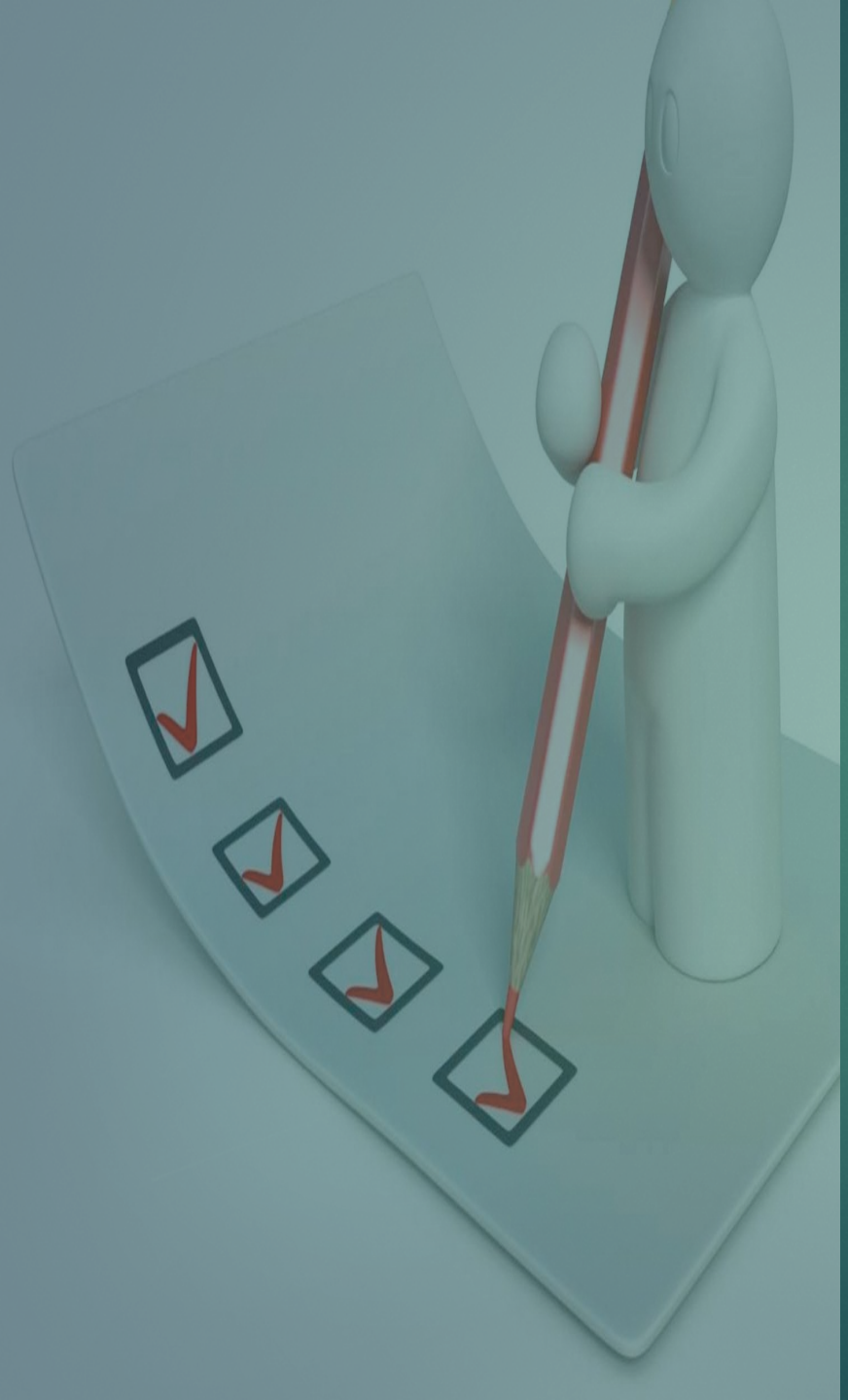
Multi Sector General Permit for Industrial Activities

SECTOR P – LAND TRANSPORTATION AND WAREHOUSING

SECTOR S – AIR TRANSPORTATION FACILITIES

SECTOR Q – WATER TRANSPORTATION



Objectives of this Section

MSGP 1.2

- Eligibility
- Obtaining MSGP Coverage
- Required Controls
  - Non-numeric Technology-Based Effluent Limits
  - Inspections
  - Water Quality Monitoring
    - Sector Specific Benchmark Parameters
    - Effluent Limitations
  - Corrective Actions
  - Reporting & Recordkeeping
- Terminating Coverage

Sector P – Land Transportation and Warehousing

MSGP App. D

Subsector P1: Railroad Transportation
Local and Highway Passenger Transportation
Motor Freight Transportation and Warehousing
United States Postal Service
Petroleum Bulk Stations and Terminals

http://www.wildnatureimages.com/images%204/090325-019.jpg

https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcSLMOSY_MXwB9gV9Z48s6oKXzATev43m1-jglHrp7F79e6obCIF

http://3.bp.blogspot.com/-hWFQkXk1mjA/T7OgdZV76oI/AAAAAAAAAMs/5WBfZwuqbXM/s1600/220003.JPG

Sector S – Air Transportation Facilities

MSGP App. D

Subsector S1: Air Transportation Facilities

http://www.boeing.com/Features/2010/11/img/bca_cargo_700.jpg

Sector Q
Water Transportation

Subsector Q1:

Water Transportation Facilities

MSGP App. D

Obtaining Coverage under the MSGP

1) Determine which sector and subsector your facility belongs to (MSGP App. D);
2) Develop the MSGP SWPPP for your facility (MSGP 5.2);
3) Select, design, install, and implement Control Measures for the Non-Numeric Technology Based Effluent Limits;
    a) All facilities must provide control measures in Section 4.2 of MSGP; and
    b) Sector specific control measures are provided in Section 11 of the MSGP.
4) Submit Notice of Intent to the Alaska Department of Environmental Conservation (MSGP 2.2);
    a) Authorization to discharge begins 7 days following DEC's acknowledgement of receipt of the operators complete and paid for NOI is posted on DEC's APDES Permit Search website.
5) Pay permit authorization fee.
    a) Initial permit authorization fee is paid with NOI; and
    b) The permit authorization fee ($735) is paid annually.

Technology-Based Effluent Limits

http://www.pugetsoundkeeper.org/wp-content/uploads/2012/12/Enforcement-1024x768.jpg

Non-Numeric Technology-Based Effluent Limits

- Two types of control measures required by the permit:
  - General controls that apply to all facilities (MSGP 4.2); and
  - Sector Specific controls that apply only to specific sectors (MSGP 11).

- General Controls Required at all facilities
  - Minimize Exposure
  - Good Housekeeping
  - Maintenance
  - Spill Prevention and Response Procedure
  - Erosion and Sediment Controls
  - Management of Runoff
  - Salt Storage Piles or Piles Containing Salt
  - Employee Training
  - Non Storm Water Discharges
  - Waste, Garbage, Floatable debris
  - Dust Generation and Vehicle Track-Out

Minimize Exposure

- 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 that will be decommissioned or will remain unused for extended periods of time;
- 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, with the exception of discharges from pavement wash water and routine building washdown described in Part 1.2.3 drains to a sanitary sewer, sump, or other proper collection system (i.e., not the storm water drainage system).

Good Housekeeping

MSGP 4.2.2

A permittee must keep clean all exposed areas that are potential sources of pollutants, including but not limited to:

- Using such measures as sweeping at regular intervals;
- Keeping materials orderly and labeled; and
- Storing materials in appropriate containers.

