flow from your facility offsite, and if it carries no flow other than the flow from your facility, you can sample the water in the ditch simply by placing the bottle where the flow is free, with the bottle opening facing upstream. If you cannot reach a freely flowing portion of the ditch by hand, you may need to attach the bottles, one at a time, to a pole for sampling. Follow the procedure outlined in the section, *How to Fill Sample Bottles.*

If the flow is carried in a small ditch or swale, you can install a barrier device in the channel or deepen a small area so you can gain enough depth of flow to sample directly into the bottles. Make sure to allow for sufficient time after disturbing the bottom so that the solids resulting from muddying the water will not become part of your sample.

Sampling sheet flow

It is not always possible to sample stormwater runoff in locations such as ditches or pipes where the flow is concentrated. Sometimes the permittee has no choice but to select sample locations for which sheet flow is sampled before it becomes concentrated. Approaches to sampling sheet flow are described below and illustrated in the figures that follow.

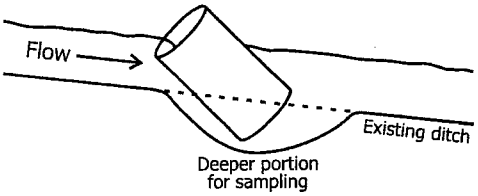
In some cases, a stormwater discharge from a facility is not concentrated at any point and leaves the property in the form of sheet flow as it runs off a work area or driveway or grassy area. In this case the flow may be too shallow for the collection bottle to be filled with sample. It is often possible to find a way to collect the stormwater runoff in these situations.

One way to concentrate sheet flow is to install a barrier device or trough, gutter, or ditch to intercept and concentrate stormwater flow. As with other sample sites, the flow should be moving and somewhat turbulent so the samples will be well-mixed. Be sure that any excavation you do does not expose the stormwater to be sampled to newly worked soil surfaces that the runoff may erode, increasing the solids in your samples. You may want to consider lining the trough, gutter, or ditch with plastic. Be sure not to introduce materials such as metals that include zinc that may contaminate the samples. Sheet flow on paved areas can be concentrated and collected by constructing small bumps, similar to speed bumps.

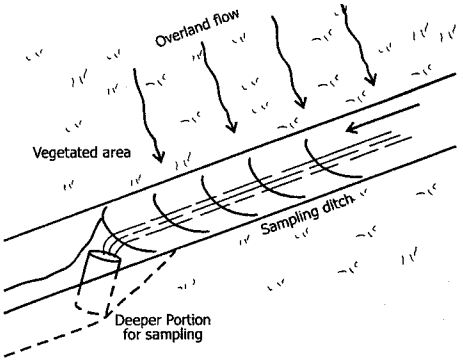
Another way to collect samples from sheet flow is to use a special peristaltic hand pump to pump samples from shallow surface flows. This method is of limited use for collecting the samples required by the general permit as it cannot be used to collect TPH samples.

Roger Bannerman of the Wisconsin Department of Natural Resources has developed simple devices to grab samples of sheet flow from paved areas, rooftops, and lawns. Though the devices are intended to be used for simple, automatic sampling, pouring a container of collected sample into other sample bottles, the ways in which they intercept and concentrate flows can be adopted for direct grab sampling.

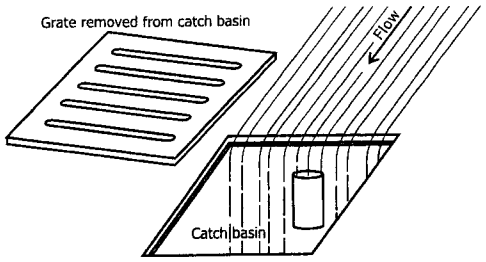
The following figures illustrate the methods of sampling sheet flow discussed above:



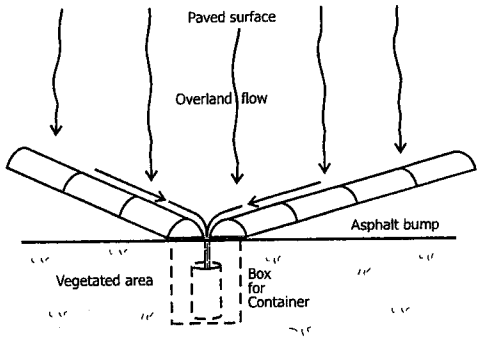
Deepening an existing ditch can allow samples to be collected directly into bottles in some cases. Be careful not to stir up solids from the sides or bottom of the ditch.



Overland flow from vegetated areas can be sampled by constructing a shallow ditch to intercept the runoff and a deepened area to place bottles to catch the runoff.



Runoff entering a catch basin can sometimes be collected directly into bottles by removing the grate and allowing the runoff to fall into the bottles.



Overland flow on paved areas can be sampled by constructing asphalt or concrete bumps to collect and concentrate the flow. A box positioned below ground surface in the paved area or the edge of an unpaved area can provide a place to collect samples directly into bottles. Please note that dirt and other debris can often build up along the bumps and in the "v" so, you may want to clean the area prior to taking the sample.

Sampling from a stormwater detention pond or other BMP

When stormwater from a facility discharges after flowing through a detention pond or other treatment system, sample as the stormwater flows out at the discharge point. Ponds may hold stormwater for a time before discharge begins. Sample within the first 12 hours from when the pond begins to discharge.

