

G. Storm Water Discharges Associated With Industrial Activity From Metal Mining (Ore Mining and Dressing) Facilities.

1. Coverage of This Section.

a. Discharges Covered Under This Section. The requirements listed under this section shall apply to storm water discharges from active and inactive metal mining and ore dressing facilities [Standard Industrial Classification (SIC) Major Group 10] if the storm water has come into contact with, or is contaminated by, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the operation. SIC Major Group 10 includes establishments primarily engaged in mining, developing mines, or exploring for metallic minerals (ores) and also includes all ore dressing and beneficiating operations. For the purposes of this part of the permit, the term "metal mining" includes all ore mining and/or dressing and beneficiating operations, whether performed at mills operated in conjunction with the mines served or at mills, such as custom mills, operated separately.

1) Covered Discharges from Inactive Facilities or those Undergoing Reclamation. All storm water discharges

2) Covered Discharges from Active and Temporarily Inactive Facilities. Only the storm water discharges from the following areas are covered:

- Waste rock and overburden piles if composed entirely of storm water and not combined with mine drainage;
- Topsoil piles;
- Offsite haul and access roads if off active area;
- Onsite haul and access roads not constructed of waste rock, overburden or spent ore and mine water is not used for dust control;
- Onsite haul and access roads constructed of waste rock, overburden or spent ore if composed entirely of storm water and not combining with mine drainage;
- Runoff from tailings dams/dikes when not constructed of waste rock or tailings and no process fluids are present;
- Concentration building, if no contact with material piles;
- Mill site, if no contact with material piles;
- Office or administrative building and housing, if mixed with storm water from industrial area;
- Chemical storage area;
- Docking facility, if no excessive contact with waste product;
- Explosive storage;
- Fuel storage;
- Vehicle and equipment maintenance area and building;
- Parking areas, excludes drainage that is exclusively from employee and visitor parking;
- Power plant;
- Truck wash areas if no excessive contact with waste product;
- Unreclaimed, disturbed areas outside of active mining area;
- Reclaimed areas released from reclamation bonds prior to December 17, 1990;

- Partially or inadequately reclaimed areas or areas not released from reclamation bonds.
- b. Limitations on Coverage. The following storm water discharges associated with industrial activity are not authorized by this permit:
- 1) Discharges from active metal mining facilities that are subject to the effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440). Storm water runoff from these sources are subject to 40 CFR Part 440 if they are mixed with other discharges subject to 440. In this case, they are not eligible for coverage under this permit. Discharges from overburden/waste rock and related areas are not subject to 40 CFR Part 440 unless they: (1) drain naturally (or are intentionally diverted) to a point source; and (2) combine with “mine drainage” that is otherwise regulated under the Part 440 regulations.
 - 2) Adit drainage, acid drainage or contaminated springs or seeps that do not directly result from precipitation events.
 - 3) Storm water discharges associated with an industrial activity that the *Director* has determined to be, or may reasonably be expected to be, contributing to a violation of a water quality standard.
 - 4) Storm water discharges associated with industrial activity from inactive mining operations occurring on Federal lands where an operator cannot be identified.
 - 5) Storm water discharges from earth-disturbing activities conducted prior to active mining activities. These are considered construction activities and must be covered under the Construction General Permit.
- c. Co-Located Industrial Activity. When an industrial facility described by paragraph *a.* (above) has industrial activities being conducted onsite that meet the description(s) of industrial activities in another section(s), that industrial facility shall comply with any and all applicable monitoring and pollution prevention plan requirements of the other section(s) in addition to all applicable requirements in this section. The monitoring and pollution prevention plan terms and conditions of this multi-sector permit are additive for industrial activities being conducted at the same industrial facility. The operator of the facility shall determine which other monitoring and pollution prevention plan section(s) of this permit (if any) are applicable to the facility.
2. Special Definitions. The following definitions are only for this section of the permit and are not intended to supersede the definitions of active and inactive mining facilities established by *40 CFR 122.26(b)(14)(iii)*:
- a. "Active Metal Mining Facility" is a place where work or other related activity to the extraction, removal, or recovery of metal ore is being conducted. With respect to surface mines, an "active metal mining facility" does not include any area of land on or in which grading has been completed to return the earth to a desired contour and reclamation work has begun.

