STATE OF COLORADO

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
TDD Line (303) 691-7700
Located in Glendale, Colorado

http://www.cdphe.state.co.us

Colorado Department of Public Health and Environment

For Agency Use Only

Permit Number Assigned

COG850_____

Date Received ____/____/____
Month Day Year

APPLICATION for DISCHARGES ASSOCIATED WITH COAL MINING

Please print or type. **Original signatures are required**. This application must be considered complete by the Division before it will initiate permit processing. The Division will notify the applicant if additional information is needed to complete the application. If more space is required to answer any question, please attach additional sheets to the application form. Applications must be mailed or delivered to:

Colorado Department of Public Health and Environment
Water Quality Control Division
4300 Cherry Creek Drive South
WQCD-P-B2
Denver, Colorado 80246-1530

PHOTO COPIES, FAXED COPIES, AND PDF COPIES WILL NOT BE ACCEPTED.

Reason for Application: ☐ NEW PERMIT

☐ RENEW PERMIT EXISTING PERMIT #_____

PERMIT INFORMATION

Applicant is: ☐ Property Owner ☐ Contractor/Operator

IS THIS THE CORRECT APPLICATION FOR YOUR FACILITY?

This application is for use by all coal mining facilities with **process water and/or stormwater** discharges. The Division has other industry-specific permits including: sand & gravel mining, construction dewatering, gasoline clean up sites, water treatment plants, hardrock mining/milling, placer mining and minimal discharge.

It is suggested that the applicant contact the Division of Mining & Geology at the Colorado Dept of Natural Resources, concerning reclamation rules and regulations at(303) 866-3567

A. CONTACT INFORMATION

PERMITTEE (If more than one please add additional pages)

ORGANIZATION FORMAL NAME: _____

1) **PERMITTEE** the person **authorized to sign and certify** the permit application. This person receives all permit correspondences and is **legally responsible** for compliance with the permit.

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No:_____

email address_____

Organization: _____

Mailing Address: _____

City:_____ State: _____ Zip: _____

This form must be signed by the Permittee to be considered complete.

Per Regulation 61 In all cases, it shall be signed as follows:

a) In the case of corporations, by a responsible corporate officer. For the purposes of this section, the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the application originates.
b) In the case of a partnership, by a general partner.
c) In the case of a sole proprietorship, by the proprietor.
d) In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official

2) DMR COGNIZANT OFFICIAL (i.e. authorized agent) the person or position authorized to **sign and certify** reports required by permits including Discharge Monitoring Reports [DMR's], Annual Reports, Compliance Schedule submittals, and other information requested by the Division. The Division will transmit pre-printed reports (ie. DMR's) to this person. If more than one, please add additional pages.

☐ Same As 1) Permittee

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No:_____

email address_____

Organization: _____

Mailing Address: _____

City:_____ State: _____ Zip: _____

Per Regulation 61 : All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(i) The authorization is made in writing by the permittee

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

(iii) Written request is submitted to the Division

3) SITE CONTACT local contact for questions relating to the facility & discharge authorized by this permit for the facility.

☐ Same As 1) Permittee

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No:_____

email address_____

Organization: _____

Mailing Address: _____

City:_____ State: _____ Zip: _____

4) OPERATOR in Responsible Char ☐ Same As 1) Permittee

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No:_____

email address_____

Organization: _____

Mailing Address: _____

City:_____ State: _____ Zip: _____

Certification Type_____Certification Number_____

5) BILLING CONTACT if different than the permittee

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No:_____

email address_____

Organization: _____

Mailing Address: _____

City:_____ State: _____ Zip: _____

6) OTHER CONTACT TYPES (check below) Add pages if necessary:

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No:_____

email address_____

Organization: _____

Mailing Address: _____

City:_____ State: _____ Zip: _____

- ☐ **Pretreatment Coordinator**
- ☐ **Environmental Contact**
- ☐ **Biosolids Responsible Party**
- ☐ **Property Owner**
- ☐ **Inspection Facility Contact**
- ☐ **Consultant**
- ☐ **Compliance Contact**
- ☐ **Stormwater Authorized Representative**
- ☐ **Other** _____

2. PERMITTED FACILITY INFORMATION

Name of Plan, Project or Development: _____

Location of construction site:

Street Address (or cross streets): _____

City (if unincorporated, so indicate): _____ County: _____

State and Zip Code: _____

Latitude and Longitude (approximate center of site to nearest 15 seconds using one of following formats):

Latitude: _____ Longitude: _____ (e.g., 39°42'11'', 104°55'57'')
degrees /minutes/ seconds — degrees/ minutes/ seconds

