

# ODNR, DIVISION OF MINERAL RESOURCES MANAGEMENT

## GUIDELINES

**SUBJECT:** Permitting of Pollution Abatement Areas and Establishing Modified Effluent Limits

**EFFECTIVE:** July 7, 2014

**PURPOSE:** To provide guidance on the identification of pre-existing discharges and the permitting process for establishing pollution abatement areas.

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(This guidance document replaces Policy/Procedure Directive Permitting 97-1)

### **Introduction**

The federal Environmental Protection Agency (EPA) and Office of Surface Mining and Enforcement (OSM) recognized that one of the most successful means for the improvement of abandoned mined lands (AML) is to encourage mine operators to remine the previously disturbed areas and extract the remaining coal reserves. As part of remining operations, the mine operator improves aesthetics and decreases polluttional discharges through backfilling and revegetating areas and also reduces safety and environmental hazards. Mine operators remained reluctant to remine these sites that had pre-existing discharges due to the potential permanent liability for the pre-existing discharge.

The 1987 "Rahall Amendment" to the Clean Water Act (CWA) provided incentives for the remining of abandoned mined lands prior to the passage of the Surface Mining Control and Reclamation Act (SMCRA) of 1977. These incentives included an exemption on remining operations from technology-based effluent limit standards for discharges that are hydrologically related or connected to the mine site. The permitting agency can set site-specific numerical limits for *pre-existing discharges* based on best professional judgment. Additional incentives were developed to encourage more remining by extending exemptions to effluent limits for total suspended solids (TSS) and the inclusion of BMP (Best Management Practices) non-numeric discharge permit requirements. The applicant mines under a revised set of water-quality limits that are established to achieve no less than baseline conditions. The applicant must also demonstrate in the permit application that the abatement or reduction of the pollution loading of the pre-existing discharges will occur as a result of the proposed mining and reclamation operation.

### **Explanation of Pollution Abatement Area**

In response to the Rahall Amendment, the Ohio Administrative Code (OAC) Section 1501:13-4-15 establishes provisions for obtaining modified effluent limits on

areas designated as *pollution abatement areas*. The rule is applicable to areas which have been previously mined and left unreclaimed, and from which there are pre-existing pollution discharges that are hydrologically related or connected to the proposed mine site. **The provisions of OAC 1501:13-4-15 are intended to encourage mining on these areas by providing for modified effluent limitations for net acidity, total iron, total manganese, and total suspended solids based on existing water quality and site conditions. Site-specific modified effluent standards are established based on loading rates rather than conventional concentration-based standards.**

OAC 1501:13-4-15 requires background water sampling within the hydrologic regime of the pollution abatement area in order to establish a baseline pollution load prior to permit approval. Establishing this load will allow the Division of Mineral Resources Management (DMRM) to evaluate and make recommendations to the Ohio Environmental Protection Agency (OEPA) for modified effluent limitations for the pollution abatement area, thereby removing certain disincentives to mine and reclaim previously affected areas which have pre-existing sources of mine drainage pollution. DMRM has adopted procedures to integrate this program into the existing permitting process.

#### **Identification and Coordination of Potential Remining and Associated Pollution Sources:**

DMRM wants to encourage the identification and reclamation of pollution sources. To facilitate and coordinate this objective, DMRM requests that the mining industry, their consultants, as well as the general public, including citizen watershed organizations that have identified pollution sources on areas that have the potential for remining, contact the Division's Remining Coordinator (RC). Any time a potential exists for mining in the vicinity of a pollution source, the attached **Description of Remining Areas with Pre-Existing Discharges** form should be completed and forwarded to the DMRM Remining Coordinator to provide information on the potential for remining and correcting the pollution source. The RC will meet with the potential applicant, consultant, landowner, or Abandoned Mined Land (AML) program staff member to explore the best methods for addressing the source of pollution either through remining, an AML reclamation project/contracting, or a combination of both. The DMRM RC may also initiate contacts with potential applicants regarding the feasibility of remining or AML contracting in areas of known water quality degradation caused by previous and unreclaimed mining and/or after consulting the Division's current AML Inventory system or OSM's (AMLIS) inventory.