- b. "Inactive Metal Mining Facility" means a site or portion of a site where metal mining and/or milling activities occurred in the past but is not an active metal mining facility, as defined in this permit and that portion of the facility does not have an active mining permit issued by the applicable (federal or state) governmental agency.
 - c. "Temporarily Inactive Metal Mining Facility" means a site or portion of a site where metal mining and/or milling activities occurred in the past, but currently are not being actively undertaken, and the facility has an active mining permit issued by the applicable (federal or state) government agency that authorizes mining at the site.
 - d. "Earth-disturbing activities conducted prior to active mining activities" consists of two classes of earth-disturbing (i.e., clearing, grading and excavation) activities:
 - 1) activities performed for purposes of mine site preparation, including: cutting new rights of way (except when related to access road construction); providing access to a mine site for vehicles and equipment (except when related to access road construction); other earth disturbances associated with site preparation activities on any areas where active mining activities have not yet commenced (e.g., for heap leach pads, waste rock facilities, tailings impoundments, wastewater treatment plants); and
 - 2) construction of staging areas to prepare for erecting structures such as to house project personnel and equipment, mill buildings, etc., and construction of access roads. Earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining are considered to be "construction" and require a construction storm water permit.
3. Storm Water Pollution Prevention Plan Requirements.
- a. Contents of Plan for Active and Temporarily Inactive Metal Mining Facilities. The plan shall include, at a minimum, the following items:
 - 1) Pollution Prevention Team. Identification of a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team that are responsible for developing the storm water pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.
 - 2) Description of Mining Activities. A description of the mining and associated activities taking place at the site that affect or may affect storm water runoff intended to be covered by this permit. The description shall report the total acreage within the mine site, an estimate of the number of acres of disturbed land and an estimate of the total amount of land proposed to be disturbed throughout the life of the mine. A general description of the location of the mining site relative to major transportation routes and communities shall also be provided.
 - 3) Description of Potential Pollutant Sources. A description of potential sources that

may reasonably be expected to add significant amounts of pollutants (including sediment) to storm water discharges or that may result in the discharge of pollutants during dry weather. Each description shall identify all activities and significant materials that may potentially be significant storm water pollutant sources from the active mining activity (see paragraph *I.*), including, at a minimum:

a) Drainage.

- (1) A site topographic map that indicates, at a minimum: mining/milling site boundaries and access and haul roads; the location of each storm water outfall and an outline of the portions of the drainage area that are within the facility boundaries; equipment storage, fueling and maintenance areas; materials handling areas; storage areas for chemicals and explosives; areas used for storage of overburden, materials, soils or wastes; location of mine drainage (where water leaves mine) or any other process water; tailings piles/ponds, both proposed and existing; heap leach pads; points of discharge from the property for mine drainage or any other process water; springs, streams, wetlands and other surface waters; and boundary of tributary areas that are subject to effluent limitations guidelines. In addition, the map must indicate the types of discharges contained in the drainage areas of the outfalls.
- (2) Prediction of the direction of flow, and identification of the types of pollutants (e.g., heavy metals, sediment) that are likely to be present in storm water discharges associated with industrial activity, for each area of the mine/mill site that generates storm water discharges associated with industrial activity with a reasonable potential for containing significant amounts of pollutants. Factors to consider include the mineralogy of the ore and waste rock (e.g., acid forming), toxicity and quantity of chemical(s) used, produced or discharged; the likelihood of contact with storm water; vegetation on site if any, and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified.
- (3) Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation for each storm water outfall that may be covered under this permit (see paragraph *I.*). Such inventory shall include a narrative description of: significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of 3 years prior to the date of the submission of a *Notice of Intent (NOI)* to be covered under this permit and the present; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of 3 years prior to the date of the submission of a *Notice of Intent (NOI)* to be covered under this permit and the present; the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any