OR

Latitude: _____ Longitude: _____ (e.g., 39.703°, 104.933')
degrees (to 3 decimal places) — degrees (to 3 decimal places)

Legal Location – Township, Range, Section, ¼ Section

3 STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE(S) FOR THIS FACILITY (Include up to 4 in order of importance.

1._____ **2.**_____ **3.** _____ **4.**_____

4. DESCRIBE THE INDUSTRIAL ACTIVITIES WHICH TAKE PLACE ON THIS SITE

APPLICATION for DISCHARGES ASSOCIATED WITH MINING

5. IS THIS FOR AN EXPLORATORY, ACTIVE MINING/MILLING, INACTIVE MINING, OR POST MINING OPERATION,

OR IS THE SITE IN TEMPORARY CESSATION?

If Exploratory – please submit any known water quality/quantity data relative to the discharge and the receiving stream which reflects the conditions prior to the present activity, the length of time the activity is expected to be under exploration, and describe what activities will take place during exploration which could have an impact on the quality of the discharge.

If Post Mining – describe the areas affected and the extent of reclamation completed and the length of time elapsed since revegetation occurred. Also specify whether any outfalls previously described serve, partially or totally, a reclaimed area. Include the expected bond release date.

6. Production: List the principal product(s) produced and maximum production rate.

7. **Is this a seasonal operation?** ☐ No ☐ Yes If yes, please indicate the months of operation:

☐ JAN ☐ FEB ☐ MAR ☐ APR ☐ MAY ☐ JUNE ☐ JULY ☐ AUG ☐ SEPT ☐ OCT ☐ NOV ☐ DEC

8. **Intermittent discharges:** Except for storm runoff, are any of the discharges intermittent or seasonal? ☐ No ☐ Yes
Describe the frequency, duration and flow rate of each discharge occurrence.

Activity duration: When did the mining/milling operation commence? _____ What is the estimated life of the activity from which the discharge(s) identified in item 13 originate? _____ years.

9. **Location map:** A location map designating the facility property, intake points, discharge points, each of its hazardous waste treatment storage or disposal facilities, each well where fluids from the facility are injected underground, those wells, springs, other surface water bodies and drinking water wells listed in public records or otherwise known to the applicant and the receiving waters shall be submitted. The map shall extend one mile beyond the property boundaries. The map shall be from a 7 or 15 minute USGS quad sheet, or a map of comparable scale. A north arrow shall be shown.

10. **Site Map:** A map of the site shall be submitted, showing appurtenant facilities (buildings, ponds, diversion ditches, stockpiles, etc.), stream location, numbered discharge points, sampling and flow monitoring points, waste rock piles, spent ore piles, tailing dams/dikes, topsoil piles, location of french drains, mine drainage flow paths, domestic wastewater plants, power plants, truck washing areas, explosive storage areas, parking lots, vehicle maintenance areas, chemical storage areas, crusher areas and land application areas. The outfalls shall be labeled to correspond with the numbers listed in item 21.

11. **Water Balance:** Attach a line drawing showing all water flow through and from the mine/mill site. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in item 21. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined, provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

12. OTHER ENVIRONMENTAL PERMITS

Does this facility currently have any environmental permits, or is it subject to regulation, under either of the following programs?

Permit Name	Yes	No	Applied For, Date	Permit No.
a.) Colorado Division of Minerals and Geology (formerly MLRD) Permit Anniversary Date_____	☐	☐		
b.) Underground Injection Control	☐	☐		
c.) Dredge or fill permit under Section 404 of the Clean Water Act (CWA) (Army Corps of Engineers)	☐	☐		
d.) Resource Conservation and Recovery Act (RCRA)	☐	☐		
e.) CDPS Stormwater **(If YES, please include copy of site's Stormwater Management Plan)**	☐	☐		
f.) Colorado State Air Pollution Emission	☐	☐		
g.) Other	☐			

13 Site-specific conditions:

a) Is this operation located within one mile of a landfill, or any mine or mill tailings? ☐ NO ☐ YES

b) Does the dewatering area have or possibly have groundwater contamination, such as Plumes from leaking underground storage tanks, etc.? ☐ NO ☐ YES

c) Do you have bulk storage of diesel fuel, gasoline, solvents or other hazardous materials on site? ☐ NO ☐ YES

If YES for **any** of these, please show location of the landfill, tailings or possible groundwater contamination on the location map in item 9 or in the site map sketch in item 10. Please explain the location, extent of contamination, and possible effect on the discharges from this facility.