It is advisable that the RC be included early in the planning process for remining operations, therefore the mine applicant should submit a copy of the U.S. Army Corp of Engineers (ACOE) Jurisdictional Waters Determination (JD) map to the RC to evaluate with respect to historical mining and AML features on the proposed permit and/or adjacent areas. Although not required, it is recommended that the RC and permitting Environmental Specialist (ES) attend the JD field review and evaluate the area for any potential remining areas or features which include: areas eligible for reduced

maintenance, modified or non-numeric effluent discharge permits, appropriate best management practices (BMP), and potential cooperative AML program reclamation opportunities, including No-Cost, Direct Negotiated or AML Enhancement projects. The RC will consult with the ACOE representative during the field review to determine if the site may qualify for a Nationwide Permit (NWP) 49 for *Coal Remining Activities*. If it is determined that there may be potential remining incentives applicable for the site, the RC will discuss these with the applicant, permitting ES, AML Program Manager, OEPA, and the ACOE.

**"Pre-existing discharge"** means a discharge from surface or subsurface waters which is located on previously mined areas. This term shall include a pre-existing discharge that is relocated as a result of the implementation of best management practices in the permit.

**"Pollution abatement area"** means that part or parts of the permit area which are causing or contributing to the base line pollution load, and which must be affected to bring about potential improvement of the base line pollution load, and which may include the immediate location of the discharge(s). The pollution abatement area shall include, to the extent practicable, areas within the permit area which are adjacent to and nearby the remining operation and which also must be affected to reduce the pollution load of the pre-existing discharges, and may include the immediate location of the pre-existing discharges.

**"Abatement plan"** means any individual technique or combination of techniques, the implementation of which may result in reduction of the base line pollution load. Abatement techniques may include but are not limited to best management practices such as: addition of alkaline material, daylighting old underground mines, special handling plans for managing toxic- and acid-forming material, regrading, and revegetation.

**"Best management practice"** means a practice implemented during the mining and reclamation of remining sites that is designed to reduce, if not completely eliminate, the pre-existing water pollution problems. Best management practices are tailored to specific mining operations based largely on pre-existing site conditions, hydrology, and geology. Best management practices are designed to function in a physical and/or geochemical manner to reduce pollution loadings. These best management practices may include engineering, geochemical materials handling, daylighting, regrading, revegetation, diversion ditches or other applicable practices.

## **Pre-Submittal Field Review**

If the applicant has not included the RC or permitting ES as part of the JD review process, the applicant must contact the Remining Coordinator prior to the submission of a remining application to request a pre-submittal field review. Prior to scheduling the field review, the applicant should be prepared to submit preliminary background information and baseline surface and ground water quality data to the Remining Coordinator so that DMRM can make a preliminary determination of whether the site meets the mine water quality characteristics for establishing modified effluent limitations. In addition, the applicant should submit any available spoil and overburden drilling results on the Drilling Report – Surface Form to allow an evaluation of the physical and chemical characteristics of the onsite spoil and overburden.

Once the above initial evaluation determination has been made, the RC will schedule a pre-submittal field review. This review will be conducted to provide an opportunity for the applicant and DMRM to further evaluate the site regarding eligibility and to identify long-term monitoring points and other areas of concern, such as pollution abatement strategies, specific best management practices, and the appropriateness of whether the applicant should seek a modified effluent limitation permit (discussed in-depth later in this guidance document), as early in the planning process as possible. Failure to do so may result in delays due to the need for additional sampling or from unnecessary sampling due to selection of inadequate sampling locations. A DMRM hydrologist will be assigned to work with the Remining Coordinator, ES, inspector, applicant and the OEPA.

Prior to the field review, the applicant/consultant should have the following information/data available for review and consideration: a minimum of two copies of a general site map showing the estimated limits of the proposed permit area, the estimated limits of the pollution abatement area, information concerning key hydrologic sites in the area proposed for mining, preliminary drainage control locations, results of any test hole drilling through overburden and spoil, and representative surface water and ground water sampling results to characterize the watershed and aid in identifying the pollution abatement area. Any valid samples may be used to meet the sampling requirements of 1501:13-4-15(C)(2) and 1501:13-4-15(D)(5)(a), including sampling analysis collected by various watershed organizations and the DMRM AML program staff.