treatment the storm water receives. The inventory of exposed materials shall include, but shall not be limited to the significant materials stored exposed to storm water, and material management practices employed that were listed for the facility in the approved group application. Also include a summary of any existing ore or waste rock/overburden characterization data, including results of testing for acid rock generation potential. If the ore or waste rock/overburden characterization data is updated due to a change in the ore type being mined, the storm water pollution prevention plan shall be updated with the new data.

- b) Spills and Leaks. A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of 3 years prior to the date of submission of a *Notice of Intent (NOI)* to be covered under this permit. Such list shall be updated as appropriate during the term of the permit.
 - c) Sampling Data. A summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit.
 - d) Risk Identification and Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources from the following activities associated with metal mining: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for identify what the pollutant or pollutant parameter (e.g., heavy metals, etc.) of concern is.
- 4) Measures and Controls. A description of storm water management controls appropriate for the facility, and procedures for implementing such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls:
- a) Good Housekeeping. Good housekeeping such as maintenance in a clean, orderly manner of areas that may contribute pollutants to storm water discharges. (For suggested measures for vehicle maintenance operations, see good housekeeping measures specified in *Appendix I.P.* for transportation facilities.)
 - b) Preventive Maintenance. A narrative describing the program for timely inspection and maintenance of storm water management devices (e.g., cleaning oil/water separators, catch basins) as well as inspection and testing of facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems.

Particular attention shall be given to erosion control and sediment control systems and devices.

- c) Spill Prevention and Response Procedures. Identified areas where potential spills that can contribute pollutants to storm water discharges, and their accompanying drainage points. The area description shall include, where appropriate, specific material handling procedures, storage requirements, and consideration of the use of equipment such as diversion valves. Procedures for cleaning up spills must be included in the plan and the necessary equipment to implement a clean up shall be available to the appropriate personnel.
- d) Inspections. Provisions for qualified personnel to inspect designated equipment and mine areas at least on a monthly basis for active sites. The monthly inspections can be done at any time during the month and do not have to be done immediately following a precipitation event. For temporarily inactive sites, the inspections should be quarterly; however, inspections are not required when adverse weather conditions (e.g., snow) make the site inaccessible. All material handling areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion control systems and sediment control devices shall also be inspected to determine if they are working properly. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained. The use of a checklist developed by the facility is encouraged.
- e) Employee Training. Outlines of employee training programs that inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping, and material management practices. The pollution prevention plan shall specify how often training shall take place, but in all cases training must be held at least annually (once per calendar year).
- f) Recordkeeping and Internal Reporting Procedures. Descriptions of incidents (such as spills, major storm events, or other discharges), as well as information describing the quality and quantity of storm water discharges. Inspections, maintenance activities, and training sessions shall also be documented and records of such activities shall be incorporated into the plan.
- g) Non-storm Water Discharges.
 - (1) Certification. A certification that any discharge has been tested or evaluated for the presence of non-storm water discharges, such as seeps or adit discharges or discharges subject to effluent limitation guidelines (e.g., 40 CFR Part 440), such as mine drainage or process water. The certification shall include the identification of potential significant sources of non-storm water or water subject to effluent limitation

guidelines at the site, a description of the results of any test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be signed in accordance with *Part VI.G.* of this permit. Such certification may not be feasible if the facility operator does not have access to an outfall, manhole, or other point of access to the ultimate conduit that receives the discharge. In such cases, the source identification section of the storm water pollution prevention plan shall indicate why the certification required by this part was not feasible, along with the identification of potential significant sources of non-storm water at the site. A discharger that is unable to provide the certification required by this paragraph must notify the *Director* in accordance with paragraph *3.a.4)g)1)(b)* (below).

