

COMMONWEALTH OF VIRGINIA
STATE WATER CONTROL BOARD

FACT SHEET
REISSUANCE OF A GENERAL VPDES PERMIT
FOR NONMETALLIC MINERAL MINING
2014 REISSUANCE
Revised April 2014

The State Water Control Board (board) has under consideration the reissuance of a general Virginia Pollutant Discharge Elimination System (VPDES) permit for point source discharges from nonmetallic mineral mining facilities. This general permit will replace VAG84 which expires June 30, 2014. Owners covered under the expiring general permit, who wish to continue to discharge under a general permit, must register for coverage under the new general permit.

Permit Number: VAG84

Name of Permittee: Any owner of a qualifying nonmetallic mineral mining facility with point source discharges agreeing to be regulated under the terms of this general permit.

Facility Location: Commonwealth of Virginia

Receiving Waters: Surface waters within the boundaries of the Commonwealth of Virginia, except those specifically named in board regulations which prohibit such discharges.
Discharge to surface waters may be through a municipal separate storm sewer system.

On the basis of preliminary review and application of lawful standards and regulations, the board proposes to reissue the general permit subject to certain conditions and has prepared a draft permit. The board has determined that this category of discharges is appropriately controlled under a general permit as it involves facilities with the same or similar types of operations that discharge the same or similar types of wastes. The draft general permit requires that all covered facilities meet standardized effluent limitations, conditions and monitoring requirements and that all covered facilities develop a site-specific stormwater pollution prevention plan.

The staff contact for questions or obtaining information about this general permit may be reached at:

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I. Activities Covered by This General Permit:

The general permit will cover point source discharges associated with nonmetallic mineral mining operations classified in Standard Industrial Classification Major Group 14. The general permit will cover stormwater discharges for all qualifying facilities within this major group that have stormwater discharges only, and for specific SIC Codes it will also provide coverage for process wastewater. Some of the Major Group 14 SIC codes or specific mining activities are excluded from the process wastewater coverage because the mining activities are subject to more stringent effluent limits under EPA effluent guidelines at 40 CFR Part 436. These facilities will require a separate, individual VPDES permit to discharge process wastewater.

Facilities for which the discharge of process wastewater is covered are those classified under SIC Codes 1411, 1422, 1423, 1429, 1442, 1455, 1459 except bentonite and magnesite mines, 1475 and 1499 except gypsum, graphite, asbestos, diatomite, jade, novaculite, wollastonite, tripoli and asphaltic mineral mining operations.

This general permit does not cover coal mining, metal mining and oil and gas extraction.

Nonmetallic mineral mines may have other industrial activities co-located within the mine permit area. These activities may involve further processing of the mined material and discharges associated with them have characteristics similar to those of the mining operation. If the mineral mine is the primary industrial activity on the site and the characteristics of the wastewater from co-located industrial activities are similar to those of the mineral mine, the co-located activity discharges are also regulated under the general permit.

This permit does not allow discharge of process wastewater pollutants from colocated asphalt paving materials operations. For the purposes of this special condition, process wastewater pollutants are any pollutants present in water used in asphalt paving materials manufacturing which come into direct contact with any raw materials, intermediate product, by-product or product related to the asphalt paving materials manufacturing process.

No owner or operator of a mineral mine will be covered under the general permit until a mineral mining permit has been issued by the Virginia Department of Mines, Minerals, and Energy, Division of Mineral Mining (DMM). In Virginia, mining activities which disturb the land surface and remove minerals at any site are required to have a mineral mining permit under the requirements of the Minerals Other Than Coal (MOTC) Surface Mining Law, Chapter 16, Title 45.1 of the Code of Virginia. The mineral mining permits are administered by DMM. The Surface Mining Law requires that no operator shall engage in mining without having first obtained from DMM an operating permit which covers the affected land. The exception to this requirement is for mineral mines owned and operated by governmental bodies, which are not required to have a mining permit, but will be eligible for coverage under the general permit. Mineral mining permits require the implementation of an erosion and sedimentation control plan as an enforceable part of the permit. The mineral mining permit application also requires the applicant to provide an acceptable mine reclamation plan that provides for adequate measures to prevent erosion and sedimentation from the reclaimed site. The mining permit and its requirements for erosion and sedimentation control are administered and enforced in such a manner as to provide protection of water quality and beneficial uses in the receiving waters from pollution caused by eroding material from mining activities. These requirements in the mineral mining permit satisfy many of the stormwater pollution prevention plan requirements of the general permit.