Ecology Wants to Hear from You

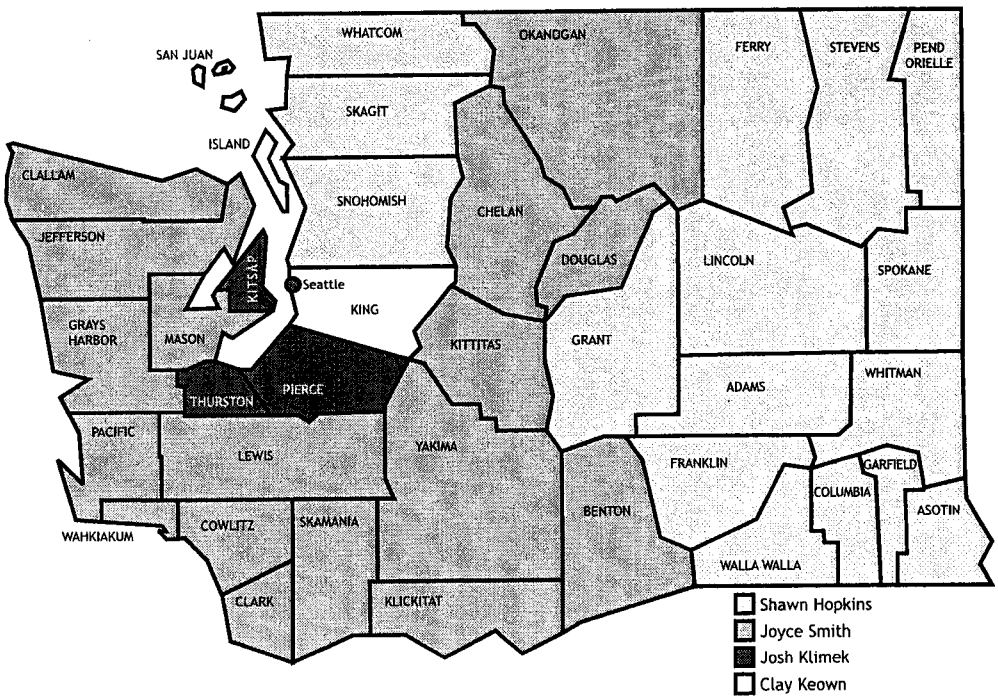
If you have suggestions on how Ecology can improve this guidance document, have developed innovative sampling techniques, or just want to comment on stormwater sampling, please contact the appropriate permit administrator for your county:

◆ *City of Seattle, Kitsap, Pierce, or Thurston County*
Josh Klimek
360-407-7451
jokl461@ecy.wa.gov

◆ *Island, King, or San Juan County*
Clay Keown
360-407-6048
ckeo461@ecy.wa.gov

◆ *Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Skagit, Snohomish, Spokane, Stevens, Walla Walla, Whatcom, or Whitman County*
Shawn Hopkins
360-407-6437
shop461@ecy.wa.gov

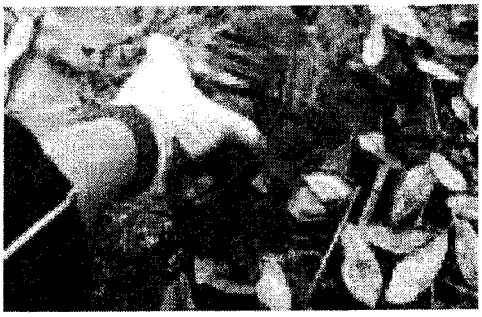
◆ *Benton, Chelan, Clallam, Clark, Cowlitz, Douglas, Grays Harbor, Jefferson, Kittitas, Klickitat, Lewis, Mason, Okanogan, Pacific, Skamania, Wahkiakum, or Yakima County*
Joyce Smith
360-407-6858
josm461@ecy.wa.gov



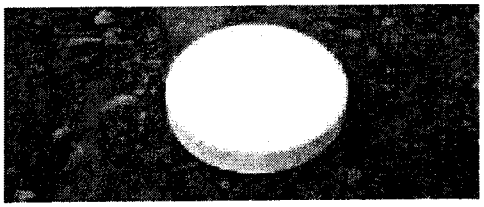
Appendix - Proper and Improper Methods of Sampling

DO *always wear gloves when taking samples.*

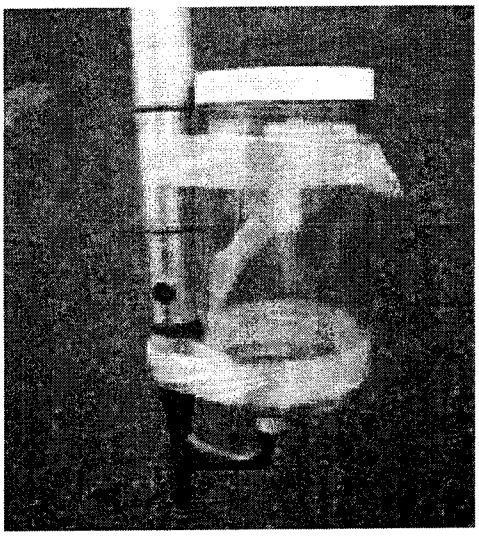
DO NOT *touch openings of bottles. Keep bottles clean to prevent contamination.*