Maintenance Practices

- A permittee 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 storm water discharged to receiving waters.
- The permittee must maintain all control measures that are used to achieve the effluent limits required by this permit in effective operating condition.
- Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained).
- If the permittee finds that their control measures need to be replaced or repaired, the permittee must make the necessary repairs or modifications within 14 days or as expeditiously as practicable.

Spill Prevention and Response

- "At a minimum, the permittee must implement:"
  - Procedures for plainly labeling containers;
  - Procedures for material storage and handling, including the use of secondary containment and barriers between material storage and traffic areas;
  - Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases;
  - Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies;
  - The permittee must provide a description of the release, the circumstances leading to the release, and the date of the release to the nearest DEC Area Response Team Office, in accordance to AS 75.300; and
  - The permittee must also implement measures to prevent the reoccurrence of such releases and to respond to such releases.

MSGP 4.2.4

Erosion and Sediment Controls

Exposed areas must be stabilized and runoff contained using structural and/or non structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants.

At a minimum, velocity dissipation devices must be placed at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants.

MSGP 4.2.5

Management of Runoff

MSGP 4.2.6

Storm water runoff must be:

- Diverted;
- Infiltrated;
- Reused;
- Contained; or
- Otherwise reduced;

to minimize pollutants in a facility's discharge(s).

Salt Storage Piles and Piles Containing Salt

MSGP 4.2.7

Storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. must be enclosed or covered

Appropriate measures (e.g., good housekeeping, diversions, containment) must also be implemented to minimize exposure resulting from adding to or removing materials from the pile.

http://www.mortonsalt.com/content/images/salt-facts/salt-production-1.jpg?v=1.5

Training of Employees

- All employees who work in areas where industrial materials or activities are exposed to storm water, or who are responsible for implementing activities necessary to meet the conditions of this permit must be trained.
- Training must cover both the specific control measures used to achieve the effluent limits, monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit.
- Training shall be conducted at least annually and documented in the SWPPP.

http://ak4.picdn.net/shutterstock/videos/2028916/preview/stock-footage-young-people-in-professional-training-on-industrial-site.jpg

MSGP 4.2.10, 1.2.3

Non-Storm Water Discharges

Authorized Non-Storm Water Discharges:

1. Discharges from fire-fighting activities;
2. Fire hydrant flushings;
3. Potable water, including water line flushings;
4. Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
5. Irrigation drainage;
6. Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
7. Pavement wash waters where no detergents or hazardous cleaning products are used;
8. Wheel wash water that does not use detergents;
9. Routine external building wash down / power wash water that does not use detergents or hazardous cleaning products;
10. Uncontaminated ground water or spring water;
11. Foundation or footing drains where flows are not contaminated with process materials;
12. Incidental windblown mist from cooling towers; and
13. Discharges from the spray down of lumber and wood product storage yards where no chemical additives are used in the spray-down waters and no chemicals are applied to the wood during storage (applicable only to Sector A facilities).

Non-storm water discharges not authorized by an APDES permit must be eliminated

http://www.recycling-nord.com/files/www/gewerbeabfall.png

Waste, Garbage and Floatable Debris

MSGP 4.2.11

Waste, garbage, and floatable debris must not be discharged into receiving waters.

Exposed areas must be kept free of waste, garbage, or floatable debris

OR

Waste, garbage, and floatable debris must be intercepted them before they are discharged.

Dust Generation and Vehicle Tracking of Industrial Materials

MSGP 4.2.12

- Dust and offsite tracking of raw, final, or waste materials must be minimized.
- Appropriate BMPs to minimize tracking include the establishment of stabilized access and exit points.

Sector P – Land Transportation
Additional Technology-Based Effluent Limits

MSGP 11.P.3.1.1

Vehicle and Equipment Storage Areas

- Minimize the potential for storm water exposure to leaky or leak-prone vehicles/ equipment awaiting maintenance.
- Implement the following (or other equivalent measures), as practicable:
  - use of drip pans under vehicles/equipment;
  - indoor storage of vehicles and equipment;
  - installation of berms or dikes;
  - use of absorbents, roofing or covering storage areas; and
  - cleaning pavement surfaces to remove oil and grease.

http://www.classicdriver.com/sites/default/files/styles/full_width_slider/public/import/articlesv2/images/_de/6054/Jay_Leno_Garage_03pop.jpg?itok=25VRFUgB

http://www.moto123.com/ArtImages/107419/JayLeno-AR09-i012.jpg

Sector P – Land Transportation
Additional Technology-Based Effluent Limits

MSGP 11.P.3.1.2

Fueling Areas

- Minimize contamination of storm water runoff from fueling areas.
- Implement the following (or other equivalent measures), as practicable:
  - Covering the fueling area;
  - using spill/overflow protection and cleanup equipment;
  - minimizing storm water run-on/runoff to the fueling area;
  - using dry cleanup methods; and
  - treating and/or recycling collected storm water runoff.

http://www.tercenter.org/images/fueling.jpg

Sector P – Land Transportation
Additional Technology-Based Effluent Limits

MSGP 11.P.3.1.3

Material Storage Areas

- Maintain all material storage vessels (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of storm water and plainly label them (e.g., “Used Oil,” “Spent Solvents,” etc.).
- Implement the following or other equivalent measures, as practicable:
  - storing the materials indoors;
  - installing berms/dikes around the areas;
  - minimizing runoff of storm water to the areas;
  - using dry cleanup methods; and
  - treating and/or recycling collected storm water runoff.

http://www.ecarcenter.org/images/oilstorage.jpg

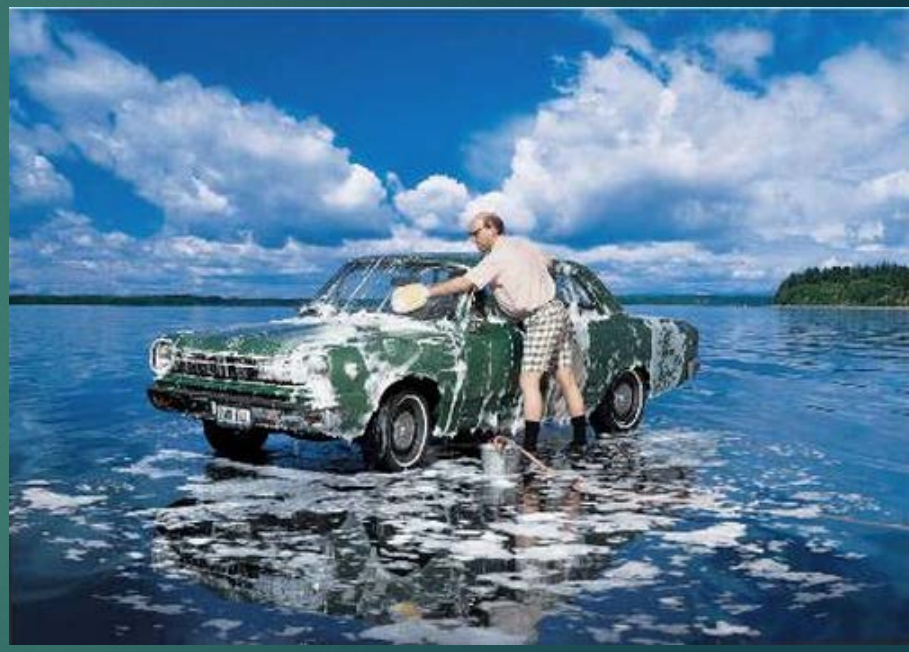
http://cleantechenv.com/cleantech/assets/Image/oil%20filters.jpg

