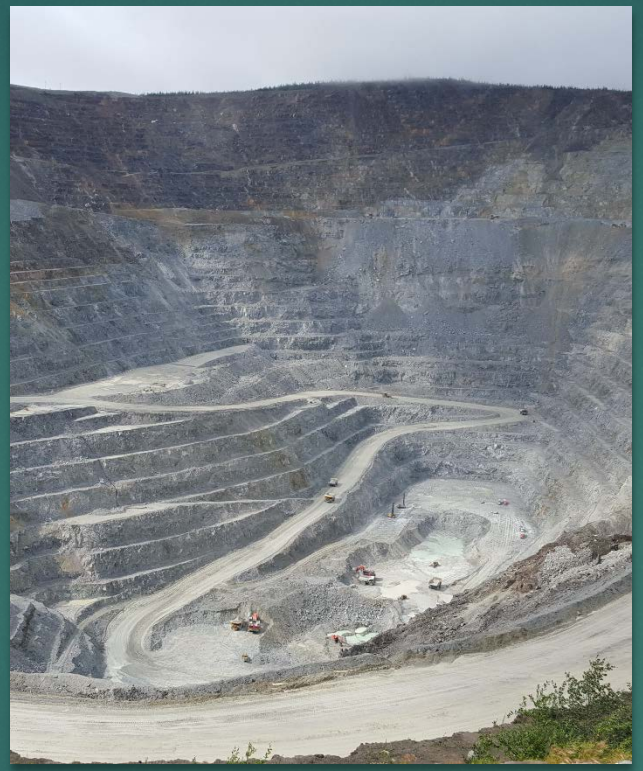
Mining MSGP Requirements



Sector G – Metal Mining
Sector H - Coal Mines & Coal Mining Related Facilities
Sector J - Mineral Mining and Dressing

DEFINITIONS – MINING OPERATIONS

MSGP § 11.G, H, & J.3

Mining Operations - Consists of the active and temporarily inactive phases, and the reclamation phase, but excludes the exploration and construction phases.

Active Phase - Activities including the extraction, removal or recovery of minerals. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun.

Reclamation Phase - Activities undertaken, in compliance with applicable mined land reclamation requirements, following the cessation of the “active phase”, intended to return the land to an appropriate post-mining land use. The reclamation phase is considered part of "mining operations".