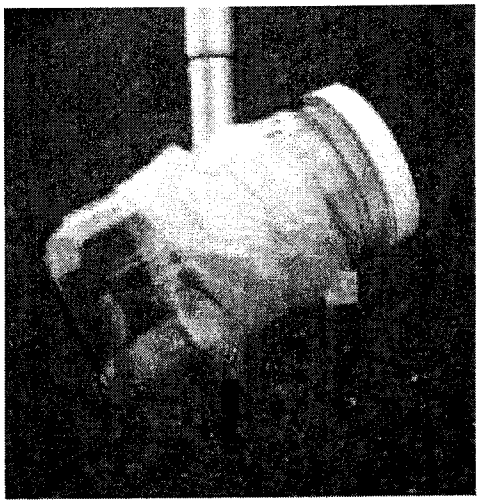
DO NOT *sample in stagnant areas with little flow.* **DO NOT** *stir up bottom sediments or allow foreign materials to enter the sample bottle. (***DO** *be careful to grab a clean sample in cases where stormwater runoff is shallow.) If the runoff is so shallow that it is not possible to sample without the sample being contaminated in the process, then find an alternative way to sample.*



DO NOT *allow bottle lids to touch ground. Keep lids clean to prevent contamination.*

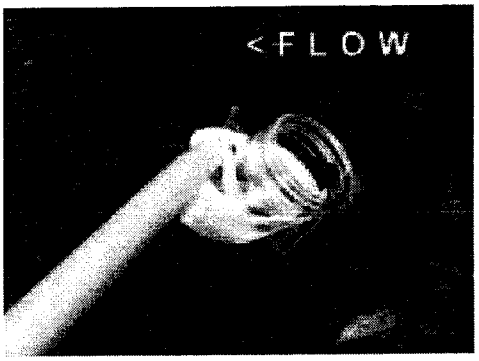


DO *attach a bottle to a pole for sampling in manholes or when a hand sample would be in stagnant water. A boathook is used in this example and the bottle is attached to it with filament strapping tape.*

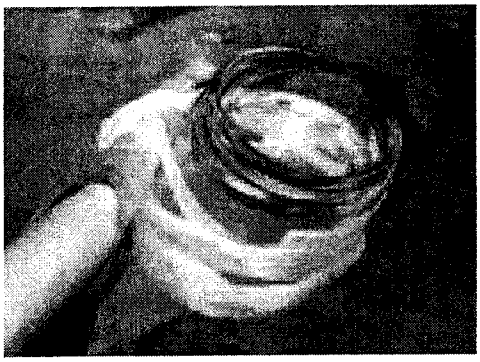


If the water is too shallow to sample with the bottle upright on the pole, try taping it on sideways, but tilted up slightly.

DO NOT *sample with the bottle opening facing downstream, when using a pole or sampling by hand. Water flowing past your container, pole, or hand and into the container can be contaminated by such contact.*



DO *sample with the opening of the bottle facing upstream, into the flow so the water will enter directly into the bottle. This is true when sampling either by hand or with a pole.* **DO** *sample water that is rapidly flowing rather than stagnant.*



DO NOT *allow water to overfill the bottle, particularly not for sample bottles with preservative. TPH samples should be collected from water falling into the bottle when possible, or otherwise in a single swoop.*

DO *collect samples without overfilling the bottles.*

References

Bannerman, R.T.; Owens, D.W.; Dodds, R.B.; Hornewer, N.J., 1993. *Sources of Pollutants in Wisconsin Stormwater*, Wat. Sci. Tech. Vol. 28. No. 3-5, pp 241-259.

Colorado Department of Public Health and Environment; Water Quality Control Division; Colorado Discharge Permit System, 1996. CDPS Stormwater Sampling Guidance Document.

Dodson, Roy D., 1995. *Storm Water Pollution Control: Municipal, Industrial, and Construction NPDES Compliance*, 1999, 1995. Second Edition. McGraw-Hill.

Ecology, 2005. *The Industrial Stormwater General Permit: A National Pollutant Discharge Elimination System and State Waste Discharge General Permit for Stormwater Discharges Associated with Industrial Activities.* State of Washington Department of Ecology, January 14, 2005.

Ecology, 2000, 1999. *Field Operations and Safety Manual: Environmental Assessment Program*, Washington State Department of Ecology, Environmental Assessment Program, Updated August 2000.

New Jersey Department of Environmental Protection Division of Water Quality, 1998. *General Sampling and Reporting Guidance for PAS and ADI Form.*

Thrush, Cindy and De Leon, Dana B., 1993. *Automatic Stormwater Sampling Made Easy*, Water Environment Federation.

United States Environmental Protection Agency, 1992. NPDES Storm Water Sampling Guidance. EPA 833-B-92-001.

Waschbusch, R.J.; Selbig, W.R.; Bannerman, R.T., 2000. *Sources of Phosphorus in Stormwater and Street Dirt from Two Urban Residential Basins in Madison, Wisconsin, 1994-95.* National Conference on Tools for Urban Water Resource Management and Protection Proceedings, February 7-10, 2000, Chicago, IL.

Wisconsin Department of Natural Resources Bureau of Water Management Municipal Wastewater Section – Storm Water Unit, 1994. *Wisconsin's Guidance for Industrial Storm Water Monitoring.*

Torno, Harry C., 1995. *Stormwater NPDES Related Monitoring Needs*, American Society of Civil Engineers.

Stormwater Sampling Field Data Form

Complete one form for each outfall.

Facility Name: _____

Sampling Date: _____

Sampler (Print Name): _____ Initials: _____

Rainfall Information

Prior Rainfall Data: Date: _____ Depth: _____ inches.

Current Rainfall Event Start: _____ (am pm)

Current Rainfall Event Total Depth: _____ inches.