14. **Bath House/Dry and Sanitary Waste:** Is there a bath house/dry at this facility? ☐ NO ☐ YES

Are there sanitary wastewater facilities or sanitary treatment systems at this facility? ☐ NO ☐ YES

If YES, what is the disposition of any wastewater generated?

15. **Chemical treatment:**

Will any flocculants (settling agents or chemical additives) be **used to treat water** prior to discharge? ☐ NO ☐ YES

If YES, list here, and include the Material Safety Data Sheet (MSDS):

Chemical Name *	**Manufacturer**	**Purpose**	**In Which Waste Stream?**

* If the chemical formula is unknown or confidential, provide the manufacturer's name, contact person, address and phone number or a copy of the manufacturer's brochure, product label information or materials handling data sheet for each product used. Please list the major constituents or active ingredient(s), if known.

16. **Used or Manufactured Toxics:** The applicant must provide a list of any toxic products which the applicant currently uses or manufactures as an intermediate or final product or byproduct.

17. **Flow Measurement:** What method of flow measurement will be used for each discharge point (e.g., v notch weir, pump capacity, parshall flume, etc.)? Designate whether currently installed or proposed. Identify the minimum and maximum flow measurement capability. List the last date calibrated.

18. **Improvements:** Please provide a description of any abatement requirement, abatement project and projected final compliance dates if subject to any present requirements or compliance schedules for construction, upgrading or operation of waste treatment equipment. List any changes from previous permit.

19. Land Application: Is or will land application of any wastewater be practiced? ☐ NO ☐ YES

If Yes, please provide a copy of the material submitted to the **Colorado Division of Minerals and Geology** on the discharge and include a copy of the CDMG approval where applicable. Briefly describe the process

20. **Flows and Treatment:** Please provide a detailed narrative description for each type of process, operation, storage or production area which contributes wastewater to the effluent for each outfall, including process wastewater, cooling waters, domestic wastewater and stormwater runoff; the flows for each process and a description of the treatment the wastewater receives including the ultimate disposal of any solid or fluid wastes other than by discharge. Processes, operations or production areas may be described in general terms. The average flow of point sources composed of stormwater may be estimated. The basis for the rainfall event and the method of determination must be indicated.

List the outfall number for each discharge point. List all sources of wastewater for each outfall and give the 30 day average flow and daily maximum flow. Estimate the flow contributed by each source if no data is available, and for stormwater, you may use any reasonable measure of duration, volume or frequency. Describe each treatment unit. Indicate the 10-year, 24-hour equivalent volume used in designing the treatment system and the system's actual volume, excluding solids retention and any "permanent pool" that may be provided. Indicate if extra capacity is provided for mine water and/or other non-storm related flows and how this volume was determined. Indicate what type(s) of discharge structure each outfall has and how flow is discharged - whether it discharges automatically or manually. If your flows vary significantly or if you anticipate significant changes in flows during the next 5 years, specify which flows will change and explain why they will change. Describe the ultimate disposal of any solid or liquid waste not discharged. (Specify receiving waters(s) in table for item 21.)

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Use additional sheets if necessary. Additional information on the treatment facilities may be requested during application review.

OUTFALL NUMBER	WASTEWATER SOURCE	TREATMENT USED	30DAY AVG FLOW, MGD*	DAILY MAX FLOW, MGD	10-YR, 24-HR CAPACITY, MG	POND VOLUME MG
001						

*MGD - Million gallons/day

21. For each outfall provide the latitude, longitude and receiving water and indicate the method used to derive this information. Use additional sheets if necessary. Please refer to instructions.

For each outfall to surface water or discharge to ground water, provide latitude/longitude and receiving water

OUTFALL	LATITUDE	LONGITUDE	RECEIVING WATERS* * Give Formation Name for Discharges to Ground Water
001			
FACILITY FRONT DOOR			

The following choices for the data acquisition are listed in order of preference. Please check the box that applies to the method used for collection of the locational data of your **Facility and Discharge points**.

☐ Global Positioning System (GPS) unit accurate to within 30 yards.

☐ Global Positioning System (GPS) unit accurate to greater than 30 yards.

☐ Global Positioning System (GPS) unit accuracy unknown.

☐ Point on original USGS topographic map.

☐ Engineering drawing/plan with latitude and longitude reference.

☐ Other: Explain:_____

22. Are the receiving waters, indicated in item 21, a ditch or storm sewer? ☐ NO ☐ YES

If YES, submit documentation that the owner of the ditch or storm sewer allows this discharge. No permit will be processed unless documentation of approval is received.