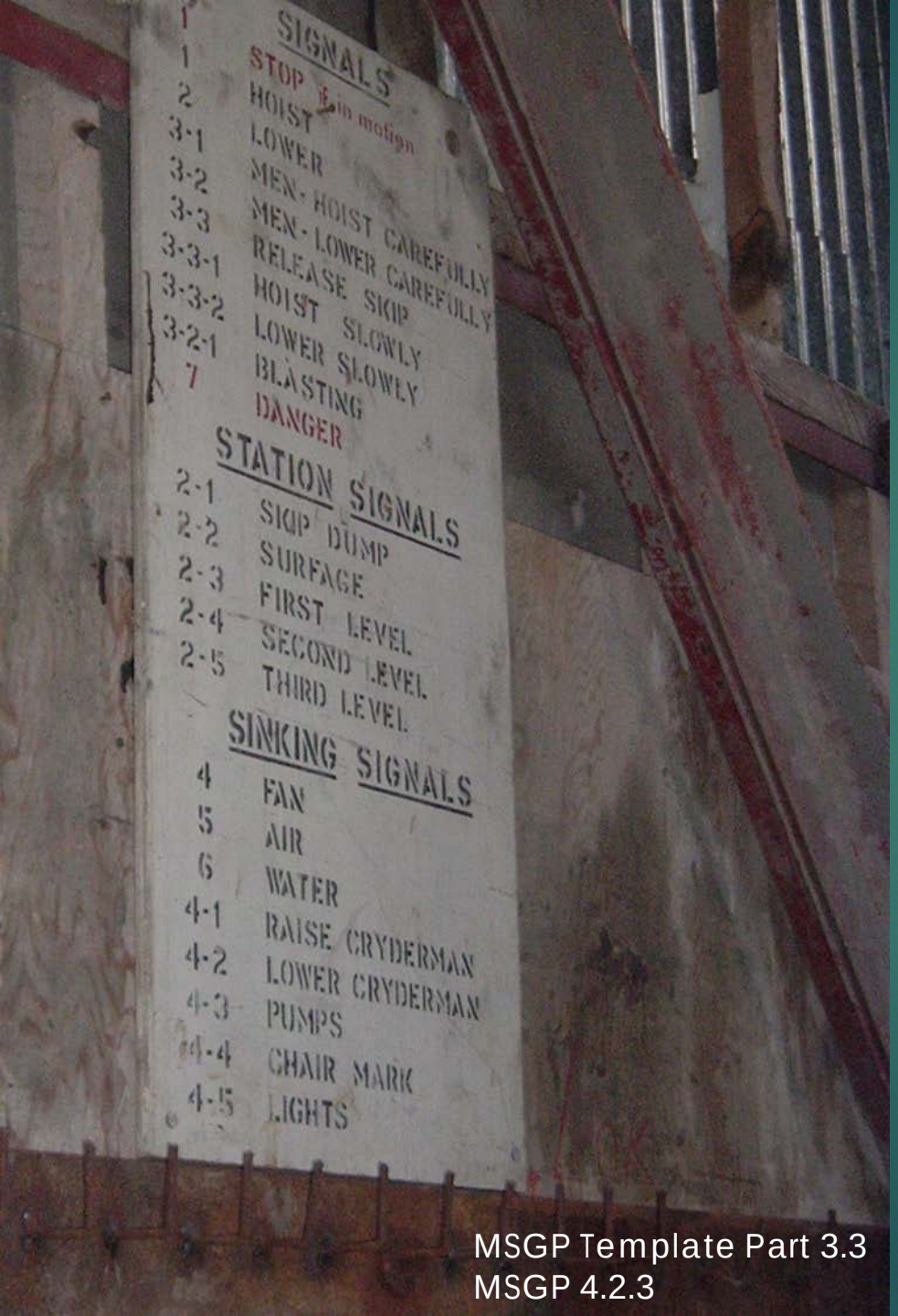
DEFINITIONS
NON-MINING ACTIVITIES

40 CFR 122.26(b)(14)(iii).

Exploration Phase - Entails exploration and land disturbance activities to determine the financial viability of a site. The exploration phase is not considered part of “mining operations.”

Construction Phase - Includes the building of site access roads, facilities, and removal of overburden and waste rock to expose mineable minerals. The construction phase is not considered part of “mining operations”.

Technology-Based Effluent Limits



MSGP Template Part 3.3
MSGP 4.2.3

Required Non-Numeric Technology-Based Effluent Limits

Two types of control measures required by the permit:

1. General controls that apply to all facilities (MSGP 4.2); and
2. 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

1. Use grading, berms, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas;
2. 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);
3. Clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants;
4. Use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible;
5. Use spill/overflow protection equipment;
6. Drain fluids from equipment and vehicles that will be decommissioned or will remain unused for extended periods of time;
7. Perform all cleaning operations indoors, under cover, or inside berms that prevent runoff and run-on and also that capture any overspray; and
8. 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 Template Part 3.2
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.

http://upload.wikimedia.org/wikipedia/commons/b/be/Barrido_Manual_Sinder.jpg

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.

MSGP Template Part 3.3
MSGP 4.2.3

Spill Prevention and Response

"**At a minimum**, the permittee must implement:"

1. Procedures for plainly labeling containers;
2. Procedures for material storage and handling, including the use of secondary containment and barriers between material storage and traffic areas;
3. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases;
4. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies;
5. 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
6. The permittee must also implement measures to prevent the reoccurrence of such releases and to respond to such releases.

MSGP Template Part 3.4
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 Template Part 3.5
MSGP 4.2.5

Management of Runoff

Storm water runoff must be:

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

to minimize pollutants in facility discharge(s).