Discharge Information

Outfall I.D. #: _____

Time Outfall Flow Began: _____ (am/pm)

Outfall Sampling Point Description (Check One):

_____ Pipe Culvert _____ Curb Inlet _____ Grate Inlet

_____ Ditch/Channel _____ Settling Basin/Pond _____ Swale

Other: _____

Estimation of Total Volume of Discharge Sampled: _____ gallons

Sampling Information

GRAB SAMPLE: Total Suspended Solids: To be sampled no more than 30 minutes after discharge begins; one liter minimum, glass w/preservative.

Sample Label ID: _____ Time: _____ (am/pm)

Bottle Size: _____ mL pH: _____

Sample Comments: _____

Additional Field Notes: _____

_____

Appendix I

Quarterly Visual Monitoring Form

5595231651

New York State Department of Environmental Conservation
Division of Water
Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505
Phone: (518) 402-8111 **Fax:**(518) 402-9029
Website: http://www.dec.ny.gov/

Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities
(GP-0-12-001)

Quarterly Visual Monitoring Form

Permit Number: N Y R 0 0 _ _ _ _

Facility Name: _____

Outfall Number: _ _ _

Examiner's Name: _____

Examiner's Title: _____

Quarter/Year: _ / _ _ _ _

Rainfall Amount: _____

Qualifying Storm? ○ Yes ○ No

Runoff Source? ○ Rainfall ○ Snowmelt

Date/Time Collected: _ _ / _ _ / _ _ _ _ : _ _ AM / PM

Date/Time Examined: _ _ / _ _ / _ _ _ _ : _ _ AM / PM

1. Does the stormwater appear to be colored? ..... ○ Yes ○ No

If yes, describe

2. Is the stormwater clear or transparent? ..... ○ Yes ○ No

If yes, which of the following best describes the clarity of the stormwater: ..... ○ Clear ○ Milky ○ Opaque

3. Can you see a rainbow sheen effect on the water surface?..... ○ Yes ○ No

If yes, which best describes the sheen?..... ○ Rainbow Sheen ○ Floating Oil Globules

4. Does the sample have an odor? ..... ○ Yes ○ No

If yes, describe

5. Is there something floating on the surface of the sample? ..... ○ Yes ○ No

If yes, describe

6. Is there something suspended in the water column of the sample? ..... ○ Yes ○ No

If yes, describe

7. Is there something settled on the bottom of the sample?..... ..... ○ Yes ○ No

If yes, describe

8. Is there foam or material forming on the top of the sample surface?..... ○ Yes ○ No

If yes, describe

Detail any concerns, corrective actions taken and any other indicators of pollution present in the sample:

Stormwater Examiner's Signature

Appendix J

Dry Weather Monitoring Form

Annual Dry Weather Flow Monitoring Form

The facility must perform and document at least one dry weather flow inspection each year after at least three (3) consecutive days of no precipitation. The dry weather flow inspection shall be conducted to determine the presence of non-stormwater discharges to the stormwater drainage system exists.

Has there been at-least 3 consecutive days of no precipitation prior the date of this inspection? (Yes/No*)
*If "NO" then the annual dry weather inspection cannot be performed.

Site Name: _____ Outfall Location Number: _____

Person Conducting Inspection: _____ Date: _____

Discharge Observed? (Yes/No)

Description of Discharge (If Any): _____

Discharge Source: _____

_____

_____

Corrective Action to eliminate Discharge: _____

_____

_____

Corrective Action Follow Up: _____

_____

_____

Appendix K

Corrective Action Form

5748554626

New York State Department of Environmental Conservation
Division of Water
Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505
Phone: (518) 402-8111 **Fax:**(518) 402-9029
Website: http://www.dec.ny.gov/

Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities (GP-0-12-001)

Corrective Action Form/Non Compliance Event Form

Permit Number
N Y R 0 0 | | | | |

Facility Name

Contact First Name

Contact Last Name

Contact Phone
| | | | - | | | | - | | | | |

Contact eMail

Is this form being used to report a Corrective Action or a Non Compliance Event? ○ Corrective Action ○ Event of Non Compliance

Instruction for using this form:
- Complete a separate attachment for each Parameter/Pollutant of Concern exceeded and for every outfall where the exceedance occurred.
- If using this form as a Corrective Action Form, all questions (1 through 12) on each attachment must be answered
- If using this form as a Non-Compliance Event Form, questions 1, 2, 3, and 9 through 12 on each attachment must be answered
- Number each attachment (1 of XX, 2 of XX, 3 of XX, etc.)
- Initial and date each attachment
- Fill in number of attachments included in the box below
- The Owner/Operator must sign and date the certification statement below

Number of attachments included: | | | |

Certification

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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possiblity of fine and imprisonment for knowing violations.

O/O Signature First Name (please print or type) | MI | O/O Signature Last Name (please print or type)

Date / /

Signature

1. Parameter/Pollutant of Concern Exceeded: [ ]

Outfall No.: [ ][ ][ ] 3. Date of Exceedance: [ ][ ] / [ ][ ] / [ ][ ][ ][ ]

4. Permitted Value: [ ][ ][ ][ ][ ][ ] Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

5. Reported Value: [ ][ ][ ][ ][ ][ ] Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

6. Is the Parameter/Pollutant of Concern exceeded subject to quarterly compliance monitoring for discharges to impaired waterbodies? ○ Yes ○ No

If No, provide Corrective Action Sample information below. If Yes, you next quarterly sample can be used as your Corrective Action Sample.