23 Do you have a certified operator? ☐ NO ☐ YES

If yes, please list name(s), certification number(s) and certification level(s). (attach sheets is required)

APPLICATION for DISCHARGES ASSOCIATED WITH MINING

24. Discharge Quality: Analytical data for the following parameters, unless waived by the Division, shall be submitted from at least one sampling of each discharge point as well as state waters upstream of each discharge. Upstream data should be from non-runoff periods, to the extent possible. If more than one outfall is to a common body of water, only one analysis of the receiving water upstream of the upper-most outfall will be required. If the receiving stream is dry during portions of the year, so indicate. In the case of sedimentation ponds for stormwater runoff, one outfall can be sampled if it can reasonably be assumed to be representative of all sedimentation pond outfalls. For new mines, please submit a minimum of one years data for those parameters listed below. Such data must have been obtained on at least a quarterly basis and must be reflective of the water quality prior to any mining activity.

PARAMETER	DETECTION LEVEL	PARAMETER	DETECTION LEVEL
Total Dissolved Solids, mg/R	10	Total Recoverable Manganese, mg/R	0.05
Flow, MGD	NA	Dissolved Manganese, mg/R	0.05
pH, s.u.	NA	Total Mercury, mg/R	0.00025
Oil and Grease, mg/R	5	Total Recoverable Nickel, mg/R	0.05
Dissolved Oxygen, mg/R	NA	Potentially Dissolved Nickel, mg/R	0.05
Alkalinity, mg/R	10	Total Recoverable Silver, mg/R	0.0002
Total Suspended Solids, mg/R	10	Potentially Dissolved Silver, mg/R	0.0002
Hardness, mg/R as $CaCO_3$	10	Total Recoverable Uranium, mg/R	0.03
Total Ammonia, mg/R	0.05	Total Recoverable Zinc, mg/R	0.05
Temperature, ^{B}C Winter	NA	Potentially Dissolved Zinc, mg/R	0.05
Temperature, ^{B}C Summer	NA	Total Residual Chlorine, mg/R	0.05
Biochemical Oxygen Demand, mg/R	1	Fecal Coliform, #/100 ml	NA
Chemical Oxygen Demand, mg/R	30	Nitrate, mg/R as N	0.1
Dissolved Aluminum, mg/R	0.1	Nitrite, mg/R as N	0.002
Total Arsenic, mg/R	0.05	Sulfide mg/R as H_2S	0.1
Total Recoverable Cadmium, mg/R	0.0004	Boron, mg/R	0.05
Hexavalent Chromium, mg/R	0.025	Chloride, mg/R	5
Trivalent Chromium, mg/R	0.05	Sulfate, mg/R	5
Total Chromium, mg/R	0.005	Total Cyanide, mg/R	0.01
Total Recoverable Copper, mg/R	0.005	Total Recoverable Selenium, mg/R	0.002
Potentially Dissolved Copper, mg/R	0.005	Total Cobalt, mg/R	0.006
Total Recoverable Iron, mg/R	0.3	Gross Alpha, piC/R	0.3
Dissolved Iron, mg/R	0.3	Total Radium 226 + 228, pCi/R	8
Total Recoverable Lead, mg/R	0.005	Total Fluoride, mg/R	0.1
Potentially Dissolved Lead, mg/R	0.005	Weak Acid Dissociable Cyanide, mg/R	0.01
Total Phenols, mg/R	0.100	Total Phosphorus, mg/R as P	0.05
Total Organic Nitrogen, mg/R as N	0.05		

25. Dioxin Testing: Each applicant must report qualitative data, generated using a screening procedure not calibrated with analytical standards, for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) if it:

(a) Uses or manufactures 2,4,5-trichlorophenoxy acetic acid (2,4,5,-T); 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5,-TP); 2-(2,4,5-trichlorophenoxy) ethyl, 2,2-dichloropropionate (Erbon); O,O-dimethyl O-(2,4,5-trichlorphenyl) phosphorothioate (Ronnel); 2,4,5- trichlorophenol (TCP); or hexachlorophene (HCP); or

(b) Knows or has reason to believe that TCDD is or may be pres ent in an effluent.