Within 10 business days following completion of the pre-submittal field review, the RC will notify the applicant in writing of DMRM's determination by identifying the sites/locations that must be sampled to meet the requirements of OAC 1501:13-4-15(C) & (D) or the eligibility of the area for a numeric or non-numeric modified Remining NPDES permit. DMRM will seek input from OEPA as necessary. If there is insufficient information available during the pre-submittal field review for DMRM to make a final determination, the RC will specify in writing within 10 business days, the additional information that must be provided by the applicant to enable DMRM to make a final determination on the monitoring locations. The RC will then notify the applicant of DMRM's final determination in writing within 10 business days of receipt of the additional information that was requested.

### **Identification of Pre-Existing Discharge Sites**

Background sampling will include ground water and surface water sites within the proposed permit and adjacent areas as required by OAC 1501:13-4-04(D) and 1501:13-4-04(E), including all upstream/downstream locations in streams receiving discharge from the pollution abatement area. This sampling will be used to characterize the general hydrologic regime of the permit and adjacent areas including those sites/locations which can be characterized as pre-existing discharges and those that are hydrologically connected to the remining permit area. The locations identified as pre-existing discharges should exhibit adverse qualitative impact indicative of mine drainage

and that would not meet technology-based effluent limits. Water quality characteristics that will be reviewed and considered include acidity, alkalinity, specific conductance, iron, manganese, aluminum, and sulfate. The values of these parameters will be compared to the values of these parameters in unpolluted springs, wells and surface waters of the surrounding area. Any pre-existing discharges having water quality characteristics of natural background conditions will not be considered eligible for modified effluent discharge limits.

## **Remining NPDES Permit Applications**

OAC 1501:13-4-15 includes provisions for applicants seeking authorization to conduct coal mining operations under alternative, or modified effluent limitations of a Remining NPDES (National Pollutant Discharge Elimination System) permit on certain previously mined areas in which earlier coal mining operations have resulted in continuing water pollution. Applicants can seek either a modified numeric or non-numeric Remining NPDES permit. The alternative limits are set to achieve no less than baseline conditions for selected pollutants and include requirements for a site-specific pollution abatement plan that demonstrates the potential to improve discharge baseline pollutant loads. Both provisions are described below.

Modified, or alternate and non-numeric effluent limitations for pre-existing pollutional discharges as part of 40 CFR Part 434 subpart G – Coal Remining, apply only to discharges that are not comingled with waste water from active mining areas. Any discharge that is comingled with active mining waste water is subject to the most stringent effluent limitations. Please refer to Division Procedure Directive (PD) *Regulatory 2014-01- Remining Inspection of Pollution Abatement Areas* for more specific information regarding compliance and monitoring during active mining and requirements for performance security release for remining permits with alternative effluent permits.

For those applicants requesting authorization for a modified (numeric or non-numeric) Remining NPDES effluent discharge permit, the attached DMRM form *DNR-744-9069 Remining – Modified Effluent Limitations* form must be completed and submitted as part of the formal remining permit application. As part of this form, the reviewers (RC and permitting hydrologist) will be able to determine if the proposed operation qualifies as a remining operation eligible for a modified effluent discharge permit. The following information/data must be provided as part of this form:

- Submit a map that clearly delineates the boundaries of the proposed pollution abatement area. The pollution abatement area is the part of the permit area which is causing or contributing to the baseline pollution load, including areas which must be affected to implement the pollution abatement plan;
- Identify how the proposed remining permit area meets applicability of requirements for OAC 1501:13-4-15 (A) and whether a modified numeric or non-numeric Remining NPDES permit is being requested;

- Provide a description of each pre-existing pollutional discharge (include the longitude and latitude); and,
- Identification of each treatment pond located on the permit area that will receive water from a pre-existing discharge.

In addition to the above, the applicant must also complete and submit a **Pre-existing Discharge Inventory** form (*DNR-744-9070*) that indicates whether each identified discharge(s) is a point, or non-point discharge. The applicant must identify if each listed discharge will be “encountered” or “non-encountered” during the course of the mining operations. A discharge shall be deemed encountered when it will be physically intercepted during the course of mining activities including, but not limited to overburden removal, coal extraction, and reclamation. These are discharges that cannot be separated from ground water that is normally intercepted during mining or that collects in surface pits or impoundments while mining. Non-encountered discharges are those that are not physically intercepted during the mining operation or have been physically rerouted from the operation.