Sector P – Land Transportation
Additional Technology-Based Effluent Limits

MSGP 11.P.3.1.4

Vehicle and Equipment Cleaning Areas

- Minimize contamination of storm water runoff from all areas used for vehicle/equipment cleaning.
- Implement the following or other equivalent measures,as practicable:
  - performing all cleaning operations indoors;
  - covering the cleaning operation, ensuring that all washwater drains to a proper collection system (i.e., not the storm water drainage system);
  - treating and/or recycling collected washwater, or
  - other equivalent measures.



http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRw&url=http%3A%2F%2Fblogsuspirodovenento.blogspot.com%2F2011%2F06%2Fcar-cleaning-tips.html&ei=S7G1VN_FNIWN8QXg3YGwAQ&bvm=bv.83339334,bs.1,d.cGU&psig=AFQjCNFh-a2TuiSqkYzQBrBA7B7_JK3QvA&ust=1421279941011888

Sector P – Land Transportation
Additional Technology-Based Effluent Limits

MSGP 11.P.3.1.5

Vehicle and Equipment Maintenance Areas

- Minimize contamination of storm water runoff from all areas used for vehicle/equipment maintenance.
- Implement the following (or other equivalent measures), as practicable:
  - performing maintenance activities indoors;
  - using drip pans;
  - keeping an organized inventory of materials used in the shop;
  - draining all parts of fluid prior to disposal;
  - prohibiting wet clean up practices if these practices would result in the discharge of pollutants to storm water drainage systems;
  - using dry cleanup methods; and
  - treating and/or recycling collected storm water runoff, minimizing run on/runoff of storm water to maintenance areas.

http://zahnsautoplus.com/images/maintenance.jpg

http://hoffna.com/wp-content/uploads/2009/09/vehicle-maintenance-300x225.jpg

Sector P – Land Transportation
Additional Technology-Based Effluent Limits

MSGP 11.P.3.1.6

Locomotive Sanding (Loading Sand for Traction) Areas

Implement the following or other equivalent measures, as practicable:

- covering sanding areas;
- minimizing storm water run on/runoff; or
- appropriate sediment removal practices to minimize the offsite transport of sanding material by storm water.

http://galleryhip.com/deflating-gif.html

Sector P – Land Transportation
Additional Technology-Based Effluent Limits

MSGP 11.P.3.2

Train personnel at least once a year and address the following activities, as applicable:

- used oil and spent solvent management;
- fueling procedures;
- general good housekeeping practices;
- proper painting procedures; and
- used battery management.

http://warehousetraining.com.au/wp-content/uploads/2013/05/warehouse-forklift-man.jpg

Sector Q – Water Transportation
Additional Technology-Based Effluent Limits

MSGP 11.Q.3.1.1

Pressure Washing Area

- If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by a separate APDES permit.
- Collect or contain the discharges from the pressure washing areas so that they are not co-mingled with storm water discharges authorized by this permit.

http://www.caleromarinas.com/wp-content/uploads/2014/05/Varadero-%C2%A9JamesMitchell-1331.jpg

Sector Q – Water Transportation
Additional Technology-Based Effluent Limits

MSGP 11.Q.3.1.2

Blasting and Painting Area

- Minimize the potential for spent abrasives, paint chips, and overspray to discharge into receiving waters or the storm sewer systems.
- Contain all blasting and painting activities or use other measures to minimize the discharge of contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris).
- When necessary, regularly clean storm water conveyances of deposits of abrasive blasting debris and paint chips.

http://www.tecor.pt/cache/binImagens/XPQEAfgXX60jeTo0vp8ruZKU.jpg

Sector Q – Water Transportation
Additional Technology-Based Effluent Limits

MSGP 11.Q.3.1.3

Material Storage Areas

- Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains.
- Minimize the contamination of precipitation or surface runoff from the storage areas.
- Specify which materials are stored indoors, and consider containment or enclosure for those stored outdoors.
- If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Implement an inventory control plan to limit the presence of potentially hazardous materials on site.

http://www.iml.fraunhofer.de/en/fields_of_activity/transport_logistics/topics_transport_logistics/inland_water_transport_design/_jcr_content/stage/image.img.jpg/Binnenschiff.1304934692673.jpg

Sector Q – Water Transportation
Additional Technology-Based Effluent Limits

MSGP 11.Q.3.1.4

Engine Maintenance and Repair Areas

- Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair.
- Implement the following or their equivalents:
  - performing all maintenance activities indoors,
  - Maintain an organized inventory of materials used in the shop;
  - drain all parts of fluid prior to disposal;
  - prohibit the practice of hosing down the shop floor;
  - use dry cleanup methods; and
  - treating and/or recycling storm water runoff collected from the maintenance area.

http://www.jocasseeoutdoorcenter.com/Portals/0/work1.jpg

Sector Q – Water Transportation
Additional Technology-Based Effluent Limits

MSGP 11.Q.3.1.5

Material Handling Area

- Minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels).
- Implement the following or their equivalents:
  - covering fueling areas, using spill and overflow protection;
  - mixing paints and solvents in a designated area (preferably indoors or under a shed); and
  - minimizing runoff of storm water to material handling areas.

http://www.briggeman.co.za/wp-content/uploads/2013/10/ship-to-shore-cranes-cabins-spare-parts-supply-install.jpg

Sector Q – Water Transportation
Additional Technology-Based Effluent Limits

MSGP 11.Q.3.1.6

Drydock Activities

- Routinely maintain and clean the drydock to minimize pollutants in storm water runoff.
- Address the cleaning of accessible areas of the drydock prior to flooding, and final cleanup following removal of the vessel and raising the dock.
- Include procedures for cleaning up oil, grease, and fuel spills occurring on the drydock.
- Implement the following or their equivalents:
  - sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding; and
  - making absorbent materials and oil containment booms readily available to clean up or contain any spills.

http://previews.123rf.com/images/nightman1965/nightman19651303/nightman1965130300061/18796664-ship-in-dry-dock-during-the-overhaul-ship-boat-shipyard.jpg

Sector Q – Water Transportation
Additional Technology-Based Effluent Limits

MSGP 11.Q.3.2

- Divert storm water away from potential pollutant sources.
- Implement the following options, as practicable:
  - interceptor or diversion controls (e.g., dikes, swales, curbs, or berms);
  - pipe slope drains;
  - subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars);
  - rolling dips and road sloping;
  - roadway surface water deflector and culverts); or
  - their equivalents.

http://graphics8.nytimes.com/images/2008/04/25/nyregion/port190.jpg

Sector Q – Water Transportation
Additional Technology-Based Effluent Limits

MSGP 11.Q.3.3

- Place velocity dissipation devices(e.g., check dams, sediment traps, or riprap), as practicable, along the length of any conveyance channel to provide a non-erosive flow velocity.
- Place velocity dissipation devices where discharges from the conveyance channel or structure join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters .

http://upload.wikimedia.org/wikipedia/commons/0/01/11-8-07_riprap_photo.jpg

Sector Q – Water Transportation Additional Technology-Based Effluent Limits

MSGP 11.Q.3.4

As part of the employee training program, address, at a minimum, the following activities (as required):

- used oil management;
- spent solvent management;
- disposal of spent abrasives;
- disposal of vessel wastewaters;
- spill prevention and control;
- fueling procedures;
- general good housekeeping practices;
- painting and blasting procedures; and
- used battery management.