26. **Whole Effluent Toxicity Testing:** WET testing shall be conducted for each outfall which is **not** solely made up of stormwater or domestic wastewater, unless waived by the Division, on 100% effluent using both Ceriodaphnia dubia and fathead minnows. This requirement is waived where routine testing is currently required under an existing CDPS permit. The test shall be an acute test unless the ratio of stream low flow to effluent design flow is less than 10:1, respectively, and the receiving stream has a Class 1 Aquatic Life Use or Class 2 Aquatic Life Use with all the appropriate aquatic life numeric standards. In the latter case, a chronic test is required. The Division reserves the right to request additional testing as part of the application review process. If so required, the permit application will not be considered complete until the additional testing is submitted. In addition, all applicants must identify any biological toxicity tests which have been performed within the last 3 years on any of the discharges or the receiving water in relation to a discharge from this facility. Attach WET test results to this application.If so required, the permit will not be processed until the additional information is submitted.

WET testing procedures are described in the *"Guidelines for Conducting Whole Effluent Toxicity Tests"* which can be obtained from the Division.

27. Priority Pollutant Scan: The results of a priority pollutant scan, unless waived by the Division, for the volatile and acid fractions as shown in Appendix A must be submitted of each discharge.

28. **Additional Monitoring:** All applicants must review the parameters listed in Appendix A and Appendix B to this application, and indicate whether it knows or has reason to believe that these pollutants are present. For every pollutant expected to be discharged, the applicant must briefly describe the reasons the pollutant is expected to be discharged, and report any quantitative data for the pollutant.

29.. Please submit a copy all water quality monitoring data of outfalls or receiving streams for which data has been gathered over the last five years for the mining/milling site and which is required by the Division of Minerals and Geology. If not already submitted to the Division, the plan which details the monitoring frequency, type, locations and method of analysis must also be submitted.

30. **Stormwater Discharges:** All active and inactive mineral mines and mills must be covered by a stormwater permit. Please complete Appendix B and submit along with the application. (Note: Appendix C is an EPA form titled, *Application for Permit to Discharge Storm Water, Discharges Associated with Industrial Activity*.) Additionally, new mines/mills must submit a copy of their Stormwater Management Plan with the application.

31. **Pollution Prevention Plans:** Please describe any pollution prevention or best management plans currently currently in place which could result in the improvement of water quality. These could include solvent recycling programs, material containment procedures, education, etc.

36. **Historic Drainages:** Does historic drainage exist at the site, which is not covered under a CDPS permit? Yes ? No ? If so, please provide a map showing the location of the discharges and copies of **all** analytical information on the discharges. Please sample the discharges for the parameters listed in item 26 and submit those results. This requirement may be waived by the Division if suitable data on the discharges historic quality and quantity exists.

APPLICATION for DISCHARGES ASSOCIATED WITH MINING
REQUIRED SIGNATURES (Both parts i. and ii. must be signed)

Signature of Applicant: The applicant must be either the owner and/or operator of the construction site. Refer to Part B of the instructions for additional information. The application must be signed by the applicant to be considered complete. In all cases, it shall be signed as follows: (Regulation 61.4 (1ei)

a) In the case of corporations, by the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the form originates
b) In the case of a partnership, by a general partner.
c) In the case of a sole proprietorship, by the proprietor.
d) In the case of a municipal, state, or other public facility, by either a principal executive officer, ranking elected official, (a principal executive officer has responsibility for the overall operation of the facility from which the discharge originates).

STOP! A STORMWATER MANAGEMENT PLAN MUST BE COMPLETED PRIOR TO SIGNING THE FOLLOWING CERTIFICATIONS!

This item applies to all facilities. A Stormwater Management Plan (SWMP) shall be prepared prior to applying for coverage under the general permit, and the following certification signed. See the SWMP requirements in Appendix C.

i. Stormwater Management Plan Certification

"I certify under penalty of law that a complete Stormwater Management Plan, as described in Appendix A of this application, has been prepared for my activity. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the Stormwater Management Plan is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for falsely certifying the completion of said SWMP, including the possibility of fine and imprisonment for knowing violations."

Signature of Legally Responsible Person or Authorized Agent (submission must include original signature) Date Signed

Name (printed) Title

ii. Signature of Permit Legal Contact

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Signature of Legally Responsible Person (submission must include origina signature) Date Signed

Name (printed Title

Signature of Operator (submission must include original signature) Date Signed

Name (printed Title

DO NOT INCLUDE PAYMENT – AN INVOICE WILL BE SENT AFTER THE CERTIFICATION IS ISSUED.

Appendix A - Priority Pollutants

Organic Toxic Pollutants in Each of Three Fractions in Analysis by Gas Chromatography/Mass Spectroscopy(GC/MS).