7. Corrective Action Sample Date: [ ][ ] / [ ][ ] / [ ][ ][ ][ ]

8. Corrective Action Sample Value: [ ][ ][ ][ ][ ][ ] Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

9. Have you claimed this outfall as a Representative Outfall? ○ Yes ○ No

If Yes, Corrective Actions must be must be completed for all outfalls claming the Representative Outfall Waiver.

10. Describe the exceedance and its cause(s):

11. Describe the Corrective Action(s) taken to address the exceedance:

12. Describe the preventative (long term) Corrective Action(s) taken (including any SWPPP modifications) to prevent a future exceedance:

3548554622

1. Parameter/Pollutant of Concern Exceeded: _____

2. Outfall No.: ___ 3. Date of Exceedance: __ / __ / ____

4. Permitted Value: _____ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

5. Reported Value: _____ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

6. Is the Parameter/Pollutant of Concern exceeded subject to quarterly compliance monitoring for discharges to impaired waterbodies? ○ Yes ○ No

If No, provide Corrective Action Sample information below. If Yes, you next quarterly sample can be used as your Corrective Action Sample.

7. Corrective Action Sample Date: __ / __ / ____

8. Corrective Action Sample Value: _____ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

9. Have you claimed this outfall as a Representative Outfall? ○ Yes ○ No

If Yes, Corrective Actions must be must be completed for all outfalls claming the Representative Outfall Waiver.

10. Describe the exceedance and its cause(s):

11. Describe the Corrective Action(s) taken to address the exceedance:

12. Describe the preventative (long term) Corrective Action(s) taken (including any SWPPP modifications) to prevent a future exceedance:

9731554622

1. Parameter/Pollutant of Concern Exceeded: _____

2. Outfall No.: ☐☐☐ 3. Date of Exceedance: ☐☐ / ☐☐ / ☐☐☐☐

4. Permitted Value: ☐☐☐☐☐☐ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

5. Reported Value: ☐☐☐☐☐☐ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

6. Is the Parameter/Pollutant of Concern exceeded subject to quarterly compliance monitoring for discharges to impaired waterbodies? ○ Yes ○ No

If No, provide Corrective Action Sample information below. If Yes, you next quarterly sample can be used as your Corrective Action Sample.

7. Corrective Action Sample Date: ☐☐ / ☐☐ / ☐☐☐☐

8. Corrective Action Sample Value: ☐☐☐☐☐☐ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

9. Have you claimed this outfall as a Representative Outfall? ○ Yes ○ No

If Yes, Corrective Actions must be must be completed for all outfalls claming the Representative Outfall Waiver.

10. Describe the exceedance and its cause(s):

11. Describe the Corrective Action(s) taken to address the exceedance:

12. Describe the preventative (long term) Corrective Action(s) taken (including any SWPPP modifications) to prevent a future exceedance:

Appendix L

Corrective Action Waiver Form

Corrective Action Waiver Form

This form was not made available by the Department to be included in this required update.
Tuesday, January 21, 2014
When the form is available please insert here.

Appendix M

Non-Compliance Event Form

5748554626

New York State Department of Environmental Conservation
Division of Water
Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505
Phone: (518) 402-8111 **Fax:**(518) 402-9029
Website: http://www.dec.ny.gov/

Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities (GP-0-12-001)

Corrective Action Form/Non Compliance Event Form

Permit Number
N Y R 0 0 _ _ _ _

Facility Name

Contact First Name

Contact Last Name

Contact Phone
_ _ _ - _ _ _ - _ _ _ _

Contact eMail

Is this form being used to report a Corrective Action or a Non Compliance Event? ○ Corrective Action ○ Event of Non Compliance

Instruction for using this form:
- Complete a separate attachment for each Parameter/Pollutant of Concern exceeded and for every outfall where the exceedance occurred.
- If using this form as a Corrective Action Form, all questions (1 through 12) on each attachment must be answered
- If using this form as a Non-Compliance Event Form, questions 1, 2, 3, and 9 through 12 on each attachment must be answered
- Number each attachment (1 of XX, 2 of XX, 3 of XX, etc.)
- Initial and date each attachment
- Fill in number of attachments included in the box below
- The Owner/Operator must sign and date the certification statement below

Number of attachments included: _ _ _

Certification

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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possiblity of fine and imprisonment for knowing violations.

O/O Signature First Name (please print or type) | MI | O/O Signature Last Name (please print or type)

Date: _ _ / _ _ / _ _ _ _

Signature

5129554629

1. Parameter/Pollutant of Concern Exceeded: _____

2. Outfall No.: ___ 3. Date of Exceedance: __ / __ / ____

4. Permitted Value: _____ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

5. Reported Value: _____ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

6. Is the Parameter/Pollutant of Concern exceeded subject to quarterly compliance monitoring for discharges to impaired waterbodies? ○ Yes ○ No

If No, provide Corrective Action Sample information below. If Yes, you next quarterly sample can be used as your Corrective Action Sample.

7. Corrective Action Sample Date: __ / __ / ____

8. Corrective Action Sample Value: _____ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

9. Have you claimed this outfall as a Representative Outfall? ○ Yes ○ No

If Yes, Corrective Actions must be must be completed for all outfalls claming the Representative Outfall Waiver.

10. Describe the exceedance and its cause(s):

11. Describe the Corrective Action(s) taken to address the exceedance:

12. Describe the preventative (long term) Corrective Action(s) taken (including any SWPPP modifications) to prevent a future exceedance:

3548554622

1. Parameter/Pollutant of Concern Exceeded:

2. Outfall No.: 3. Date of Exceedance: / /

4. Permitted Value: Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

5. Reported Value: Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

6. Is the Parameter/Pollutant of Concern exceeded subject to quarterly compliance monitoring for discharges to impaired waterbodies? ○ Yes ○ No

If No, provide Corrective Action Sample information below. If Yes, you next quarterly sample can be used as your Corrective Action Sample.