http://www.msc.navy.mil/sealift/2010/July/images/DSC_0246.jpg

Sector Q – Water Transportation
Additional Technology-Based Effluent Limits

MSGP 11.Q.3.5

As part of the preventive maintenance program, perform timely inspection and maintenance of storm water management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

http://www.oil-water-separator.net/DCP_0610.JPG

Sector S – Air Transportation
Additional Technology-Based Effluent Limits

MSGP 11.S.4.1.1

Aircraft, Ground Vehicle and Equipment Maintenance Areas

- Minimize the contamination of storm water runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangers).
- Implement the following practices or their equivalents:
  - performing maintenance activities indoors;
  - maintaining an organized inventory of material used in the maintenance areas;
  - draining all parts of fluids prior to disposal;
  - prohibiting the practice of hosing down the apron or hanger floor;
  - using dry cleanup methods; and
  - collecting the storm water runoff from the maintenance area and providing treatment or recycling.

http://upload.wikimedia.org/wikipedia/commons/8/80/Field_maintenance_on_a_1956_model_Cessna_172.JPG

Sector S – Air Transportation
Additional Technology-Based Effluent Limits

MSGP 11.S.4.1.2

Aircraft, Ground Vehicle, and Equipment Cleaning Areas

Clearly demarcate these areas on the ground using signage or other appropriate means. Minimize the contamination of storm water runoff from cleaning areas.

http://www.safetysign.com/images/catlog/product/large/F3756.png

Sector S – Air Transportation
Additional Technology-Based Effluent Limits

MSGP 11.S.4.1.3

Aircraft, Ground Vehicle and Equipment Storage Areas

- Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and minimize the contamination of storm water runoff from these storage areas.
- Implement the following control measures or their equivalents:
  - store aircraft and ground vehicles indoors;
  - use drip pans for the collection of fluid leaks; and
  - perimeter drains, dikes or berms surrounding the storage areas

http://www.corbisimages.com/images/Corbis-42-34906844.jpg?size=67&uid=a89d19bd-edf6-49b4-a67d-9f6a36d98bcb

Sector S – Air Transportation
Additional Technology-Based Effluent Limits

MSGP 11.S.4.1.4

Material Storage Areas

- Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of storm water.
- Plainly label the storage vessels (e.g., “used oil,” “Contaminated Jet A,” etc.).
- Minimize contamination of precipitation/runoff from these areas. Implement the following control measures or their equivalents:
  - store materials indoors;
  - store waste materials in a centralized location; and
  - install berms/dikes around storage areas.

http://upload.wikimedia.org/wikipedia/commons/thumb/5/58/US_Navy_100217-8490W-N-003_Power_plants_department_Sailors_assigned_to_the_Mad_Foxes_of_Patrol_Squadron_%28VP%29_5_simulate_an_oil_spill_in_Hangar_511_during_the_squadron%27s_maintenance_Olympics.jpg/800px-thumbnail.jpg

Additional Technology-Based Effluent Limits

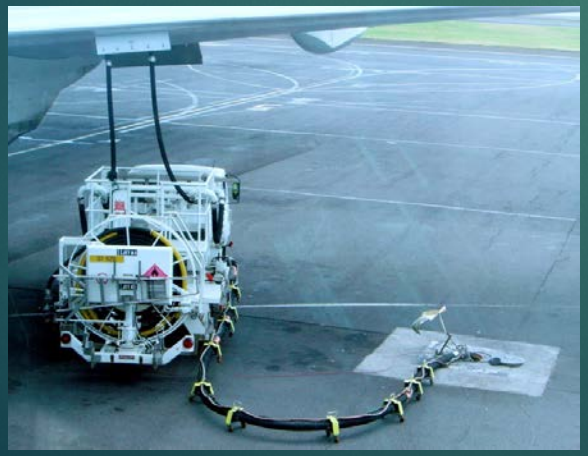
MSGP 11.S.4.1.5

Airport Fuel System and Fueling Areas

Minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the airport fuel system.

Implement the following control measures or their equivalents:

- implement spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations);
- use only dry cleanup methods; and
- collect storm water runoff.



http://upload.wikimedia.org/wikipedia/commons/4/40/Jet_a1_truck_refueling

https://encrypted-tbn3.gstatic.com/images?q=tbn:ANd9GcSkXGmYFnQJ2jia_1urocJ5u5Hj6abQf-

Sector S – Air Transportation
Additional Technology-Based Effluent Limits

MSGP 11.S.4.1.6

Source Reduction

- Minimize and where feasible, eliminate the use of urea and glycol-based deicing chemicals, to reduce the aggregate amount of deicing chemicals used and/or lessen the environmental impact.
- Chemical options to replace ethylene glycol, propylene glycol, and urea include:
  - potassium acetate;
  - magnesium acetate;
  - calcium acetate; and
  - anhydrous sodium acetate.