Volatiles

Acrolein
Acrylonitrile
Benzene
Bromoform
Carbon Tetrachloride
Chlorobenzene
Chlorodibromomethane
Chloroethane
2-Chloroethylvinyl Ether
Chloroform
Dichlorobromomethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene
1,2-Dichloropropane
1,3-Dichloropropylene
Ethylbenzene
Methyl Bromide
Methyl Chloride
Methylene Chloride
1,1,2,2-Tetrachloroethane
Tetrachloroethylene
Toluene
1,2-Trans-dichloroethylene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene
Vinyl Chloride

Base/Neutral

Acenaphthene
Acenaphthylene
Anthracene
Benzidine
Benzo(a)anthracene
Benzo(a)pyrene
3,4-Benzofluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl) ether
Bis(2-chloroisopropyl) ether
Bis(2-ethylhexyl)phthalate
4-Bromophenyl phenyl ether
Butylbenzyl phthalate
2-Chloronaphthalene
4-Chlorophenyl phenyl ether
Chrysene
Dibenzo (a,h) anthracene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3-Dichlorobenzidine
Diethyl phthalate
Dimethyl phthalate
Di-n-butyl phthalate
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-n-octyl phthalate
1,2-Diphenylhydrazine (as azobenzene)
Fluorene
Fluoranthene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorcyclopentadiene
Hexachloroethane
Indeno(1,2,3-cd) pyrene
Isophorone
Naphthalene
Nitrobenzene
N-Nitrosodimethylamine
N-Nitrosodi-n-propylamine
N-Nitrosodiphenylamine
Phenanthrene
Pyrene
1,2,4-Trichlorobenzene)

Acid

2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
4,6-Dinitro-o-cresol
2,4-Dinitrophenol
2-Nitrophenol
4-Nitrophenol
P-chloro-m-cresol
Pentachlorophenol
Phenol
2,4,6-Trichlorophenol

Pesticides

Aldrin
Alpha-BHC
Beta-BHC
Gamma-BHC
Delta-BHC
Chlordane
4,4'-DDT
4,4'-DDE
4,4'-DDD
Dieldrin
Alpha-Endosulfan
Beta-Endosulfan
Endosulfan Sulfate
Endrin
Endrin Aldehyde
Heptachlor
Heptachlor Epoxide
PCB-1242
PCB-1254
PCB-1221
PCB-1232
PCB-1248
PCB-1260
PCB-1016
Toxaphene

Metals, Cyanide, and Total Phenols

Total Recoverable Antimony, mg/P
Total Recoverable Beryllium, mg/P
Total Recoverable Thallium, mg/P
Bromide, mg/P
Color
Sulfite, mg/P
Surfactants,
Total Magnesium, mg/P
Total Molybdenum, mg/P
Total Tin, mg/P
Total Titanium, mg/P

Appendix B - Toxic Pollutants and Hazardous Substances

Toxic Pollutants

Asbestos

Hazardous Substances

Acetaldehyde
Allyl alcohol
Allyl chloride
Amyl acetate
Aniline
Benzonitrile
Benzyl chloride
Butyl acetate
Butylamine
Captan
Carbaryl
Carbofuran
Carbon disulfide
Chlorphyrifos
Coumaphos
Cresol
Crotonaldehyde
Cyclohexane
2,4-D (2,4-Dichlorophenoxy acetic acid)
Diazinon
Dicamba
Dichlobenil
Dichlone
2,2-Dichloropropionic acid
Dichlorvos
Diethyl amine
Dimethly amine
Dinitrobenzene
Diquat
Disulfoton
Diuron
Epichlorohydrin
Ethion
Ethylene diamine
Ethylene dibromide
Formaldehyde
Furfural
Guthion
Isoprene
Isopropanolamine dodecylbenzenesulfonate
Kelthane
Kepone
Malathion
Mercaptodimethur
Methoxychlor
Methyl mercaptan
Methyl methacrylate
Methyl parathion
Mevinphos
Mexacarbate
Monoethyl amine
Monomethyl amine
Naled
Naphthenic acid
Nitrotoluene
Parathion
Phenolsulfanate
Phosgene
Propargite
Propylene oxide
Pyrethrins
Quinoline
Resorcinol
Strontium
Strychnine
Styrene
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)
TDE (Tetrachlorodiphenyl ethane)
2,4,5-TP [2-(2,4,5-Trichlorophenoxy) propanoic acid]
Trichlorofan
Triethanolamine dodecylbenzenesulfonate
Triethylamine
Trimethylamine
Uranium
Vanadium
Vinyl acetate
Xylene
Xylenol
Zirconium

APPENDIX C - STORMWATER MANAGEMENT PLAN (SWMP) AND APPLICATION 9/97/sg

In this document, the text in ***bold italics*** is quoted directly from the Sand and Gravel general permit. The text in straight type is provided as guidance in the preparation of your SWMP.