MSGP Template Part 3.6
MSGP 4.2.6

Salt Storage Piles and Piles Containing Salt

MSGP Template Part 3.7
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

Erosion Control Measures [MSGP 11.(G, H, J).4.1]

- Delineate site boundaries
- Minimize the amount of soil exposed during construction activity
- Maintain natural buffer areas (minimum of 25 feet wide)
- Control storm water discharges and flow rates
- Protect steep slopes

Sediment Control Measures [MSGP 11.(G, H, J).4.2]

- Storm drain inlet protection measures
- Water body protection measures
- Down-slope sediment controls
- Stabilized construction vehicle access and exit points
- Dust generation and track-out from vehicles
- Soil stockpiles (locate away from waters and wetlands including drainages)
- Authorized non-storm water discharges
- Sediment basins (where applicable)

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Dewatering [MSGP 11.(G, H, J).4.3]

- If a construction activity includes excavation dewatering and has a discharge that could adversely impact a local drinking water well, an DEC-identified contaminated site, or a waters of the U.S., the permittee must review the DEC Excavation Dewatering General Permit (AKG002000, or most current version) for specific requirements the permittee may have to comply with in addition to the conditions of this permit.
- A discharge from eligible dewatering activities, including discharges from dewatering of trenches and excavations are prohibited unless treated by appropriate control measures. Appropriate control measures include, but are not limited to, sediment basins or traps, dewatering tanks, weir tanks, or filtration systems designed to remove sediment.

Soil Stabilization [MSGP 11.(G, H, J).4.4]

- A permittee must stabilize all disturbed areas of the site to minimize on-site erosion and sedimentation and the resulting discharge of pollutants according to the requirements of this Part.
- A permittee must ensure that existing vegetation is preserved wherever possible and that disturbed portions of the site are stabilized.

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

- **Treatment Chemicals [MSGP 11.(G, H, J).4.5]**
- Documentation of treatment chemicals selected for use at a site must include the information outlined in MSGP 11.(G, H, J).4.5.1.
  - A permittee must train employees who handle treatment chemicals to comply with the information required
  - A permittee must handle, store and dispose of treatment chemicals, waste chemicals, or flocculants in appropriate leak proof containers under a storm resistant cover or surrounded by secondary containment structures so as to prevent their discharge to the waters of the U.S.
  - Treatment chemicals are typically developed, tested, and approved in regions of the country that may have soils, soil and water temperatures, and other site conditions significantly different from Alaska. These differences must be considered in the selection of the treatment chemicals for use at the Alaskan site.
  - The application of treatment chemicals shall be in combination with appropriate physical control measures to ensure effectiveness of the treatment chemical.

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Prohibited Discharges

- Wastewater from concrete washout, unless managed by an appropriate control measure;
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
- Soaps or solvents used in vehicle and equipment washing.

MSGP 11.(G, H, J).4.6

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Good Housekeeping Measures [MSGP 11.(G, H, J).4.7]

A permittee must design, install, implement, and maintain effective good housekeeping measures to prevent and/or minimize the discharge of pollutants.

A permittee must include appropriate measures for any of the following activities that are used at the site:

- Washing of equipment and vehicles and wheel wash-down; and
- Fueling and maintenance areas.
- Staging and Material Storage Areas [MSGP 11.(G, H, J).4.8]

If a permittee maintains staging and material storage. Areas at the site the permittee must comply with the following requirements:

- Designate areas to be used for staging and material storage areas;
- Locate such activities, to the extent practicable, away from storm water conveyance channels, storm drain inlets, and waters of the U.S; and
- Minimize the exposure to precipitation and storm water and vandalism for all chemicals, treatment chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment.

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

- If a permittee conducts washing of applicators and/or containers used for paint, concrete, and other materials at the site, the permittee must comply with the following requirements:
- Designate areas to be used for washout;
- Locate such activities, to the extent practicable, away from storm water conveyance channels, storm drain inlets, and waters of the U.S.;
- Direct all concrete, paint, and other material washout activities into a lined, watertight container or pit to ensure there is no discharge into the underlying soil and onto the surrounding areas;
- Dispose of liquid wastes in accordance with Part 11.(G, H, J).4.11; and
- For concrete washout areas, remove hardened concrete waste when it has reached one-half (½) the height of the container or pit and dispose of in accordance with Part 11.(G, H, J).4.11.

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

MSGP 11.(G, H, J).4.10

- Fertilizer or Pesticide Use
- If a permittee uses fertilizers or pesticides the permittee must comply with the following requirements:
- Application of fertilizers and pesticides in a manner and at application rates that will minimize the loss of chemical to storm water runoff. Manufacturers' label requirements for application rates and disposal requirements must be followed; and
- Use pesticides in compliance with federal, state and local requirements.