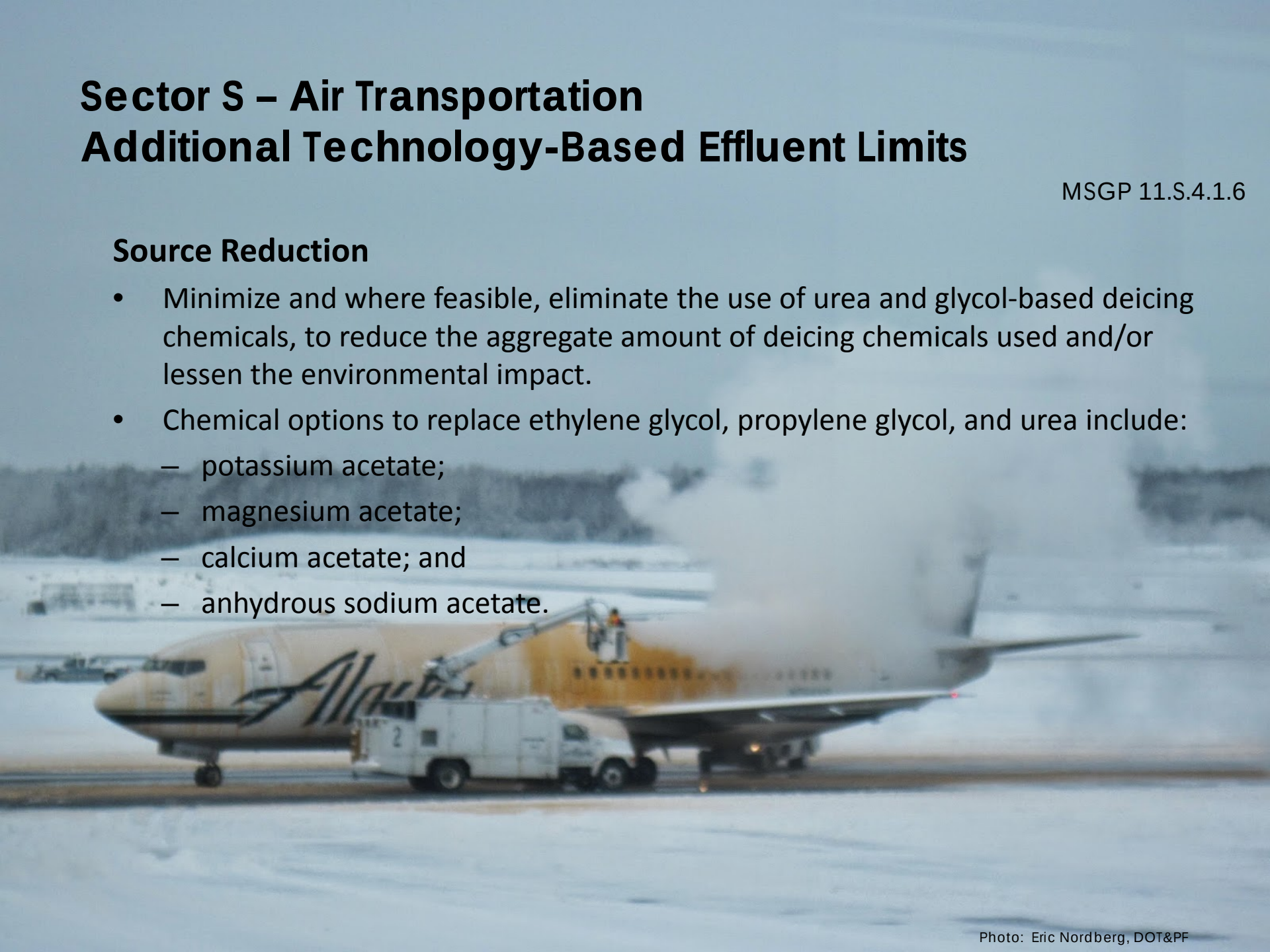


Photo: Eric Nordberg, DOT&PF

Sector S – Air Transportation
Additional Technology-Based Effluent Limits

MSGP 11.S.4.1.6

Runway Deicing Operations

- Minimize contamination of storm water runoff from runways as a result of deicing operations.
- Evaluate whether over-application of deicing chemicals occurs by analyzing application rates, and adjust as necessary, consistent with considerations of flight safety.
- Implement these control measure options or their equivalents:
  - metered application of chemicals;
  - pre-wetting dry chemical constituents prior to application;
  - install a runway ice detection system; and
  - implement anti-icing operations as a preventive measure against ice buildup .

Sector S – Air Transportation: Aircraft Deicing Operations

- Minimize contamination of storm water runoff from aircraft deicing operations.
- Determine whether excessive application of deicing chemicals occurs and adjust as necessary, consistent with considerations of flight safety. Evaluate using alternative deicing/anti-icing agents as well as containment measures for all applied chemicals.
- Also consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems. The evaluations and determinations required by this Part should be carried out by the personnel most familiar with the particular aircraft and flight operations and related systems in question (versus an outside entity such as the airport authority).

MSGP 11.S.4.1.6

- Consider these control measure options for reducing deicing fluid use:
  - forced-air deicing systems;
  - computer-controlled fixed-gantry systems;
  - infrared technology;
  - hot water;
  - varying glycol content to air temperature;
  - enclosed basket deicing trucks;
  - mechanical methods;
  - solar radiation;
  - hangar storage;
  - aircraft covers; and
  - thermal blankets for MD-80s and DC-9s.

Sector S – Air Transportation
Additional Technology-Based Effluent Limits

MSGP 11.S.4.1.7

Management of Runoff

- Where deicing operations occur, implement a program to control or manage contaminated runoff to minimize the amount of pollutants being discharged from the site.
- Use these control measure or their equivalents
  - a dedicated deicing facility with a runoff collection/recovery system;
  - using vacuum/collection trucks;
  - storing contaminated storm water/deicing fluids in tanks and releasing controlled amounts to a publicly owned treatment works;
  - collecting contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and
  - directing runoff into vegetative swales or other infiltration measures.
- Consider recovering deicing materials when these materials are applied during non-precipitation events to prevent these materials from later becoming a source of storm water contamination.
- Deicing operations should be developed with an emphasis on using a combination of the BMPs listed above to contain, capture, and reuse deicing materials.
- Used deicing fluid should be recycled whenever practicable.

Sector S – Air Transportation
Additional Technology-Based Effluent Limits

Deicing Season

MSGP 11.S.4.2

- The permittee must determine the seasonal timeframe (e.g., December- February, October - March, etc.) during which deicing activities typically occur at the facility.
- Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season.
- If the permittee meets the deicing chemical usage thresholds of 100,000 gallons glycol and/or 100 tons of urea, the deicing season they identified is the timeframe during which the permittee must obtain the four required benchmark monitoring event results for deicing-related parameters(i.e., BOD, COD, ammonia, and pH).

http://images.morris.com/images/juneau/mdControlled/cms/2010/03/14/589857346.jpg

MSGP Inspections

All Facilities are required to perform inspections!

- Who performs inspections?
- Types of Inspections?
- What is required to be inspected?
- When must Inspections be performed?
- What documentation must be completed?
- Exceptions to Inspections?

http://wp.compliancego.com/wp-content/uploads/2013/07/inspection.jpg

Who Performs Inspections?

MSGP App. C

Qualified Personnel

Qualified personnel are those who possess the knowledge and skills to assess conditions and activities that could impact storm water quality at your facility, and who can also evaluate the effectiveness of control measures.

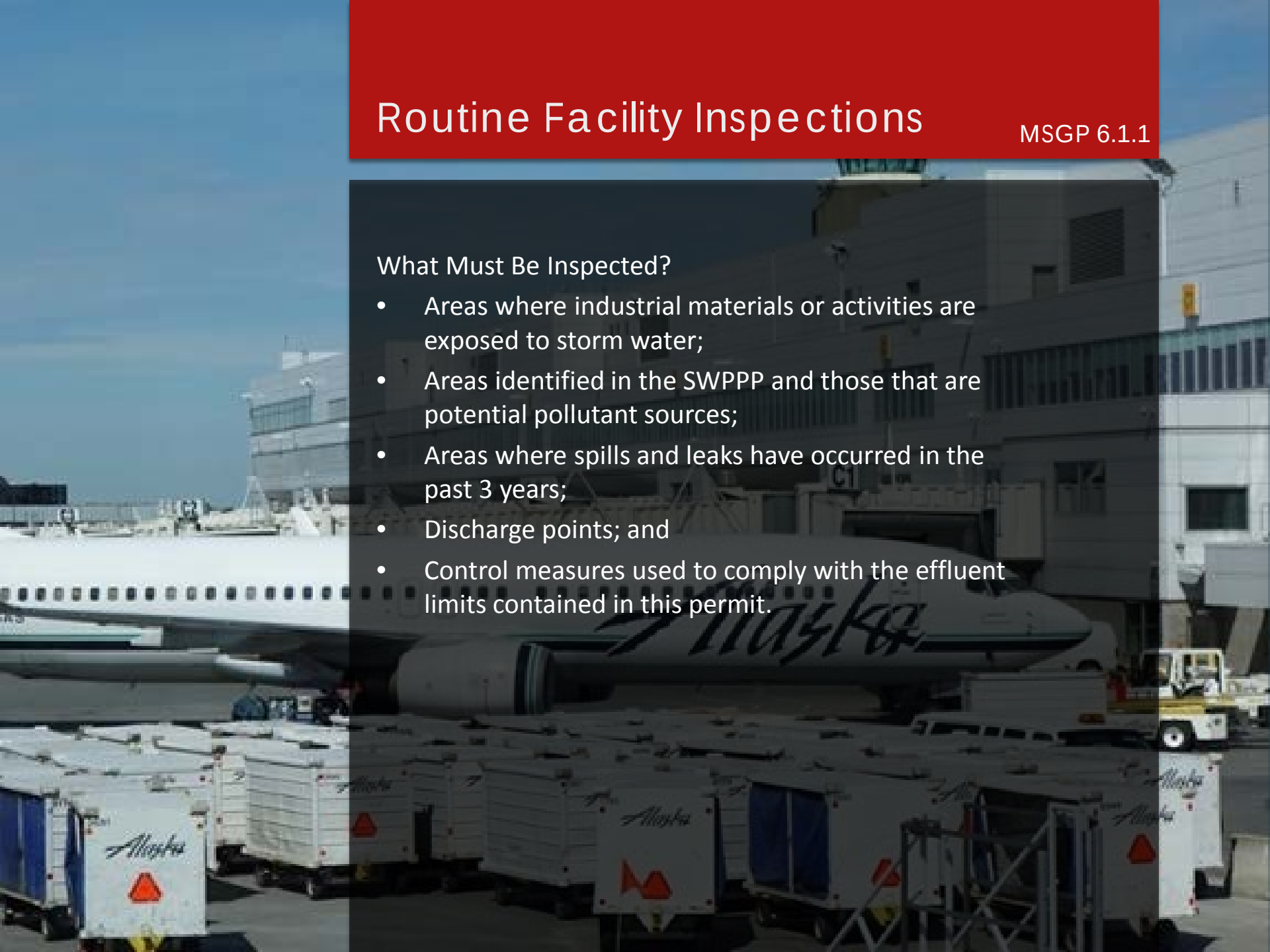
http://tdhengineering.com/wp-content/uploads/2014/03/construction-managment.jpg