7. Corrective Action Sample Date: / /

8. Corrective Action Sample Value: Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

9. Have you claimed this outfall as a Representative Outfall? ○ Yes ○ No

If Yes, Corrective Actions must be must be completed for all outfalls claming the Representative Outfall Waiver.

10. Describe the exceedance and its cause(s):

11. Describe the Corrective Action(s) taken to address the exceedance:

12. Describe the preventative (long term) Corrective Action(s) taken (including any SWPPP modifications) to prevent a future exceedance:

9731554622

1. Parameter/Pollutant of Concern Exceeded: _____

Outfall No.: ___ 3. Date of Exceedance: __ / __ / ____

4. Permitted Value: ______ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

5. Reported Value: ______ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

6. Is the Parameter/Pollutant of Concern exceeded subject to quarterly compliance monitoring for discharges to impaired waterbodies? ○ Yes ○ No

If No, provide Corrective Action Sample information below. If Yes, you next quarterly sample can be used as your Corrective Action Sample.

7. Corrective Action Sample Date: __ / __ / ____

8. Corrective Action Sample Value: ______ Units: ○ mg/L ○ ng/L ○ ug/L ○ s.u. ○ NTUs

9. Have you claimed this outfall as a Representative Outfall? ○ Yes ○ No

If Yes, Corrective Actions must be must be completed for all outfalls claming the Representative Outfall Waiver.

10. Describe the exceedance and its cause(s):

11. Describe the Corrective Action(s) taken to address the exceedance:

12. Describe the preventative (long term) Corrective Action(s) taken (including any SWPPP modifications) to prevent a future exceedance:

Appendix N

Secondary Containment Discharge Monitoring Log

Secondary Containment Discharge Monitoring Log

Complete this log whenever draining accumulated water from petroleum tank secondary containment.

Date	Tank #	Water Volume	Water Appearance	Drain Closed ✓	Locked ✓	In Good Repair ✓	Outlet Obstruction Free ✓	Initials
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						
		gal						

Appendix O

Annual Comprehensive Site Compliance Evaluation Form

Annual Comprehensive Site Compliance Form

Site Name: _____ Location: _____

A compliance inspection & evaluation report must be made and retained as part of the SWPPP for at least five (5) years from the date permit coverage expires or is terminated.

Qualified Inspectors: _____ Initials: _____

_____ Initials: _____

Date of Inspection/Evaluation: _____

Perform a complete facility inspection including all areas where industrial activities or materials are exposed to stormwater and where spills and leaks have occurred within the past 3 years

Are any of the following conditions observed at the site?

YES / NO Industrial materials, residue or trash on the ground that could contaminate or be washed away in stormwater. Comment: _____

_____

YES / NO Leaks or spills from industrial equipment, drums, barrels, tanks or similar containers. Comment: _____

YES / NO Unauthorized non-stormwater discharges or allowable non-stormwater discharges that are not certified in accordance Section 6.1.11. Comment: _____

_____

YES / NO Off-site tracking of industrial materials or sediment where vehicles enter or exit the site or tracking of material outside of the area where it originates. Comment: _____

_____

YES / NO Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas. Comment: _____

_____

YES / NO Evidence of, or the potential for, pollutants entering or discharging the drainage system. Comment: _____

_____

Annual Comprehensive Site Compliance Form

YES / NO Where discharge outfalls are accessible, they must be inspected to see whether BMPs are effective in preventing significant impacts to receiving waters. Where discharge outfalls are inaccessible, nearby downstream locations must be inspected. Is there any evidence of sheens, turbidity, or scouring? Comment: _____

_____

YES / NO Are the stormwater BMPs identified in the SWPPP operating correctly? Comment: _____

YES / NO Are spill kits present at the site, labeled, and adequately stocked with spill control products? Comment: _____

Identify the locations of the following:

Discharges of pollutants from the site. _____

_____

_____

Previously unidentified discharges of pollutants from the site. _____

_____

_____

BMPs that need to be maintained._____

_____

_____

BMPs that failed to operate as designed or proved inadequate for that location. _____

_____

_____

Locations where additional BMPs are needed that did not exist at the time of the inspection. _____

_____

_____

YES / NO Did you have any incidents of non-compliance this year? Comment: _____

_____

Annual Comprehensive Site Compliance Form

YES / NO Will corrective action be needed for any of the facility's current BMPs or controls?

Comment: _____

_____

_____

_____

Required corrective actions must be completed in accordance with Part III.E of the permit and recorded and retained with the SWPPP.

SWPPP Review

_____ Are there any personnel changes to the Pollution Prevention Team?

_____ Is facility description current?

_____ Is the facility drainage and features map accurate and current?

_____ Are there any new stormwater or non-stormwater discharges?

_____ Are all site BMPs consistent with those identified in the SWPPP?

_____ Are there any new BMPs?

_____ Is the employee training log filled out and up-to-date?

_____ Are all spills within the last three years summarized on the spill reporting form?

_____ Are copies of the sampling results and completed inspection forms stored with the SWPPP?

_____ Have all SWPPP revisions been summarized in the SWPPP?

_____ Are all certifications completed (non-stormwater discharges, annual, no non-compliance events) and stored with the SWPPP?