II. Proposed Effluent Limitations and Monitoring Requirements:

A. Discharge of commingled stormwater runoff and process wastewater:

| <u>Parameter</u> | <u>Limitation</u> |
|------------------------|---|
| Flow | Report average and maximum |
| Total Suspended Solids | 30 mg/l average, 60 mg/l maximum |
| pH | 6.0 minimum, 9.0 maximum ⁽¹⁾ |
| TPH ⁽²⁾ | Report maximum |

⁽¹⁾ Where the Water Quality Standards establish alternate standards for pH, those standards shall be the minimum and maximum pH effluent limits.

⁽²⁾ Monitoring for Total Petroleum Hydrocarbons (TPH) is required for outfalls which carry discharges from vehicle or equipment degreasing activities.

Discharge Monitoring Reports (DMRs) of quarterly monitoring shall be submitted to the DEQ Regional Office no later than the 10th day of April, July, October and January.

B. Discharge of stormwater which does not combine with other wastewater:

| <u>Parameter</u> | <u>Monitoring Requirement</u> |
|------------------------|---|
| Flow | Report volume discharged during monitored storm event |
| Total Suspended Solids | Report maximum |
| pH | Report minimum and maximum |

Monitoring and reporting of grab sample analysis results are required once per year for a storm event that produces a discharge from the site. Discharges from a stormwater management structure (a series of large settling lagoons) must be representative. All other stormwater discharges must be taken when the discharge occurs, but provided the interval from the preceding measurable storm event is at least 72 hours. The sample must also be taken during the first 30 minutes of the discharge. There are some exemptions to these timing requirements.

DMRs of yearly monitoring (January 1st to December 31st) must be submitted to the DEQ Regional Office no later than the 10th day January.

If Total Suspended Solids (TSS) monitoring results exceed 100 mg/L daily maximum, the stormwater pollution prevention plan (SWPPP) must be reviewed for necessary changes and an inspection must be performed and deficiencies corrected.

III. Basis for Part I Proposed Effluent Limits and Monitoring Requirements, Commingled Wastewater:

Mining area wastewaters are recycled as a source of processing water, lost by evaporation or discharged. The discharges that are not recycled are controlled by limitations in this draft permit. These discharges may consist of stormwater associated with industrial activity which has come in contact with overburden, raw material, intermediate product, finished product, byproduct or waste product; process wastewater which may include water used in the process of washing mined materials, vehicle or equipment degreasing wastewater, miscellaneous plant cleanup wastewater and mine pit dewatering which may include the above collected discharges along with accumulated groundwater that enters the mine. Treatment usually consists of

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sedimentation.

The discharge parameters to be limited are pH, TSS and TPH monitoring when vehicle or equipment degreasing activities occur at the facility. Normally, these degreasing activities waste water will pass through an oil/water separator before discharge.

The pH limitation is based upon Virginia's water quality standards and federal effluent guidelines (40 CFR Part 436). Effluent guidelines (40 CFR Part 436) require pH limits of 6.0 – 9.0 Standard Units (SU). Stream standards for pH are in most cases in the range of 6 to 9 SU; however, there are special standards in effect in some areas (e.g., 6.5 – 9.5 in some valley streams or 3.7 – 8.0 in some swamp waters). However, because DEQ comports with federal effluent guidelines for its general permits, pH limits cannot go below 6.0 or above 9.0. For example, a 6.5 to 9.5 special stream standard will necessitate a 6.5 to 9.0 effluent limit and a 3.7 – 8.0 special stream standard will necessitate a 6.0 – 8.0 effluent limit.