The requirement to develop a Stormwater Management Plan (SWMP) prior to application for the general permit applies to **all** facilities. The applicant shall develop a SWMP for their facility, and certify in Item 8 of the application that it has been completed. The SWMP shall be prepared in accordance with good engineering practices. (The plan need not be completed by a registered engineer.)

The plan shall identify potential sources of pollution (including sediment) which may reasonably be expected to affect the quality of stormwater discharges associated with the mining activity. In addition, the plan shall describe and ensure the implementation of Best Management Practices (BMPs) which will be used to reduce the pollutants in stormwater discharges associated with mining activity. BMPs are defined as physical, structural, and/or managerial practices that, when used singly or in combination, prevent or reduce pollution of water.

Mining operations must certify the completion of their SWMP, as described in this document. Implementation of the plan will be required at the time that coverage under the general permit begins. The Division reserves the right to request and review the plans, and to require additional measures to prevent and control pollution, as needed.

When preparing your plan, make sure to **address each item**. If it is not applicable to your site, briefly explain why. A simple "Not Applicable" is not enough. Also note that the SWMP should include any existing stormwater controls at your site, not just new or proposed ones. Take full credit for what you are already doing.

The SWMP shall include the following items, at a minimum:

1. Site Map

The plan shall provide a site map or maps which indicate at a minimum:

- ***Mining site boundaries***
- ***Access and haul roads***
- ***Stormwater outfalls and an outline of the drainage area of each stormwater outfall***
- ***An estimate of the direction of flow***
- ***Materials handling areas***
- ***Each existing structural control measure to reduce pollutants in stormwater runoff***
- ***Areas used for storage or disposal of overburden, materials, soils or wastes***
- ***Areas used for mineral milling and processing***
- ***Springs, streams, wetlands and other surface waters***
- ***Location of mine drainage or any other process water***
- ***Boundary of tributary area that is subject to effluent limitations***
- ***Date the map was prepared***

The drainage areas shown should include the portions of the site where industrial activities occur, as well as those portions contributing stormwater that mixes with runoff from the industrial area. Therefore, the entire drainage area where industrial activities occur must usually be included.

Aside from mining, industrial activities can include equipment washing, materials storage, vehicle maintenance or fueling, incineration, waste treatment, storage or disposal, shipping/loading/unloading, etc. You do not need to include industrial activities which only take place indoors, unless there is some part or aspect of the activity with which stormwater could come in contact. For example, if all vehicle maintenance is done indoors, but vehicle storage or fueling is outside, the vehicle storage or fueling area must be addressed.

It is a good idea to start with a portion of the USGS (U.S. Geological Survey) quadrangle map showing the site. These are available and easily obtainable for the entire state; they show a large amount of information for very little effort. You can then use the USGS map as a guide for preparing your site map, which will be more detailed. Regardless of the source of the base map, the site map needs to be of suitable scale to show the industrial portion of the facility and the features within it.

- Locations of stormwater outfalls:
  If the site has a stormwater drainage system, the location of outfalls is a simple task. Indicate on the map where pipeline outfalls are, as well as the general layout of the drainage system such as inlets, grates, pipelines, etc. If stormwater is conveyed over land without a developed storm drainage system, the points where runoff collects and runs off must be located.
- Drainage basins for each outfall:
  Field inspection can usually accomplish this task with acceptable accuracy. Look for high areas such as crests of parking lots, roads, etc. which would form the division between drainages. Gullies and swales are indicators of stormwater flow direction. Obviously, if runoff is observed during a storm, most uncertainties can be eliminated.
- Surface water bodies (including dry water courses):
  Mark on the site map any surface water bodies, including lakes, streams, springs, wetlands, detention ponds, roadside or irrigation ditches, etc. These do not necessarily need to be within the facility, but may be adjacent to it or impacted by stormwater runoff. Also include any existing storm sewers.
- Existing structural control measures to reduce stormwater pollution:
  Show on the map the location of any structural stormwater pollution control measures, such as detention ponds, diversion ditches, covered material storage areas, fuel farm secondary containment structures, etc.

In addition, there are several other features which could be included to make the SWMP a more comprehensive and usable plan. For example, later sections of the SWMP will include requirements for spill prevention procedures, which can include a site map showing where materials are stored. By including the following items on the site map, all information would be in one place on a single base map.

- Materials handling and loading areas
- Materials storage areas
- Paved and unpaved areas (for hydrologic assessments)

2. Description of Potential Pollutant Sources/Material Inventory

The plan shall provide a description of all potential sources (activities and materials) which may reasonably be expected to add pollutants to stormwater discharges. Such sources may include haul roads, equipment storage and maintenance areas, fuel storage areas, etc.