Alternatively, the plan may include a certification that any non-storm water discharge that mixes with storm water is subject to a separate *UPDES* permit that applies applicable effluent limitations prior to the mixing of non-storm water and storm water. In such cases, the certification shall identify the non-storm water discharge(s), the applicable *UPDES* permit(s), the effluent limitations placed on the non-storm water discharge by the *UPDES* permit(s), and the point(s) at which the limitations are applied.

- (a) Exceptions. Except for flows from emergency fire fighting activities, sources of non-storm water listed in *Part II.A.2* (Non-storm Water Discharges) of this permit that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.
- (b) Failure to Certify. Any facility that is unable to provide the certification required (testing for non-storm water discharges), must notify the *Director* within 180 days after submitting an *NOI* to be covered by this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water discharges to the storm sewer; and why adequate tests for such storm sewers were not feasible. Non-storm water discharges to waters of the State that are not authorized by a *UPDES* permit are unlawful and must be terminated.
- h) Sediment and Erosion Control. Identification of areas that, due to topography, activities, or other factors, have a high potential for significant erosion of soil and/or other materials, and measures to be used to limit erosion and/or remove sediment from storm water runoff. The measures to

consider include diversion of flow away from areas susceptible to erosion (such as interceptor dikes and swales; diversion dikes curbs and berms; pipe slope drains; subsurface drains; and drainage/storm water conveyance systems [channels or gutters; open top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector; and culverts]), stabilization methods to prevent or minimize erosion (such as temporary or permanent seeding; vegetative buffer strips; protection of trees; topsoiling; soil conditioning; contouring; mulching; geotextiles [matting; netting; or blankets]; riprap; gabions; and retaining walls), and structural methods for controlling sediment (such as check dams; rock outlet protection; level spreaders; gradient terraces; straw bale barriers; silt fences; gravel or stone filter berms; brush barriers; sediment traps; grass swales; pipe slope drains; earth dikes; other controls such as entrance stabilization, waterway crossings or wind breaks; or other equivalent measures).

- i) Management of Runoff. A narrative consideration of the appropriateness of traditional storm water management practices (practices other than those that control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site and provisions for implementation and maintenance of measures that the permittee determines to be reasonable and appropriate. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity [see paragraph 3.a.3) of this section (Description of Potential Pollutant Sources)] shall be considered when determining reasonable and appropriate measures. Appropriate measures may include: vegetative swales and other vegetative filtration practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management plans, infiltration devices, and wet detention/retention devices, or impoundments.
 - j) Capping. Where capping of a contaminant source is necessary, the source being capped and materials and procedures used to cap the contaminant source must be identified. In some cases, the elimination of a pollution source through capping contaminant sources may be the most effective control measure for discharges from inactive ore mining and dressing facilities.
 - k) Treatment. A description of how storm water will be treated prior to discharging to waters of the State if treatment of a storm water discharge is necessary. Storm water treatments include the following: chemical/physical treatment; oil/water separators; and artificial wetlands.
- 5) Comprehensive Site Compliance Evaluation. Procedures for qualified personnel to conduct site compliance evaluations at appropriate intervals specified in the plan, but in no case less than once a year. Such evaluations shall include:
- a) Visual inspections of areas contributing to a storm water discharge associated with industrial activity for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be

evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

- b) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with paragraph 3.a.3) of this section (Description of Potential Pollutant Sources) and pollution prevention measures and controls identified in the plan in accordance with paragraph 3.a.4) of this section (Measures and Controls) shall be revised as appropriate within 30 days of such inspection and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 12 weeks after the evaluation unless additional time is authorized by the *Director*.
 - c) Preparation of a report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph 3.a.5)b) (above) of the permit shall be made and retained as part of the storm water pollution prevention plan for at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with *Part VI.G.* (Signatory Requirements) of this permit.
 - d) Where compliance evaluation schedules overlap with inspections required under 3.a.4)d), the compliance evaluation may be conducted in place of one such inspection.
- b. Contents of Plan for Inactive Metal Mining Facilities. The plan shall include, at a minimum, the following items:
- 1) Pollution Prevention Team. Identification of a specific individual or individuals that are responsible for the development, implementation, maintenance, and revision of the storm water pollution prevention plan. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the storm water pollution prevention plan at the inactive facility.
 - 2) Description of Mining Activities. A description of the mining and associated activities that took place at the site. The description shall report the approximate dates of operation, the total acreage within the mine and/or processing site, an estimate of the number of acres of disturbed area, and the current activities (e.g., reclamation) that are taking place at the facility. A general description of the location of the mining site relative to major transportation routes and communities

shall also be provided.

- 3) Description of Potential Pollutant Sources. A description of potential sources that may reasonably be expected to add significant amounts of pollutants (including sediment) to storm water discharges or that may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials that may potentially be significant storm water pollutant sources from the inactive mining site. Each description shall include, at a minimum:
 - a) Site Map. A generalized site map or maps that depict any of the following that may be applicable: mining/milling site boundaries and access and haul roads; the location of each storm water outfall and an outline of the portions of the drainage area that are within the facility boundaries; areas used for storage of overburden, materials, soils, tailings, or wastes; areas used for outdoor manufacturing, storage, or disposal of materials; any remaining equipment storage, fueling, and maintenance areas; tailings piles/ponds; mine drainage or any other process water discharge points; an estimate of the direction(s) of flow; existing structural controls to reduce pollutants in storm water runoff; and springs, streams, wetlands, and other surface waters. The map must also indicate the types of discharges contained in the drainage areas of the outfalls.
 - b) Inventory of Exposed Materials. An inventory and narrative description for each outfall of any significant materials that may still be at the site. This description of sources should agree with sources identified on the map.
 - c) Spills and Leaks. A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of 3 years prior to the date of submission of a Notice of Intent (NOI) to be covered under this permit. Such list shall be updated as appropriate during the term of the permit.
 - d) Sampling Data. A summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit.
 - e) Risk Identification and Summary of Potential Pollutant Sources. For each potential pollutant source at the site the pollutants of concern (e.g., heavy metals) shall be identified and an assessment made of the potential of these pollutant sources to contribute pollutants to storm water discharges.
- 4) Measures and Controls. A description of storm water management controls appropriate for the facility, and procedures for implementing and maintaining such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. This includes:
 - a) Storm Water Diversion. Description of how and where storm water will be diverted away from potential pollutant sources to prevent storm water

contamination. Storm water diversions may include the following: interceptor dikes and swales; diversion dikes curbs and berms; pipe slope drains; subsurface drains; drainage/storm water conveyance systems (channels or gutters; open top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector; and culverts) or equivalent measures.

- b) Sediment and Erosion Control. Identification of areas that, due to topography, activities, or other factors, have a high potential for significant erosion of soil and/or other materials, and measures to be used to limit erosion and/or remove sediment from storm water runoff. The measures to consider include diversion of flow away from areas susceptible to erosion, stabilization methods to prevent or minimize erosion (such as temporary or permanent seeding; vegetative buffer strips; protection of trees; topsoiling; soil conditioning; contouring; mulching; geotextiles (matting; netting; or blankets); riprap; gabions; and retaining walls), structural methods for controlling sediment (such as check dams; rock outlet protection; level spreaders; gradient terraces; straw bale barriers; silt fences; gravel or stone filter berms; brush barriers; sediment traps; grass swales; pipe slope drains; earth dikes; and other controls such as entrance stabilization, waterway crossings or wind breaks; or other equivalent measures).
- c) Management of Runoff. A narrative consideration of the appropriateness of traditional storm water management practices (practices other than those that control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site and provisions for implementation and maintenance of measures that the permittee determines to be reasonable and appropriate. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity [see paragraph 3.a.3) of this section (Description of Potential Pollutant Sources)] shall be considered when determining reasonable and appropriate measures. Appropriate measures may include: vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls, snow management activities, infiltration devices, and wet detention/retention devices, or impoundments.
- d) Capping. Where capping of a contaminant source is necessary, the source being capped and materials and procedures used to cap the contaminant source must be identified. In some cases, the elimination of a pollution source through capping contaminant sources may be the most effective control measure for discharges from inactive ore mining and dressing facilities.
- e) Treatment. A description of how storm water will be treated prior to discharging to waters of the State if treatment of a storm water discharge is necessary. Storm water treatments include the following: chemical/physical treatment; oil/water separators; artificial wetlands or other equivalent measures.