TSS limitations are based on federal effluent guidelines for some of the industrial categories covered by the draft general permit and at levels which, based on the Department's experience with individual VPDES permits, will protect receiving waters from solids impacts.

TPH monitoring is retained in this reissuance draft only for outfalls which convey discharges from vehicle or equipment degreasing activities. Review of TPH data from the last permit cycle indicated negligible levels of TPH from commingled wastewater in the mine pits.

The monitoring frequency and sample type have been established after considering the consistency and nature of these operations, the existing analytical data and the potential environmental risk and consequences of the discharges. Reporting of monitoring data is required quarterly.

IV. Basis for Proposed Part I Storm Event Monitoring Requirement

Stormwater associated with industrial activity that is not combined with process wastewater may be discharged from mining activities covered by this permit. This stormwater may have come in contact with or been exposed to overburden, raw material, intermediate product, finished product or byproduct and it may contain sediments eroded from the exposed surfaces of the mine, stockpiles, overburden storage, processing areas, or overburden disposal areas. It is necessary for the protection of water quality in the streams receiving the stormwater runoff from a mining operation that appropriate erosion and sedimentation controls and practices be designed and implemented at these facilities. The erosion and sedimentation control practices mandated by the DMM regulations and imposed on the owners or operators of a mineral mine through their mining permit include requirements that temporary and permanent control facilities for mining operations be designed to accommodate the rainfall from at least the 50-year and 100-year storm event, respectively, and that control facilities provide for considerable sediment storage (0.125 acre-feet per disturbed acre). Federal effluent guidelines for the mineral mining category (40 CFR Part 436) exempt discharges from the requirement to meet effluent limitation if they are from facilities which are designed to treat the runoff associated with a 10-year 24-hour precipitation event. The storm event specifications in these DMME requirements exceed the 10-year storm event threshold which exempts applicable federal effluent limitations. This is why discharges which are composed exclusively of stormwater only have monitoring requirements.

Permittees are required to monitor these discharges for pH and TSS once per year over the term of the general permit and report the results to the Department.

V. Basis for Proposed Special Conditions:

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The VPDES permit regulation (9VAC25-260-31) delineates the procedures and requirements to be followed in VPDES permits pursuant to the Clean Water Act and the State Water Control Law. All special conditions are needed to protect water quality as required by the VPDES permit regulation. Additional explanations and citations are listed below.

- A. Special Condition No. 1 requires that vehicles and equipment used in the industrial activity are to be operated and maintained in a manner that prevents pollution of surface or ground water. Petroleum products and other fluids are to be stored and handled in such a manner that the discharge of pollutants to state waters is prevented. The basis for the condition is the water quality standards.
- B. Special Condition No. 2 prohibits sewage discharges to surface waters under this general permit. Any sewage discharges would require coverage by a separate, individual permit. The basis for this condition is because the federal secondary sewage treatment standards are not addressed in this permit.
- C. Special Condition No. 3 prohibits the discharge of chemical additives other than those identified in the registration statement and approved at the time coverage is granted under the general permit. The basis for the condition is the water quality standards.
- D. Special Condition No. 4 requires that the permittee submit a new registration statement if the DMM mining permit is modified or renewed in any way that would affect the location or characteristics of any discharge covered by the general permit. Any changes to the mining facility that could impact discharge quality require additional review before coverage under the general permit is continued. The basis for the condition is water quality standards.
- E. Special Condition No. 5 is a requirement for notification of discharges of any toxic pollutants not limited by the permit. The basis for the condition is 40 CFR 122.42(a) and 9VAC25-31-200 A.
- F. Special Condition No. 6 requires that all materials, products and wastes be handled and stored or disposed of such that discharge of pollutants to state waters is prevented. The basis for the condition is the water quality standards.
- G. Special Condition No. 7 prohibits the discharge of process wastewater pollutants from co-located asphalt operations. The basis is 40 CFR Part 443.
- H. Special Condition No. 8 allows process water to be used for dust suppression on site. The basis for the condition is that, when implemented as a BMP, the use of process water as a dust suppressant can control or abate the discharge of pollutants.
- I. Special Condition No. 9 allows process water to be provided to local property owners for beneficial agricultural use. This language is included in keeping with DEQ's pollution prevention philosophy.
- J. Special Condition No. 10 prohibits the discharge of floating solids or visible foam in other than trace amount from process water discharges. This condition also prohibits solids deposition or oil sheen discharged to surface water as a result of the industrial activity. Housekeeping and on site BMPs should maintain this requirement. The prohibition of oil sheen was added to a similar general permit (concrete products) in response to staff concerns that petroleum products are on the site and could lead to an oil discharge. Accidental spills of petroleum products are cleaned up immediately so as not to enter surface waters as per special condition #1. If vehicle degreasing is occurring on the site then those process water discharges have TPH limits. This special condition is an added measure of protection and something the inspector can look for to ensure proper BMPs,