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Storage, Handling, and Disposal of Construction Waste

- If a permittee stores, handles and/or disposes of construction waste at the site, the permittee must comply with the following requirements:
- Locate areas dedicated for management or disposal of construction waste, to the extent practicable, away from storm water conveyance channels, storm drain inlets, and waters of the U.S.;
- Dispose of all collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other domestic wastes according to federal, state and local requirements;
- Store hazardous or toxic waste in appropriate sealed containers and dispose of these wastes in accordance with manufactures recommended method of disposal or federal, state or local requirements; and
- Provide containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water. Clean or replace sanitation facilities and inspect them regularly for leaks and spills.

MSGP 11.(G, H, J).4.11

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

- Winter Considerations
- A permittee who temporarily ceases construction for the winter and plans to resume construction the next summer must plan for winter shutdown.
- Permit coverage is not required for the construction of ice roads or the placement of sand or gravel on frozen tundra with no excavation or potential to pollute waters of the U.S. This permit does address those construction activities that have the potential for erosion or sediment runoff during spring thaw and summer rainfall.
- Cutting of trees and brush while the ground is frozen, without disturbing the vegetative mat, for the purpose of clearing in accordance with the U.S. Fish & Wildlife Service “Recommended Time Periods for Avoiding Vegetation Clearing” is allowed prior to the submittal of a project NOI.

MSGP 11.(G, H, J).4.12

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Maintaining Control Measures

- A permittee must maintain all control measures, good housekeeping measures, and other protective measures in effective operating condition.
- If existing control measures need to be modified or if additional control measures are necessary for any reason, the permittee must complete any corrective action.
- A permittee must remove sediment from silt fences, check dams, berms or other controls before the accumulated sediment reaches one-half (½) the distance up the above-ground height (or it reaches a lower height based on manufacturer's specifications) of the control measure. For sediment traps or sediment ponds, the permittee must remove accumulated sediment when the design capacity has been reduced by fifty (50%) percent.

MSGP 11.(G, H, J).4.13

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Site Stabilization

- Stabilization measures should be initiated immediately in portions of the site where mining, exploration, and/or construction activities have permanently ceased, but in no case more than 14 days after the exploration and/or construction activity in that portion of the site has permanently ceased.
- Inspections and maintenance of control measures, including BMPs, associated with clearing, grading, and/or excavation activities being conducted as part of the exploration and construction phase of a mining operation must continue until final stabilization has been achieved on all portions of the disturbed area, or until the commencement of the active mining phase for those areas that have been temporarily stabilized as a precursor to mining.
- Until temporary vegetative stabilization is achieved, interim measures (e.g., surface roughening or a surface cover, including but not limited to, establishment of ground vegetation, application of mulch, or surface tackifiers with an appropriate seed base) must be employed.

MSGP 11.(G, H, J).4.15.2

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

- Final Stabilization
- Final vegetative stabilization measures must be initiated as soon as possible.
- Until final stabilization is achieved, temporary stabilization measures must be used.

MSGP 11.(G, H, J).4.15.3

http://www.goldcorp.com/files/images/coniaurum_property.jpg

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

During Operation (Mining and Reclamation)

MSGP 11.(G, H, J).4.15.3

Training [MSGP 11.(G, H, J).5.1]

- Conduct employee training at least annually.

Good Housekeeping Measures [MSGP 11.(G, H, J).5.2]

- Use sweepers and covered storage;
- Watering haul roads to minimize dust generation; and
- Conserving vegetation (where possible) to minimize erosion.

Preventative Maintenance [MSGP 11.(G, H, J).5.3]

- Inspect storage tanks and pressure lines of fuels, lubricants, hydraulic fluid, and slurry to prevent leaks due to deterioration or faulty connections.

http://getaminejob.com.au/wp-content/uploads/2012/06/mining-supervisor-training-470x330-Fotolia_5397053_S.jpg

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Storm Water Controls

Storm Water Diversions [MSGP 11. (G, H, J).5.4.1]

Divert storm water away from potential pollutant sources!