- f) Recordkeeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges), as well as information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.
- 5) Comprehensive Site Compliance Evaluation. Procedures for qualified personnel to conduct site compliance evaluations at appropriate intervals specified in the plan, but, except as provided in paragraph 3.b.5)d) (below), in no case less than once a year. Such evaluations shall include:
- a) Visual inspection of areas contributing to a storm water discharge associated with industrial activity for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.
 - b) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with paragraph 3.b.3) of this section (Description of Potential Pollutant Sources) and pollution prevention measures and controls identified in the plan in accordance with paragraph 3.b.4) of this section (Measures and Controls) shall be revised as appropriate within 30 days of such inspection and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 12 weeks after the evaluation unless additional time is authorized by the permit issuing authority.
 - c) Preparation of a report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph 3.b.5)b) (above) of the permit shall be made and retained as part of the storm water pollution prevention plan for at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with *Part VI.G.* (Signatory Requirements) of this permit.
 - d) Where annual site compliance evaluations are shown in the plan to be impractical for inactive mining sites due to the remote location and inaccessibility of the site, site evaluations required under this part shall be conducted at appropriate intervals specified in the plan, but, in no case less

than once in 3 years.

4. Numeric Effluent Limitations. There are no additional numeric effluent limitations beyond those described in *Part IV.B* of this permit.
5. Monitoring and Reporting Requirements.
 - a. Analytical Monitoring Requirements. Copper ore mining and dressing facilities must monitor their storm water discharges associated with industrial activity at least quarterly (4 times per year) during years 1 (2021) and 3 (2023) except as provided in paragraphs 5.a.3) (Sampling Waiver), 5.a.4) (Representative Discharge), and 5.a.5) (Alternative Certification). Active copper ore mining and dressing facilities are required to monitor their storm water discharges for the pollutants of concern listed in Table G-1 below. Facilities must report in accordance with 5.b. (Reporting). In addition to the parameters listed in Table G-1 below, the permittee shall provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled.

Table G-1.
Monitoring Requirements for Active Copper Ore Facilities (SIC 1021)

Pollutants of Concern	Benchmark Monitoring Cut-Off Concentration
Chemical Oxygen Demand (COD)	120 mg/L
Total Suspended Solids (TSS) ¹	100 mg/L
Nitrate plus Nitrite Nitrogen	0.68 mg/L

1. Sampling for TSS is not required for storm water discharges that are infiltrating to groundwater.

Table G-2.
Monitoring Requirements for Discharges from Waste Rock and Overburden Piles at Active Facilities. Includes: Iron, Copper, Lead and Zinc, Gold and Silver, Ferroalloy (except Vanadium), and Miscellaneous Metal Ore Facilities (SIC 1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099)

Pollutants of Concern	Benchmark Monitoring Cut-Off Concentration
Total Suspended Solids (TSS) ¹	100 mg/L
Turbidity	50 NTU
pH	6.0-9.0 s.u.
Hardness (as CaCO ₃ ; calculated from Ca, Mg) ²	No benchmark value
Total Antimony	0.64 mg/L
Total Arsenic (freshwater)	0.15 mg/L
Total Arsenic (saltwater) ³	0.069 mg/L
Total Beryllium	0.13 mg/L