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clean up measures or treatment is occurring. The citation in the water quality standards is 9VAC25-260-20.

K. Special Condition No. 11 requires all effluent limitations to be written using two significant figures. The basis for this condition is Guidance Memo No. 06-2016, Significant Figures for Discharge Monitoring Reports.

L. Special Condition No. 12 requires a facility inspection if the TSS evaluation result is greater than 100 mg/l. The condition is similar to a condition of the EPA 2008 Multi-sector General Permit (MSGP).

M. Special Condition No. 13 requires permittees subject to total maximum daily load (TMDL) waste load allocations established prior to this permit issuance to include measures and controls necessary to meet the assumptions of the TMDL in the SWPPP. The basis for this condition is Section 303(d) of the Clean Water Act requires that Total Maximum Daily Loads (TMDLs) be developed for streams listed as impaired.

N. Special Condition No. 14 requires dischargers to the Chickahominy watershed to meet more stringent effluent limitations for BOD5, TSS, total phosphorus, ammonia and settleable solids. The basis for this condition is the Water Quality Standards at 9VAC25-260-310 m. Without these requirements in this regulation, permittees in the Chickahominy watershed would be required to get an individual permit.

O. Special Condition No. 15 requires discharges to be controlled as necessary to meet applicable water quality standards. This condition is being added to all general permits as they are reissued per EPA recommendations.

P. Special Condition No. 16 provides a waiver for monitoring and routine quarterly inspections at sites that are inactive and unstaffed (temporarily closed). Annual comprehensive site inspections are still required. The waiver request must be submitted to the board for approval. Reactivation of the site also requires board notification within 30 days unless approval for an alternate timeframe is received in advance from the board. Inactive and unstaffed facilities covered under are not required to meet the "no industrial materials or activities exposed to stormwater" standard to be eligible for this waiver, consistent with the conditional exemption requirements established in Part 8 Sector J (Nonmetallic mineral mining and dressing) of the EPA 2008 MSGP.

Q. Special Condition No. 17 describes how process water system designed to operate as "no discharge" must be implemented. These systems may not discharge except in storm events greater than a twenty-five-year, 24-hour storm event. In the event of such a discharge, the permittee must report an unusual or extraordinary discharge per Part III H of the permit. No sampling or DMR is required for these discharges as they are considered to be discharging in emergency discharge conditions. These discharges may not contravene the water quality standards, or any provision of the State Water Control Law. Any other discharge from this type of system is prohibited, and shall be reported as an unauthorized discharge per Part III G of this permit. This special condition is based on best professional judgment of the staff.

R. Special Condition No. 18 describes how terminations of coverage under a general permit will be implemented. Permittees need to know this is an option available to them. This is being added to all general permits as they are reissued.

It is believed that the above effluent limitations and special conditions will maintain State water quality standards.