- Interceptor or diversion controls;
- Pipe slope drains;
- Subsurface drains; and
- Conveyance systems.

Velocity Dissipation Devices [MSGP 11. (G, H, J).5.4.2]

- Placed along the length of any conveyance channel to provide a non-erosive flow velocity; and
- Placed at the outfalls of all channels and conveyances.

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Storm Water Controls

Down Slope Sediment Controls [MSGP 11.(G, H, J).5.4.3]

- Establish and use down-slope sediment controls (e.g., silt fence or temporary diversion dike) for any portion of the down-slope and side-slope perimeter where storm water will be discharged from disturbed areas of the site.

Stabilized Construction Vehicle Access and Exit Points [MSGP 11.(G, H, J).5.4.4]

- Establish stabilized vehicle access and exit points.
- Off-site accumulations of sediment must be removed at a frequency sufficient to minimize off-site impacts.

Storm Water Controls Capping [MSGP 11.(G, H, J).5.4.5]

If capping is required, identify the source being capped and the material used to construct the cap.

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Overburden, Waste Rock, and Raw Material Piles
Overburden, topsoil, and waste rock, as well as raw material and intermediate and final product stockpiles, shall be located a minimum of 25 feet away from:

- Waters of the United States;
- Wetlands;
- Conveyances and other water features; and
- Outside of geologically unstable areas (if possible).

[MSGP 11.(G, H, J).5.4.6]

Inspections

Construction Phase (Exploration & Land Clearing)

Once every 14 days and after a storm event resulting in discharge from the site.

A storm event is 0.5 inches of rain in 24 hours

Operation Phase (mining and reclamation)

Quarterly (at a minimum)

Inactive/unstaffed exemption applies

http://www.vista-training.com/wp-blog/wp-content/uploads/2010/03/inspection-300px.jpg

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Inspections

Inspections must be conducted either at least once every 7 calendar days, or at least once every 14 calendar days and within 24 hours of the end of a measurable storm event.

- For each inspection required above, the permittee must complete an inspection report.
- If the exploration and construction phase is undergoing winter shutdown the permitee may stop inspections fourteen (14) calendar days after the anticipated fall freeze-up and must resume inspections at least twenty-one (21) calendar days prior to the anticipated spring thaw.

MSGP 11 (G, H, J).4.14.1 & 2

Sectors G, H, & J (Mining Operations) Additional Technology-Based Effluent Limits

Inspections must include:

- All areas of the site disturbed by clearing, grading, and/or excavation activities and areas used for storage of materials that are exposed to precipitation.
- Sedimentation and erosion control measures must be observed to ensure proper operation.
- Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to waters of the United States, where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable.
- Locations where vehicles enter or exit the site must be inspected for evidence of significant offsite sediment tracking.

MSGP 11 (G, H, J).4.14.3

Routine Facility Inspections

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

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.**

MSGP 6.1.1

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.

http://www.ironmountaindailynews.com/photos/news/md/537104_1.jpg

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

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.

MSGP 6.2.1

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

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.

Bench Mark Monitoring

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.