_____ Have all certifications and sampling results been submitted to NYSDEC prior to February 28th?

Stormwater Sampling Laboratory Analytical Results Summary

A summary of the analytical results from the ongoing stormwater sampling is provided in Table O-1 as required by the permit.

Table 9: Stormwater Sampling Laboratory Analytical Results Summary

Parameters of Concern	Numeric Effluent Guideline		Benchmark Monitoring Cut-off Concentration	Laboratory Detection Limit	Analytical Results Year				
	Daily Maximum	30-Day Average			20___	20___	20___	20___	20___
Total Nitrogen			6 mg/l						
Total Phosphorous (TP)			2 mg/l						
Total Suspended Solids (TSS)	45 mg/l	25 mg/l	100 mg/l						
Total Recoverable Iron			1 mg/l						
Total Recoverable Zinc			110 ug/l						
pH	6.0 - 9.0 s.u.		6.0 - 9.0 s.u.						

Annual Comprehensive Site Compliance Form

This annual compliance inspection and evaluation report has been prepared pursuant to the requirements of the MSGP GP-0-12-001.

Signature: _____ Date: _____

Printed Name: _____

Title: _____

When there are no incidents of non-compliance, the following certification applies:

"I certify that no incidents of non-compliance with the terms of the MSGP-0-12-001 have been identified during the annual site inspection and compliance review, and that the facility is in compliance with the SWPPP."

Signature: _____ Date: _____

Printed Name: _____

Title: _____

Appendix P

Annual Certification Report Form

8812243503

Annual Certification Report
SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (GP-12-01-001)

The owner/operator shall complete this Annual Certification Report form by answering the following questions, describing improvements to the facility's Stormwater Pollution Prevention Plan (SWPPP), providing copies of monitoring results on appropriate Discharge Monitoring Reports forms and signing the certification at the end of this form. This completed report is to be submitted each calendar year by February 28th of the following year to:

MSGP Permit Coordinator
NYSDEC, Bureau of Water Compliance
625 Broadway, Albany, NY, 12233-3506

SECTION I: FACILITY INFORMATION:

Permit I.D. No.: NYR00 ☐☐☐☐ **Report for Calendar Year:** ☐☐☐☐

Owner Name

Facility Name

SECTION II: GENERAL INFORMATION:

1. List the number of stormwater outfalls at the facility that are from areas of industrial activity..... ☐☐☐

2. Is the facility claiming any monitoring waiver(s)? ..... ○ Yes ○ No

If yes, which waiver(s) are you claiming?

- ○ Adverse Climatic Conditions*
- ○ Alternate Certification of "Not Present" or "No Exposure"
- ○ Inactive or Unstaffed Site*
- ○ Representative Outfall*

* If you are claiming a monitoring waiver the appropriate monitoring waiver form must be included with your Discharge Monitoring Report form.

3. Is the information provided in your original Notice of Intent (NOI) submission still accurate and up to date? If not, please submit a Notice of Modification (NOM) to update the facility information ..... ○ Yes ○ No

4. Has a comprehensive Site Compliance Inspection and Evaluation been conducted at the facility in the past year? ... ○ Yes ○ No

5. Is the facility's Stormwater Pollution Prevention Plan (SWPPP) kept up to date and modified when necessary? ..... ○ Yes ○ No

SECTION III: QUARTERLY VISUAL MONITORING:

1. Have the required quarterly visual examinations of stormwater at the facility been performed during this reporting period (See Part.IV.1.a of the MSGP)? ..... ○ Yes ○ No

2. Did any of the quarterly visual examinations result in observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, or other indicators of stormwater pollution and contamination? (If yes, question 2.A, 2.B, and 2.C below must be answered) ..... ○ Yes ○ No

A. Were corrective and follow up actions taken (See Part IV.B.1.a.(5) of the MSGP)? ..... ○ Yes ○ No

B. Has the facility's SWPPP been updated to include modification to existing BMPs or installation of new BMPs to prevent stormwater pollution and contamination from reoccurring (See Part IV.B.1.a.(5)(c) of the MSGP)?..... ○ Yes ○ No

C. Was a follow up visual inspection conducted to ensure corrective and follow up actions were successful (See Part IV.B.1.a.(5)(d) of the MSGP)? ..... ○ Yes ○ No

SECTION IV: ANNUAL DRY WEATHER FLOW MONITORING:

1. Was the annual dry weather flow inspection performed during this reporting period (See Part IV.B.1.b of the MSGP)? ○ Yes ○ No

2. Were any non-stormwater dischargers or indicators of non-stormwater discharges identified? (If no, proceed to Section IV) ○ Yes ○ No

3. Was the source of the non-stormwater discharge identified? (If no, proceed to question 5) ○ Yes ○ No

4. Is the source an allowable non-stormwater discharge (i.e., discharge covered by another SPDES permit or an allowable non-stormwater discharge covered in Part I.C.3 of the MSGP)? (If yes, question 4.A. below must be answered; if no, proceed to question 5) ○ Yes ○ No

A. Has the facility's SWPPP been updated to address the newly identified allowable non-stormwater discharge(s) (See Part IV.B.1.b.(3)(d) of the MSGP)? ○ Yes ○ No

5. Were corrective and follow up actions taken to eliminate the unauthorized non-stormwater discharge (See Part IV.B.1.b.(3) of the MSGP)? ○ Yes ○ No

6. Were corrective and follow up actions successful in eliminating the unauthorized non-stormwater discharge? ○ Yes ○ No

Note: If it is not possible to eliminate the non-authorized stormwater discharge the owner/operator must notify the Department with 14 days.