VI. Basis for Proposed Requirements for Stormwater Management

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Stormwater management is required to reduce the potential for pollutants to reach state waters via stormwater discharges. Stormwater management requirements in Part II are generally current with stormwater management requirements in the 2009 VPDES General Permit for Discharges of Stormwater Associated with Industrial Activity (VAR05) and the EPA 2008 MSGP, while taking into account the characteristics of the industry to be regulated under this general permit.

Management of stormwater is to be achieved through the development of a SWPPP. The plan is intended to identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges and will describe and ensure the implementation of practices which will be used to reduce the pollutants in stormwater discharges. The SWPPP requirement maintains the flexibility for a site-specific plan to be developed and implemented but identifies specific components that the plan must address. These components include the formation of a pollution prevention team, a description of pollutant sources, stormwater controls (BMPs) and a comprehensive site compliance evaluation.

An annual comprehensive site evaluation for all facilities is required in order to allow for the identification of areas contributing to a stormwater discharge associated with industrial activity and the evaluation of whether measures to reduce pollutant loadings identified in the SWPPP are adequate and properly implemented in accordance with the terms of the permit, or whether additional control measures are needed. Quarterly inspections, including visual examination of stormwater discharges, are required to identify sources of pollution and to evaluate whether the pollution prevention measures are being effectively implemented. The inspections are considered a means of determining compliance with permit conditions without requiring extensive sampling programs. The permittee is required to maintain records summarizing the results of inspections and a certification that the facility is in compliance with the permit.

VII. Administrative:

The general permit will have a fixed term of five (5) years. Every authorization to discharge under this general permit will expire at the same time and most existing covered owners' authorizations to discharge will be renewed on the same date.

All persons desiring to be covered by this general permit must register with the Department by filing a registration statement and submitting applicable fees. Owners of nonmetallic mineral mining facilities that are discharging on the effective date of this general permit, which have not been covered under the previous general permit or an individual VPDES permit and desire to be covered under this general permit are required to submit the registration statement. Owners of existing operations covered under an individual VPDES permit that wish to seek coverage under the general permit must file a registration statement at least 210 days prior to the expiration date of the individual VPDES permit. Owners of existing operations covered under the previous general permit seeking to retain coverage under the reissued general permit must file a new registration in accordance with the reissued general permit requirements by April 1, 2014. For all new facilities that will begin activities after the effective date of this permit, the registration statement must be filed at least 45 days prior to the commencement of discharge.

This general permit does not cover activities or discharges covered by an individual VPDES permit until the individual permit has expired or has been terminated. Any person conducting an activity covered by an individual permit which could be covered by this general permit may request that the individual permit be terminated and register for coverage under this general permit. The conditions of the VPDES permit regulation at 9VAC25-31-200 will be considered prior to granting coverage under this general permit. Any owner or operator not wishing to be covered or limited by this general permit may make application for an individual VPDES permit in accordance with VPDES permit application procedures.

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To gain coverage under this general permit an owner must submit the registration information required in 9VAC25-190-60 (a registration statement form will be provided by the board), submit the required permit fee and comply with the applicable effluent limitations and other requirements of the permit. An additional requirement for this general permit is that the owner must have a mineral mining permit approved by the Virginia Department of Mines, Minerals and Energy, Division of Mineral Mining under provisions and requirements of Title 45.1 of the Code of Virginia. Owners of mineral mines in bordering states with discharges in Virginia must provide documentation that they have a mining permit from the appropriate state authority. Mineral mines owned and operated by governmental bodies not subject to the provisions and requirement of Title 45.1 are exempt from this requirement.

Coverage under this general permit will not be issues for any new or increased discharge that will result a violation of the board's antidegradation policy contained in the Virginia Water Quality Standards at 9VAC25-260-30 or to a facility where the discharge is not consistent with the assumptions and requirements of an approved TMDL for the receiving stream. Coverage under the general permit is also not available to owners that discharge to state waters that are specifically named in other board regulations that prohibit such discharges (e.g., exceptional or tier 3 waters).