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Pollutants of Concern	Benchmark Monitoring Cut-Off Concentration
Total Cadmium (freshwater) ² Total Cadmium (saltwater) ³	Hardness Dependent 0.04 mg/L
Total Copper (freshwater) ² Total Copper (saltwater) ³	Hardness Dependent 0.0048 mg/L
Total Iron	1.0 mg/L
Total Lead (freshwater) ² Total Lead (saltwater) ³	Hardness Dependent 0.21 mg/L
Total Mercury (freshwater) Total Mercury (saltwater) ³	0.0014 mg/L 0.0018 mg/L
Total Nickel (freshwater) ² Total Nickel (saltwater) ³	Hardness Dependent 0.074 mg/L
Total Selenium (freshwater) Total Selenium (saltwater) ³	0.005 mg/L 0.29 mg/L
Total Silver (freshwater) ² Total Silver (saltwater) ³	Hardness Dependent 0.0019 mg/L
Total Zinc (freshwater) ² Total Zinc (saltwater) ³	Hardness Dependent 0.09 mg/L

1. Sampling for TSS is not required for storm water discharges that are infiltrating to groundwater.

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 DWQ's Guidance Document for UPDES Multi-Sector General Permit Monitoring and Reporting Requirements section on "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology), to identify the applicable 'hardness range' for determining their benchmark value applicable to their facility. Hardness Dependent Benchmarks follow in the table below. If hardness cannot be determined (groundwater or inaccessible waterbodies), use the most conservative values (0-24.99 mg/L range).

3. Saltwater benchmark values apply to storm water discharges into saline waters where indicated.

Freshwater Hardness Range	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Nickel (mg/L)	Silver (mg/L)	Zinc (mg/L)
0-24.99 mg/L	0.0005	0.0038	0.014	0.15	0.0007	0.04
25-49.99 mg/L	0.0008	0.0056	0.023	0.20	0.0007	0.05
50-74.99 mg/L	0.0013	0.0090	0.045	0.32	0.0017	0.08
75-99.99 mg/L	0.0018	0.0123	0.069	0.42	0.0030	0.11
100-124.99 mg/L	0.0023	0.0156	0.095	0.52	0.0046	0.13
125-149.99 mg/L	0.0029	0.0189	0.122	0.61	0.0065	0.16
150-174.99 mg/L	0.0034	0.0221	0.151	0.71	0.0087	0.18
175-199.99 mg/L	0.0039	0.0253	0.182	0.80	0.0112	0.20
200-224.99 mg/L	0.0045	0.0285	0.213	0.89	0.0138	0.23
225-249.99 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

Table G-3.¹
Additional Monitoring Requirements for Discharges from Waste Rock and Overburden Piles at Active Facilities Based on Ore Type

Type of Ore Mined	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

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

1. Use the benchmark values provided in Table G-2 for parameters that are required to be sampled as part of this table. If a parameter is required in G-3 and you are already sampling that same parameter as part of G-2, you may use the monitoring results from Table G-2 to satisfy the requirement for that parameter in Table G-3.

- 1) **Monitoring Periods.** Active copper ore mining and dressing facilities shall monitor samples collected during the sampling periods of: January through March, April through June, July through September, and October through December for the years specified in paragraph *a.* (above).
- 2) **Sample Type.** A minimum of one grab sample shall be taken. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description

of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or non-process water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