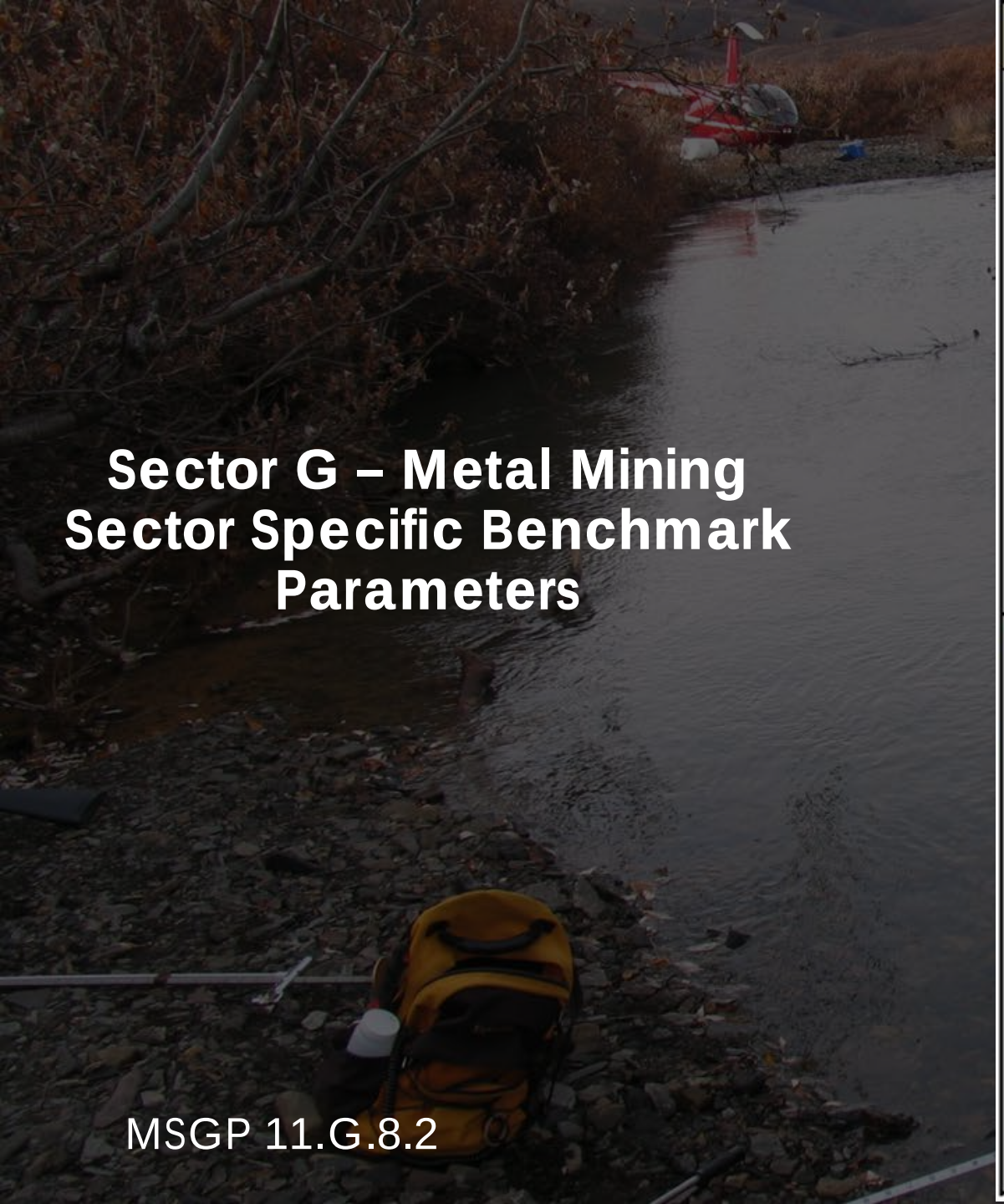
At the permittee's discretion, more than four samples may be taken during separate runoff events and used to determine the average benchmark parameter concentration for facility discharges. These extra samples may be taken in any quarter of the permittee's choice.

MSGP 7.2.1

Sector G – Metal Mining
Sector Specific Benchmark Parameters

MSGP 11.G.8.1

Subsector (Permittees may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector G1. Active Copper Ore Mining and Dressing Facilities (SIC 1021)	Total Suspended Solids (TSS)	100 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L



Sector G – Metal Mining Sector Specific Benchmark Parameters

MSGP 11.G.8.2

Subsector (Permittees may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector G2. Iron Ores; Copper Ores; Lead and Zinc Ores; Gold and Silver Ores; Ferroalloy Ores, Except Vanadium; and Miscellaneous Metal Ores (SIC Codes 1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099) (Note: when analyzing hardness for a suite of metals, it is more cost effective to add analysis of calcium and magnesium, and have hardness calculated than to require hardness analysis separately)	Total Suspended Solids (TSS)	100 mg/L
	Turbidity	See Note 1
	pH	6.5 - 8.5 s.u.
	Hardness (as $CaCO_3$; calc. from Ca, Mg)[2]	no benchmark value
	Total Antimony	0.64 mg/L
	Total Arsenic (saltwater)[2] Total Arsenic (freshwater)	0.069 mg/L 0.15 mg/ L
	Total Beryllium	0.13 mg/L
	Total Cadmium (saltwater)[2] Total Cadmium (freshwater)[3]	0.04 mg/L Hardness Dependent
	Total Copper (saltwater)[2] Total Copper (freshwater)[3]	0.0048 mg/L Hardness Dependent
	Total Iron	1.0 mg/L
	Total Lead (saltwater)[2] Total Lead (freshwater)[3]	0.21 mg/L Hardness Dependent
	Total Mercury (saltwater)[2] Total Mercury (freshwater)[3]	0.0018 mg/L 0.0014 mg/L
	Total Nickel(saltwater)[2] Total Nickel (freshwater)[3]	0.074 mg/L Hardness Dependent
	Total Selenium	0.005 mg/L
	Total Silver (saltwater)[2] Total Silver (freshwater)[3]	0.0019 mg/L Hardness Dependent
	Total Zinc (saltwater)[2] Total Zinc (freshwater)[3]	0.09 mg/L Hardness Dependent