Types of Inspections

1. Routine Inspections (MSGP 6.1);
2. Comprehensive Inspections (MSGP 6.3); and
3. Sectors Requiring Additional Inspections.

Routine Facility Inspections

MSGP 6.1.1



What Must Be Inspected?

- Areas where industrial materials or activities are exposed to storm water;
- Areas identified in the SWPPP and those that are potential pollutant sources;
- Areas where spills and leaks have occurred in the past 3 years;
- Discharge points; and
- Control measures used to comply with the effluent limits contained in this permit.

Comprehensive Facility Inspections

MSGP 6.3

- What Must Be Inspected?
- Industrial materials, residue, or trash that may have or could come into contact with storm water;
- Leaks or spills from industrial equipment, drums, tanks, and other containers;
- Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas;
- Control measures needing replacement, maintenance, or repair;
- Storm water control measures required by this permit must be observed to ensure that they are functioning correctly. If discharge locations are inaccessible, nearby downstream locations must be inspected; and
- Review of Visual Quarterly Assessment Data for the year.

Sector P
Additional Inspection Requirements

MSGP 11.P.5

Inspect all the following areas/activities:

- storage areas for vehicles/equipment awaiting maintenance;
- Fueling areas;
- indoor and outdoor vehicle/equipment maintenance areas;
- material storage areas;
- vehicle/equipment cleaning areas, loading/unloading areas; and
- any petroleum bulk fuel storage areas.

Quarterly visual assessment of the bulk fuel storage areas should focus on identifying any potential leaks in tanks, pipelines, valves, etc. and implementing temporary spill containment measures until permanent corrective actions can be made.

Sector Q
Additional Inspection Requirements

MSGP
11.Q.5

Include the following in all quarterly routine facility inspections:

- pressure washing area;
- blasting, sanding, and painting areas;
- material storage areas;
- engine maintenance and repair areas;
- material handling areas;
- drydock area; and
- general yard area.

http://www.motorship.com/__data/assets/image/0009/842832/RightShip-vessel-inspection.jpg

Sector S
Additional Inspection Requirements

Inspections (MSGP 11.S.6.1)

- At a minimum, conduct routine facility inspections at least monthly during the deicing season (e.g., October through April for most airports).
- If a permittees facility needs to deice before or after this period, expand the monthly inspections to include all months during which deicing chemicals may be used. The Department may specifically require the permittee to increase inspection frequencies.

Comprehensive Site Inspections (MSGP 11.S.6.2)

- Using only qualified personnel, conduct the annual site inspection during periods of actual deicing operations, if possible.
- If not practicable during active deicing because of weather, conduct the inspection during the season when deicing operations occur and the materials and equipment for deicing are in place.

When Must Inspections be Performed?

Inspection Schedule

- Routine Inspections - monthly or quarterly(MSGP 6.1.1)
- Comprehensive Inspections – annually (MSGP 6.3.1)

http://www.brickhouse-environmental.com/sitebuildercontent/sitebuilderpictures/.pond/Post_Const_Inspection.jpg.w300h681.jpg

What Documentation Must be Completed?

MSGP 6.1.2

Documentation of each facility inspection must include:

- The inspection date and time;
- The name(s) and signature(s) of the inspector(s);
- Weather information;
- All observations relating to the implementation of control measures at the facility, including:
- A description of any discharges occurring at the time of the inspection;
- Any previously unidentified discharges of pollutants from the site;
- Any evidence of, or the potential for, pollutants entering the drainage system;
- Observations regarding the physical condition of and around all outfalls including any flow dissipation devices, and evidence of pollutants in discharges and/or the receiving water;
- Any control measures needing maintenance, repairs; or replacement;
- Any additional control measures needed to comply with the permit requirements; and
- Any incidents of noncompliance observed.

http://www.ci.seatac.wa.us/Modules/ShowImage.aspx?imageid=1049

Exceptions to Inspection

MSGP 6.1.3

Inactive and Unstaffed Sites

The requirement to conduct routine facility inspections on a quarterly basis does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to storm water.

MSGP Water Quality Monitoring

Types of Monitoring

- Quarterly Visual Assessment (MSGP 6.2)
- Bench Mark Monitoring (MSGP 7.2.1)
- Annual Effluent Guideline Monitoring (MSGP 7.2.2)
- Impaired Water Monitoring (MSGP 7.2.3)

https://allianceforthebay.org/wp-content/uploads/2012/04/Monitoring.jpg

Quarterly Visual Assessment

MSGP 6.2.1

Once each calendar quarter for the entire permit term, the permittee must collect a storm water sample from each outfall and conduct a visual assessment of each of these samples.

Quarterly Visual Assessment

MSGP 6.2.1

Sample Collection Procedure

The visual assessment of Storm Water must be made for each outfall:

- Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a measurable storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and the permittee must document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from the permittee's site; and
- For storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if the permittee documents that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period.

http://www.ci.valdez.ak.us/images/pages/N212/Full%20water%20sample%20bottle.jpg

Quarterly Visual Assessment

Water Quality Characteristics

- Color;
- Odor;
- Clarity (diminished);
- Floating solids;
- Settled solids;
- Suspended solids;
- Foam;
- Oil sheen; and
- Other obvious indicators of storm water pollution.

MSGP 6.2.1

Quarterly Visual Assessment

MSGP 6.2.2

Visual Assessment Documentation

- Sample location(s)
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the storm water discharge;
- Probable sources of any observed storm water contamination, and
- If applicable, why it was not possible to take samples within the first 30 minutes.

Quarterly Visual Assessment Documentation must be signed and certified in accordance with the permit.

http://thewaterproject.org/images/dirty-water-glass.jpg

Bench Mark Monitoring

MSGP 7.2.1

This permit stipulates pollutant benchmark concentrations that may be applicable to certain sectors / subsectors. Benchmark monitoring data are primarily for the permittee's use to determine the overall effectiveness of the permittee's control measures and to assist the permittee in knowing when additional corrective action(s) may be necessary to comply with the effluent limitations in MSGP Part 4.

The benchmark concentrations are not effluent limitations; a benchmark exceedance, therefore, is not a permit violation. However, if corrective action is required as a result of a benchmark exceedance, failure to conduct required corrective action is a permit violation.

At the permittee's discretion, more than four samples may be taken during separate runoff events and used to determine the average benchmark parameter concentration for facility discharges. These extra samples may be taken in any quarter of the permittee's choice.