Pre-existing pollutional discharges may occur as numerous indiscrete or non-discernable discharge points or may occur in hydrologically discrete hydrologic units. As part of the **Pre-existing Discharge Inventory** form, it may be necessary for the applicant to designate separate individual pre-existing discharges into hydrologic units. The applicant will be required (if applicable) to identify hydrologic units where two or more discharges occur with a hydrologically discrete ground water flow system and whether the discharges will be combined, either naturally or man-made (channels, diversions, etc.).

### **Numeric Modified Remining NPDES Permit Applications**

Modified numeric effluent limitations are calculated from the background, or baseline samples collected to determine the baseline pollution load. Establishment of baseline pollution loads for a coal remining permit requires proper sampling and chemical analysis of pre-existing abandoned mine discharges. Samples must be collected and analyzed for pH, alkalinity, acidity, total iron, total manganese, total suspended solids, and total sulfate loads. Other relevant water quality parameters, such as total aluminum may be requested.

To properly characterize impacts to water quality and quantity, sample locations should be chosen both upstream and downstream of, and as close as possible to, the proposed pollution abatement area(s) for a period of 12-months as required by OAC 1501:13-4-15(C). These samples must be collected over a period of at least 12 months or longer to provide an accurate representation of the variations of flow and seasonal impacts the pollution abatement area is having on stream quality and quantity. Because loadings will be calculated, it is important that the determined flow rates be as accurate and representative as possible. Discharge measurements must be made by measuring actual volume (where appropriate) or by a permanently installed and properly constructed weir, flume or other suitable measuring device.

To achieve the required number of samples over the 12-month (or longer) period, it is necessary to sample sites no more frequently than once a month, with sampling conducted at relatively equal time spacing. These sites will be the same sites identified during the pre-submittal field review. Pollution loads will then be calculated and expressed in pounds per day. The loading rates can be calculated using the following formula and must be entered on **POLLUTION LOAD VALUES** form *DNR-744-9071*:

$$\begin{array}{ccccccc} \text{Pollution Load} & = & \text{Concentration} & \times & \text{Flow} & \times & 0.01202 \\ \text{(lbs/day)} & & \text{(mg/L)} & & \text{(gal/min)} & & \end{array}$$

Results of this intensive sampling will determine the baseline pollution load and will be subsequently used to set the effluent standards for the pollution abatement area. Because flow rate is an integral component of the loading, the method used to determine the flow rate (manually, permanent or temporary device, etc.) must be an accepted method and must be described in an addendum to the water sampling data.

### **Non-Numeric Remining NPDES Permit Applications**

Non-numeric Remining NPDES permits may be issued pursuant to OAC 1501:13-4-15(C) (2). If the RC or DMRM hydrologist determines that it is physically or economically infeasible to collect samples for establishing pollution load and that remining will result in significant improvement to water quality that would not otherwise occur, then the numeric effluent limitations do not apply to the pollution abatement area. Pre-existing discharges for which it is infeasible to collect samples for determination of baseline pollutant levels include, but are not limited to, diffuse ground water flow that cannot be adequately collected, inaccessible discharges such as those on a hazardous steep slope, a number of pre-existing discharges so extensive that monitoring of individual discharges is infeasible, or base flow to a receiving stream that cannot be sampled separate from the receiving stream..

Total suspended solids (TSS) and settleable solids (SS) have an additional non-numeric option, wherein the option may be applicable when post-mining effluent standards are infeasible or impractical based on the site specific conditions of soil, climate, topography, steep slopes, or other baseline conditions, provided the operator demonstrates that significant reductions of total suspended solids and settleable solids will be achieved through the incorporation of sediment control BMPs into the pollution abatement plan. The non-numeric permit provisions are established using best professional judgment to evaluate the adequacy of the BMPs contained in the pollution abatement plan.

Determination of the appropriateness of issuing a non-numeric permit will be based on the pre-submittal field review and data (including water sampling) provided by the applicant. If it is determined that the pre-existing discharges associated with a remining site qualify for non-numeric discharge permit, no baseline effluent standards would be established for the qualifying discharges. Therefore, the requirements for

treatment of discharges pursuant to OAC 1501:13-4-05 F (2), (3), (4), (5), and (6) would not apply to those qualified discharges. Monitoring of certain discharges and the receiving stream during and after remaining operations may still be necessary.