Note:

1. Turbidity in fresh water may not exceed 5 nephelometric turbidity units (NTU) above natural conditions when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU. See 18 AAC 70.020(b)(12)(A)(i).
2. Saltwater benchmark values apply to storm water discharges into saline waters where indicated.
3. 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	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Nickel (mg/L)	Silver (mg/L)	Zinc (mg/L)
0 – < 25 mg/L	0.0005	0.0038	0.014	0.15	0.0007	0.04
25 – < 50 mg/L	0.0008	0.0056	0.023	0.20	0.0007	0.05
50 – < 75 mg/L	0.0013	0.0090	0.045	0.32	0.0017	0.08
75 – < 100 mg/L	0.0018	0.0123	0.069	0.42	0.0030	0.11
100 – < 125 mg/L	0.0023	0.0156	0.095	0.52	0.0046	0.13
125 – < 150 mg/L	0.0029	0.0189	0.122	0.61	0.0065	0.16
150 – < 175 mg/L	0.0034	0.0221	0.151	0.71	0.0087	0.18
175 – < 200 mg/L	0.0039	0.0253	0.182	0.80	0.0112	0.20
200 – < 225 mg/L	0.0045	0.0285	0.213	0.89	0.0138	0.23
225 – < 250 mg/L	0.0050	0.0316	0.246	0.98	0.0168	0.25
250+ mg/L	0.0053	0.0332	0.262	1.02	0.0183	0.26

Sector G – Metal Mining Supplemental Benchmark Parameters

Supplemental Requirements			
Type of Ore Mined	Pollutants of Concern		
	Total Suspended Solids (TSS)	pH	Metals, Total
Tungsten Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Nickel Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Aluminum Ore	X	X	Iron
Mercury Ore	X	X	Nickel (H)
Iron Ore	X	X	Iron (Dissolved)
Platinum Ore			Cadmium (H), Copper (H), Mercury, Lead (H), Zinc (H)
Titanium Ore	X	X	Iron, Nickel (H), Zinc (H)
Vanadium Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Molybdenum	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Mercury, Zinc (H)
Uranium, Radium, and Vanadium Ore	X	X	Chemical Oxygen Demand, Arsenic, Radium (Dissolved and Total), Uranium, Zinc (H)

Note: An "X" indicated for TSS and/or pH means that permittees are required to monitor for those parameters. (H) indicates that hardness must also be measured when this pollutant is measured.

- MSGP 11.G.8.3

Sector H - Coal Mining Sector Specific Benchmark Parameters

Subsector (Permittees may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector H1. Coal Mines and Related Areas (SIC 1221-1241)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Total Suspended Solids (TSS)	100 mg/L

MSGP 11.H.8

Sector J – Non-Metallic Mineral Mining and Dressing, Sector Specific Benchmark Parameters

Subsector (Permittees may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Subsector J1. Sand and Gravel Mining (SIC 1442, 1446)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Suspended Solids (TSS)	100 mg/L
Subsector J2. Dimension and Crushed Stone and Nonmetallic Minerals (except fuels) (SIC 1411, 1422-1429, 1481, 1499)	Total Suspended Solids (TSS)	100 mg/L

http://www.usibelli.com/images/water-coal-quality.jpg

MSGP 11.J.8

MSGP Impaired Water 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 7.2.3

MSGP Water Quality Monitoring

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

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 9.5

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.