MSGP Water Quality Monitoring

MSGP 4.3

Annual Effluent Guideline Monitoring

Sectors Requiring Monitoring for Effluent Limits Based on Effluent Limitations Guidelines

Regulated Activity		Monitoring Frequency	Sample Type
Sector A	Wetted log decks	1/year	Grab
Sector C	Phosphate fertilizers	1/year	Grab
Sector D	Asphalt emulsion facilities	1/year	Grab
Sector E	Storage piles at cement facilities	1/year	Grab
Sector J	Mine dewatering discharges	1/year	Grab
Sector K	Runoff from hazardous waste landfills	1/year	Grab
Sector L	Runoff from landfills	1/year	Grab
Sector O	Coal storage piles	1/year	Grab
Sector S	***Airports with 1,000 or more annual jet departures that discharge wastewater associated with airfield pavement deicing that contains urea commingled with storm water***	***1/year***	***Grab***

Sector Q
Water Transportation
Sector Specific Benchmark Parameters

MSGP 11.Q.6

Subsector (Permittees may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector Q1. Water Transportation Facilities (SIC 4412-4499)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Lead (saltwater)[1]	0.21 mg/L
	Total Lead (freshwater)[2]	Hardness Dependent
	Total Zinc (saltwater)[1]	0.09 mg/L
	Total Zinc (freshwater)[2]	Hardness Dependent

Note:
1. Saltwater benchmark values apply to storm water discharges into saline waters where indicated.
2. The freshwater benchmark values of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water (see Appendix E, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), in accordance with Part 7.2.1.1, to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. The ranges occur in 25 mg/L increments. Hardness Dependent Benchmarks follow in the table below:

Water Hardness Range	Lead (mg/L)	Zinc (mg/L)
0 – < 25 mg/L	0.014	0.04
25 – < 50 mg/L	0.023	0.05
50 – < 75 mg/L	0.045	0.08
75 – < 100 mg/L	0.069	0.11
100 – < 125 mg/L	0.095	0.13
125 – < 150 mg/L	0.122	0.16
150 – < 175 mg/L	0.151	0.18
175 – < 200 mg/L	0.182	0.20
200 – < 225 mg/L	0.213	0.23
225 – < 250 mg/L	0.246	0.25
250+ mg/L	0.262	0.26

http://www.ufz.de/export/data/1/27320_probennahme_fluss.jpg

Sector S - Air Transportation Sector Specific Benchmark

MSGP 11.S.7

Subsector (Permittees may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
For airports where a single permittee, or a combination of permitted facilities use more than 100,000 gallons of glycol-based deicing chemicals on an average annual basis, monitor the first four parameters in ONLY those outfalls that collect runoff from areas where deicing activities occur (SIC 4512-4581).	Biochemical Oxygen Demand (BOD_5)[1]	30 mg/L
	Chemical Oxygen Demand (COD)[1]	120 mg/L
	Ammonia[1, 2]	2.14 mg/L
	pH[1]	6.5 – 8.5 s.u.

Note:
1. These are deicing-related parameters. Collect the four benchmark samples, and any required follow-up benchmark samples, during the timeframe defined in Part 11.S.3.2 when deicing activities are occurring.
2. If a permittee certifies annually that it does not use airfield deicing products that contain urea, then the permittee does not need to sample for ammonia.

http://drinkdreamwater.com/dream-waters-5-tips-to-help-you-finally-get-to-sleep-on-a-plane/

Sector S
Air Transportation
Effluent Limitations

Wastestream	Paramter	Daily Maximum
Airfield pavement deicing discharges from airports with at least 1,000 annual non-propeller aircraft[1] departures.	Ammonia as Nitrogen[2]	14.7 mg/l

Note:
1. Annual non-propellar aircraft is the average annual aircraft departures of commercial turbine-engine aircraft that are propelled by jet, i.e., turbojet or turbofan as tabulated by the Federal Aviation Administration.
2. Monitor twice a deicing season during the timeframe defined in Part 11.S.3.2 when deicing activities are occuring.

MSGP Impaired Water Body Monitoring

Section 303(d) Listed Waters Monitoring

ALL Discharges to an impaired water body must be monitored

If a permittee discharges to an impaired water, the permittee must monitor for all pollutants for which the waterbody is impaired and for which a standard analytical method exists.

MSGP Template Part 4.0
MSGP 7.2.3

MSGP Water Quality Monitoring

MSGP 9.1

All monitoring data collected must be submitted to DEC no later than 30 days (email date or postmark date) after the permittee has received the complete laboratory results for all monitored outfalls for the reporting period.

DEC requires the use of the MSGP discharge monitoring report (MDMR) available at:

http://www.dec.alaska.gov/water/wnpspc/pdfs/ MSGPMDMR.pdf

http://static.squarespace.com/static/528d008fe4b04aa0e208072e/t/53370238e4b035f75f2968df/1396113979118/

For Agency Use

Permit Tracking #_____

Alaska Department of Environmental Conservation

MSGP Industrial Discharge Monitoring Report (MDMR)

Reason(s) for Submission (Check all that apply):	
☐	Submitting monitoring data (fill in all Sections).
☐	Reporting no discharge for all outfalls for this monitoring period (fill in Sections I, II, III, IV, and VI).
☐	Reporting that your site status has changed to inactive and unstaffed (fill in Sections I, II, VI and include date of status change in comments field in Section V).
☐	Reporting that your site status has changed to active (fill in all sections and include date of status change in comments field in Section V).
☐	Reporting that no further pollutant reductions are achievable for all outfalls and for all pollutants via Part 7.2.1.4 of the MSGP (fill in Sections I, II, and VI).
Section I. Permit Information	
Permit Tracking Number:	
Section II. Facility Information	