SECTION V: STORMWATER MONITORING - BENCHMARK PARAMETERS:

1. Is the owner/operator required to monitor stormwater at the facility for benchmark parameters (See Part IV.B.1.c)? (If no, proceed to Section V) ○ Yes ○ No

2. Were there any monitoring problems? (Answer "Yes" if storm event criteria was not met or if the laboratory indicated quality assurance/quality control problems) ○ Yes ○ No

3. Were any of the sampling results from this year higher than the benchmark cut-off concentrations listed in the permit? (If yes, questions 3.A and 3.B below must be answered) ○ Yes ○ No

A. Were corrective and follow up actions taken (See Part IV.B.1.c.(6) of the MSGP)? ○ Yes ○ No

B. Has the facility's SWPPP been updated to include modification to existing BMPs or installation of new BMPs to prevent the benchmark exceedance from reoccurring (See Part IV.B.1.c.(6)(c) of the MSGP) ? ○ Yes ○ No

Note: If you had a benchmark exceedance your Corrective Action Form with follow up sample results are due by July 31 (See Part IV.B.1.c.(6)(d)(iii) of the MSGP).

SECTION VI: STORMWATER MONITORING - COAL PILE RUNOFF:

1. Is the owner/operator required to conduct compliance monitoring for storm water discharges from coal piles (See Part IV.B.1.d of the MSGP? (If no, proceed to Section VI) ○ Yes ○ No

2. Were there any monitoring problems? (Answer "Yes" if storm event criteria was not meet or if the laboratory indicated quality insurance assurance/quality control problems) ○ Yes ○ No

3. Were any of the sampling results from this year higher than the effluent limitations listed in Table IV-1 of the MSGP? (If yes, questions 3.A and 3.B. below must be answered) ○ Yes ○ No

A. Were corrective and follow up actions taken (See Part IV.B.1.d.(6) of the MSGP)? ○ Yes ○ No

B. Has the facility's SWPPP been updated to include modification to existing BMPs or installation of new BMPs to prevent the effluent limitation exceedance from reoccurring (See Part IV.B.1.d.(6) of the MSGP)? ○ Yes ○ No

Note: If you had a effluent limitation exceedance your Corrective Action Form with follow up sample results are due by July 31 (See Part IV.B.1.e.(5)(e)(ii) of the MSGP).

SECTION VII: STORMWATER MONITORING - COMPLIANCE MONITORING

1. Is the owner/operator required to conduct compliance monitoring for storm water discharges subject to Point Source Category Effluent Limitations (See Part IV.B.1.e of the MSGP)? (If no, proceed to Section VII) ..... ○ Yes ○ No

2. Were there any monitoring problems? (Answer "Yes" if storm event criteria was not meet of if the laboratory indicated quality insurance assurance/quality control problems) ..... ○ Yes ○ No

3. Were any of the sampling results from this year higher than the effluent limitations listed in the permit? (If yes, questions 3.A and 3.B. below must be answered) ..... ○ Yes ○ No

A. Were corrective and follow up actions taken (See Part IV.B.1.e.(5) of the MSGP)? ..... ○ Yes ○ No

B. Has the facility's SWPPP been updated to include modification to existing BMPs or installation of new BMPs to prevent the effluent limitation exceeding from reoccurring (See Part IV.B.1.e.(5)(c) of the MSGP? ..... ○ Yes ○ No

Note: If you had an effluent limitation exceedance your Corrective Action Form with follow up sample results are due by July 31 (See Part IV.B.1.e.(5)(e)(ii) of the MSGP).

SECTION VIII: STORMWATER MONITORING - DISCHARGES TO IMPAIRED WATERBODIES:

1. Is the owner/operator required to conduct compliance monitoring for discharges to impaired waterbodies (See Part IV.B.1.g of the MSGP)? (If no, proceed to Section VIII)..... ○ Yes ○ No

2. Were there any monitoring problems? (Answer "Yes" if storm event criteria was not meet of if the laboratory indicated quality insurance assurance/quality control problems) ..... ○ Yes ○ No

3. Were any of the sampling results from this year higher than the benchmark cut-off concentrations or effluent limitations listed in the permit? (If yes, questions 3.A and 3.B below must be answered). ..... ○ Yes ○ No

A. Were corrective and follow up actions taken (See Part IV.B.1.g.(6) of the MSGP)? ..... ○ Yes ○ No

B. Has the facility's SWPPP been updated to include modification to existing BMPs or installation of new BMPs to prevent the benchmark cutoff concentrations or effluent limitations exceedance from reoccurring (See Part IV.B.1.g.(6)(c) of the MSGP)? ..... ○ Yes ○ No

C. Did the follow-up quarterly sample show the corrective and follow up actions to be successful? ..... ○ Yes ○ No

SECTION IX: SUMMARY:

Provide a brief description of any facility changes; problems identified during comprehensive compliance evaluations, quarterly visual observations or monitoring results; and actions taken to improve the quality of the stormwater discharge.

CERTIFICATION

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 inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of 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.

Owner/Operator First Name (please print or type) | MI | Date

Owner/Operator Last Name (please print or type) | Owner/Operator Signature

Appendix Q

Stormwater Sampling Results and Discharge Monitoring Reports

Stormwater Sampling Data Forms
Stormwater Sampling Lab Results
Quarterly Visual Stormwater Monitoring Forms
Discharge Monitoring Reports
Annual Comprehensive Site Compliance Inspection and Evaluation Reports
Annual Certifications
NYSDEC Site Inspection Reports

The above for each year should be filed here.