In each case where stormwater pollution potential exists, appropriate preventive measures must be taken and documented.

This section of the SWMP summarizes the existing potential for stormwater contamination at the site. It is a narrative description which states what is stored, where it is stored, how it is used, what has been used, etc. These can include such pollutants as fuels, oils, detergents, pesticides, herbicides, fertilizers, etc.

3. Stormwater Quality Controls

Each mining site covered by this plan shall develop a description of stormwater quality controls appropriate for that site, and implement such controls. The appropriateness and priorities of controls in the plan shall reflect identified potential sources of pollutants at the site. The description of stormwater quality controls shall address the following minimum components, including a schedule for implementing such controls:

This section of the SWMP, when completed, will spell out what the facility **is** doing to control stormwater pollution, what the facility **will** do in the future, **when** Best Management Practices (BMPs) will be implemented, and **who** at the facility is responsible for the plan.

a) <u>SWMP Administrator</u> - The SWMP shall identify a specific individual or individuals within the mining organization who is responsible for developing the SWMP and assisting the mine operator in its implementation, maintenance, and revision.

The SWMP Administrator becomes the contact for all SWMP-related issues and is the person responsible for its accuracy, completeness, and implementation. Therefore, the SWMP Administrator should be a person in an authoritative position. Larger

facilities may want to develop a "SWMP team" in order to share the responsibilities and generate greater awareness and participation.

b) ***<u>Materials Handling and Spill Prevention</u> - Where materials can impact stormwater runoff, BMPs that reduce the potential for contamination shall be described. For example, materials should be stored and handled in covered areas whenever possible to prevent contact with stormwater; fuels and other chemicals should be stored within berms or secondary containment devices to prevent leaks and spills from entering stormwater runoff.***

When selecting BMPs, the most important ones to evaluate first are those which limit the source of the pollutant. It is much more efficient, from both a cost and environmental standpoint, to prevent the pollution in the first place than to clean up contaminated stormwater. For example, a BMP requiring that any vehicle maintenance that involves fluid exchange must take place indoors, results in the removal of a pollutant source (i.e., oil/hydraulic fluids) from possible contact with stormwater.

Good housekeeping measures, such as cleaning and maintenance schedules, trash disposal and collection practices, grounds maintenance, etc., can be included here.

c) ***<u>Erosion and Sediment Controls</u> - Describe BMPs that will be used to reduce erosion and prevent sediment delivery to State waters. These should include structural (such as silt fences, sediment ponds, drop structures, check dams) and non-structural (such as mulching and revegetation) methods.***

BMPs can describe a wide range of management procedures, schedules of activities, prohibitions or practices and other management practices. BMPs can include operating procedures, treatment requirements and practices to control plant site runoff, drainage from raw materials storage, spills or leaks. Nonstructural BMPs are mainly definitions of operational or managerial techniques. Structural BMPs include physical processes ranging from diversion structures to oil/water separators to retention ponds.

The BMPs selected are up to the judgment of the individual permittee. However, it is important to note that a fully implemented SWMP will constitute compliance with Best Available Technology (BAT) and Best Conventional Technology (BCT), as mandated under the Federal Clean Water Act. This means that, in order to comply with your permit, the appropriate measures **must** be taken in keeping with the pollutant(s) involved and the risk potential at the facility.

d) ***<u>Identification of Discharges other than Stormwater</u> - The stormwater conveyance system on the site shall be evaluated for the presence of discharges other than stormwater, such as mine drainage, spoil springs, sanitary waste, or process water of any kind. The SWMP shall include a description of the results of any evaluation for the presence of discharges other than stormwater, the method used, the date of the evaluation, and the on-site drainage points that were directly observed during the evaluation.***

A number of discharges other than stormwater may not require a CDPS Industrial Wastewater Discharge permit and are considered Allowable Non-Stormwater Discharges. Flows from fire fighting activities, landscaping irrigation return flow or springs (except spoil springs) that are combined with stormwater discharges associated with industrial activity must be identified in the SWMP.

In other words, only stormwater can be conveyed by the stormwater drainage system. Examples of potential illicit connections include floor drains and toilets in maintenance buildings, chemical storage buildings, etc. There are several methods of determining whether or not illicit connections exist. Acceptable procedures include dry weather observations of outfalls or other appropriate locations, analysis and validation of accurate piping schematics, dye tests, etc.

Note - if illicit connections are discovered, corrective measures must be taken.