MSGP Corrective Actions

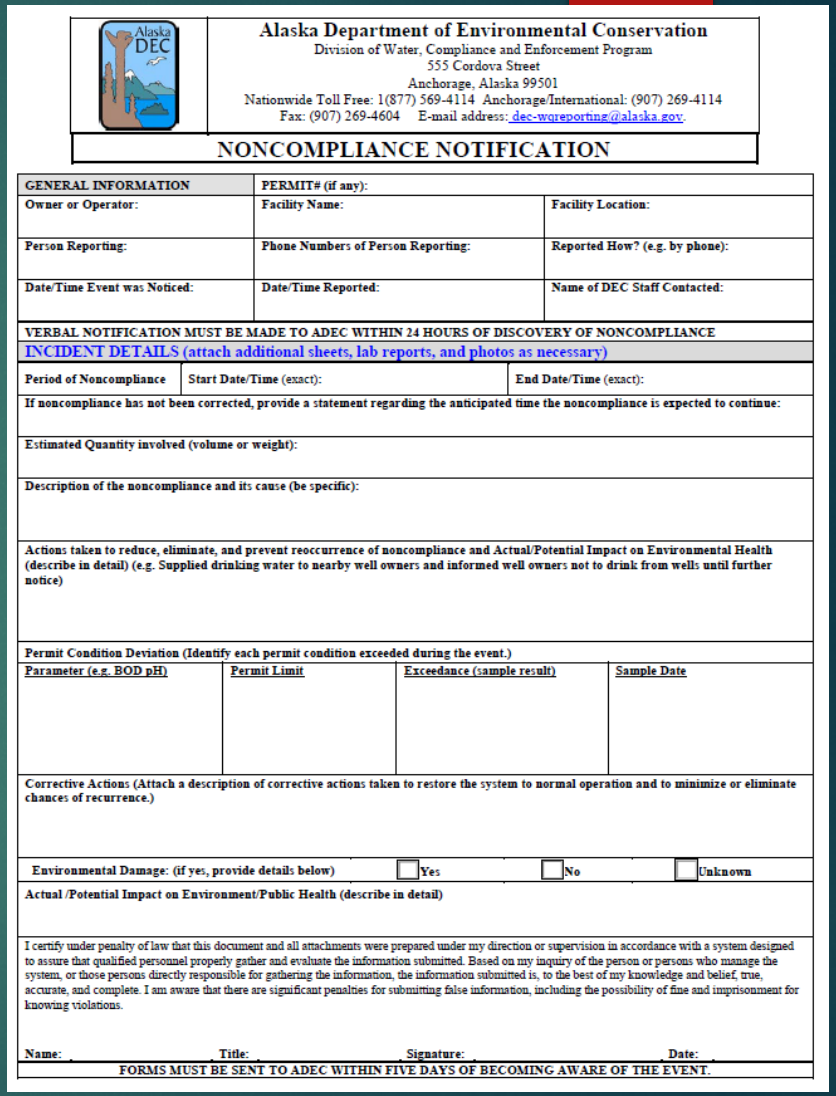
MSGP 8.1

Corrective action is required when:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-storm water not authorized by this or another APDES permit) occurs at the permittee's facility;
- A discharge violates a numeric effluent limit;
- The permittee becomes aware, or DEC determines, that the permittee's control measures are not stringent enough for the discharge to meet a WQS in the receiving water;
- An inspection or evaluation of the permittee's facility by an DEC or EPA official determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit; or
- The permittee finds in their routine facility inspection, quarterly visual assessment, or comprehensive site inspection that their control measures are not being properly operated and maintained.

http://sakenvironmental.com/wp-content/uploads/2014/04/storm-water1.jpeg

MSGP NON COMPLIANCE REPORT



Alaska Department of Environmental Conservation
Division of Water, Compliance and Enforcement Program
555 Cordova Street
Anchorage, Alaska 99501
Nationwide Toll Free: 1(877) 569-4114 Anchorage/International: (907) 269-4114
Fax: (907) 269-4604 E-mail address: dec-wqreporting@alaska.gov.

NONCOMPLIANCE NOTIFICATION

GENERAL INFORMATION	PERMIT# (if any):	
Owner or Operator:	Facility Name:	Facility Location:
Person Reporting:	Phone Numbers of Person Reporting:	Reported How? (e.g. by phone):
Date/Time Event was Noticed:	Date/Time Reported:	Name of DEC Staff Contacted:

VERBAL NOTIFICATION MUST BE MADE TO ADEC WITHIN 24 HOURS OF DISCOVERY OF NONCOMPLIANCE

INCIDENT DETAILS (attach additional sheets, lab reports, and photos as necessary)

Period of Noncompliance	Start Date/Time (exact):	End Date/Time (exact):

If noncompliance has not been corrected, provide a statement regarding the anticipated time the noncompliance is expected to continue:

Estimated Quantity involved (volume or weight):

Description of the noncompliance and its cause (be specific):

Actions taken to reduce, eliminate, and prevent reoccurrence of noncompliance and Actual/Potential Impact on Environmental Health (describe in detail) (e.g. Supplied drinking water to nearby well owners and informed well owners not to drink from wells until further notice)

Permit Condition Deviation (Identify each permit condition exceeded during the event.)

Parameter (e.g. BOD pH)	Permit Limit	Exceedance (sample result)	Sample Date

Corrective Actions (Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of recurrence.)

Environmental Damage: (if yes, provide details below) ☐ Yes ☐ No ☐ Unknown

Actual /Potential Impact on Environment/Public Health (describe in detail)

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 possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____ Signature: _____ Date: _____

FORMS MUST BE SENT TO ADEC WITHIN FIVE DAYS OF BECOMING AWARE OF THE EVENT.

MSGP Corrective Actions

MSGP 8.2

As part of any corrective action, the permittee must review the selection, design, installation, and implementation of their control measures to determine if:

- Construction or a change in design, operation, or maintenance at a permittee's facility significantly changes the nature of pollutants discharged in storm water from their facility, or significantly increases the quantity of pollutants discharged; or
- The average of four quarterly sampling results exceeds an applicable benchmark. If less than four benchmark samples have been taken, but the results are such that an exceedance of the four quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than four times the benchmark level) this is considered a benchmark exceedance, triggering this review.

http://secainc.com/wp-content/uploads/2012/06/Stormwater.jpg

For Agency Use

Permit Tracking #: _____

Alaska Department of Environmental Conservation
MSGP Corrective Action Form

Section I. General Information

Facility Name			APDES Permit Tracking Number
Facility Physical Address			
Street	City	State	Zip Code
		Alaska	

Contact Person	Title	Phone	Email

Lead Inspector's Name	Additional Inspector's Name	Additional Inspector's Name	Inspection Date

Section II. Corrective Actions

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in the comprehensive storm water inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # of for this reporting period.

2. Is this corrective action:
   - ☐ An update on a corrective action from a previous annual report; or
   - ☐ A new corrective action?

3. Identify the condition(s) triggering the need for this review:
   - ☐ Unauthorized release of discharge
   - ☐ Numeric effluent limitation exceedance
   - ☐ Control measures inadequate to meet applicable water quality standards
   - ☐ Control measures inadequate to meet non-numeric effluent limitations
   - ☐ Control measures not properly operated or maintained
   - ☐ Change in facility operations necessitated change in control measures
   - ☐ Average benchmark value exceedance
   - ☐ Other (describe):

4. Briefly describe the nature of the problem identified:

MSGP Annual Report

MSGP 9.2

A permittee must submit an annual report to DEC that includes:

- The findings from facility comprehensive inspections;
- Corrective actions performed at the facility;
- The status of any uncompleted corrective actions;
- Facility name;
- APDES Tracking Number;
- Facility physical address; and
- Contact person name, title, and phone number.

http://dadsdivorce.com/wp-content/uploads/2012/05/www.dadsdivorce.com_images_child-custody-report.jpg

For Agency Use

Permit Tracking #: _____

Alaska Department of Environmental Conservation
MSGP Annual Reporting Form

Section I. General Information

Facility Name	APDES Permit Tracking Number

Facility Physical Address

Street	City	State	Zip Code
		Alaska	

Contact Person	Title	Phone	Email

Lead Inspector's Name	Additional Inspector's Name	Additional Inspector's Name	Inspection Date

Section II. General Inspection Findings

1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to storm water? ☐ Yes ☐ No

   If NO, describe why not:

MSGP Recordkeeping

MSGP 9.4

For a period of at least 3 years from the date that the permittee's coverage under this permit expires or is terminated:

A permittee must retain copies of their SWPPP (including any modifications made during the term of this permit), additional documentation requirements pursuant to MSGP Part 5.8 (including documentation related to corrective actions taken pursuant to MSGP Part 5), all reports and certifications required by this permit, monitoring data, and records of all data used to complete the NOI to be covered by this permit.

http://www.jmco.com/media/Recordkeeping.jpeg

Terminating Coverage

MSGP 10.2

A permittee must submit a notice of termination (NOT) within 30 calendar days after one or more of the following conditions have been met:

- A new owner or operator has taken over responsibility for the facility;
- The permittee has ceased operations at the facility, there are not or no longer will be discharges of storm water associated with industrial activity from the facility, and has already implemented necessary sediment and erosion controls as required by MSGP 4.2.5;
- The permittee is a Sector G, H, or J facility and has met the applicable termination requirements; or
- The permittee has obtained coverage under an individual or alternative general permit for all discharges required to be covered by an APDES permit, unless DEC has required that they obtain such coverage under authority of MSGP 2.8.1, in which case coverage under this permit will terminate automatically.