- 3) Sampling Waiver.
 - a) Adverse Conditions. When a discharger is unable to collect samples within a specified sampling period due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate qualifying event in the next period and submit the data along with data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).
 - b) Low Concentration Waiver. When the average concentration for a pollutant calculated from all monitoring data collected from an outfall during the monitoring period January 1, 2021 lasting through December 31, 2021, is less than the corresponding value for that pollutant listed in Table G-1 and G-2 under the column Monitoring Cut-Off Concentration, a facility may waive monitoring and reporting requirements in the monitoring period beginning January 1, 2023, lasting through December 31, 2023. The facility must submit to the *Director*, in lieu of the monitoring data, a certification that there has not been a significant change in industrial activity or the pollution prevention measures in area of the facility that drains to the outfall for which sampling was waived.
- 4) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may test the effluent of one of such outfalls and report that the quantitative data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan. The permittee shall include the description of the location of the outfalls, explanation of why outfalls are expected to discharge substantially identical effluents, and estimate of the size of the drainage area and runoff coefficient with the *Storm Water Discharge Monitoring Report (SWDMR)*.
- 5) Alternative Certification. A discharger is not subject to the monitoring requirements of this section provided the discharger makes a certification for a given outfall, or on a pollutant-by-pollutant basis in lieu of the monitoring reports required under paragraph *b.* below, under penalty of law, signed in accordance

with *Part VI.G.* (Signatory Requirements), that material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, or significant materials from past industrial activity that are located in areas of the facility within the drainage area of the outfall are not presently exposed to storm water and are not expected to be exposed to storm water for the certification period. Such certification must be retained in the storm water pollution prevention plan, and submitted to *DWQ* in accordance with *Part V.B.* of this permit. In the case of certifying that a pollutant is not present, the permittee must submit the certification along with the monitoring reports required under paragraph *b.* below. If the permittee cannot certify for an entire period, they must submit the date exposure was eliminated and any monitoring required up until that date. This certification option is not applicable to compliance monitoring requirements associated with effluent limitations.

- b. Reporting. Permittees with active facilities requiring monitoring under part *a.* (above) shall submit monitoring results for each outfall associated with industrial activity or a certification in accordance with sections 3), 4), or 5) above] obtained during the first (2021) and third year (2023) monitoring period on *Storm Water Discharge Monitoring Report (SWDMR)* form(s) postmarked no later than the 31st day of March on the following year (2022 and 2024). For each outfall, one signed *SWDMR* form must be submitted to the *Director* per storm event sampled. Signed copies of *SWDMR*, or said certifications, shall be submitted to the *Director* at the address listed in *Part V.B.* of this permit.
- 1) Additional Notification. In addition to filing copies of *SWDMRs* in accordance with paragraph *b.* (above), active ore mining and dressing facilities with at least one storm water discharge associated with industrial activity through a large or medium municipal separate storm sewer system (systems serving a population of 100,000 or more) must submit signed copies of discharge monitoring reports to the operator of the municipal separate storm sewer system in accordance with the dates provided in paragraph *b.* (above).
- c. Benchmark Level Exceedance Actions. Benchmarks are used to help gauge the overall effectiveness of control measures at a facility. If there is an exceedance of these levels you must review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary. This review must be completed within a month of receiving sample results. Actions taken as a result of the review must be documented in the pollution prevention plan and completed in a timely manner, but in no case more than 12 weeks after the evaluation. If no action is taken then you must document the rationale for this decision (e.g. natural background pollutant levels, further pollutant reduction is not technologically or economically feasible, etc.).
- d. Visual Examination of Storm Water Quality. Facilities covered under this sector shall perform and document a visual examination of storm water discharges associated with industrial activity from each outfall, except discharges exempted below. The examination must be made during daylight hours unless there is insufficient rainfall or snow melt to produce a runoff event. Facilities must examine storm water quality at least once in each of the following periods: January through March; April through June; July through September; and October through December.

- 1) Sample and Data Collection. Examinations shall be made of grab samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual should carry out the collection and examination of discharges for entire permit term.
- 2) Visual Storm Water Discharge Examination Reports. Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.
- 3) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the examination data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.
- 4) Adverse Conditions. When a discharger is unable to conduct one of the required visual examinations during the required period as a result of adverse climatic conditions or inaccessibility, the discharger must document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examination. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).
- 5) Inactive and Unstaffed Site. When a discharger is unable to conduct visual storm water examinations at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirement as long as the facility remains inactive and unstaffed. The facility must state on their NOI that it is inactive and unstaffed and submit a change NOI if this status changes.