### **Pollution Abatement Plan**

All remaining operations seeking modified effluent limitations (numeric and non-numeric) must include a *pollution abatement plan* that includes a set of plans and supporting information that has been designed to result in the reduction of the baseline pollution load and has best technology incorporated into the plan.

The pollution abatement plan must include the following:

- Must be site-specific and identify characteristics of the pollution abatement area (e.g. maps, hydrogeology, geochemical data, etc.);
- Characteristics of the pre-existing discharges (e.g. locations, chemistry, flow measuring devices, etc.);
- Description of how pollution load will be reduced from pre-existing discharges;
- Identification of the selected best management practices (BMPs) to be used;
- Description of design and construction specifications for the BMPs;
- Implementation and maintenance schedules, criteria for monitoring and inspection of the BMPs; and,
- Expected performance of the BMPs to reduce the pollution loads.

The steps requiring certification by the supervising professional engineer must be listed in the abatement plan, per OAC 1501:13-4-15(E) (3). It is within the discretion of DMRM to determine whether additional or more intensive BMPs than those identified in the proposed plan are required. For more information please refer to OAC 1501:13-4-15 (C) (5).

### **Best Management Practices (BMPs)**

The types and scope of BMPs employed in a permitted pollution abatement area should be based on pre-existing site conditions, hydrology, and geology. BMPs are designed to function in a physical and/or geochemical manner to reduce the pollution loadings. BMPs may be categorized in four ways: physical, geochemical, operational, and passive treatment. Remaining operations will likely employ multiple BMPs.

Physical BMPs are designed to limit the amount of water that is ultimately discharged from the mine and to reduce erosion and off-site sedimentation. They include but are not limited to: regrading of spoil, revegetation, diversion ditch installation, use of low-permeability caps, stream sealing, underground mine daylighting, mine entry and auger hole sealing, highwall and pit floor drains, grout curtains, and ground water diversion wells.



Geochemical BMPs may include but are not limited to alkaline addition, alkaline redistribution, mining into highly-alkaline strata, induced alkaline recharge, special handling or capping of acid-forming materials, and special handling of alkaline materials (importing, redistributing, or strategically placing). These methods work to inhibit pyrite oxidation, reduce the contact of water with acid-producing materials, inhibit iron-oxidizing bacteria, or increase the amount of alkalinity generated within the backfill.

Operational BMPs include but are not limited to coal refuse reprocessing, rapid mining and concurrent reclamation, and limited or no auger mining.

Passive treatment can be used as part of the overall pollution abatement plan although it is preferred that it is used in combination with other BMP's. Passive treatment includes but is not limited to: anoxic limestone drains, constructed wetlands, successive alkalinity-producing systems, open limestone channels, steel slag leachate systems, limestone leachate beds, and alkalinity-producing diversion wells.

For additional discussion of BMPs, U.S. Environmental Protection Agency document EPA 821-R-00-007 "Coal Remining Best Management Practices Guidance Manual" should be consulted.

### **Completeness Review and Application Processing**

A coal mining permit application containing a pollution abatement area will be deemed complete when it:

- (1) Meets the completeness requirements for a standard mining application;
- (2) Includes a completed **REMINING – MODIFIED EFFLUENT LIMITATION** Form (*DNR-744-9069*);
- (3) If requesting a modified numeric Remining NPDES permit application, must include a minimum of six (6) months of sampling for the pre-existing discharges and upstream/downstream intensive sampling sites; and,
- (4) Includes a *Pollution Abatement Plan* with a list and description of best management practices.

### **Remining NPDES Permit Application Review**

Once the application is deemed complete, the public notice can be published and field review of the application can begin. For modified numeric Remining NPDES applications, the hydrology review can be initiated when a minimum of six (6) of the 12 months of required background sampling has been included in the application. Although DMRM is responsible for processing and review of the Remining NPDES application, DMRM and OEPA have established a memorandum of agreement between the agencies that provides for a cooperative review of Remining NPDES permits. As part of that

agreement, DMRM will submit the **Remining – Modified Effluent Limitations** form and all necessary portions of the Surface Mining Application to the OEPA within five (5) business days of deeming the application complete (which includes submission of the above-listed items). OEPA will provide DMRM with written conclusions from the preliminary review within twenty (20) business days of OEPA receipt of the application from DMRM. If the OEPA preliminary review determination is not positive, the applicant, DMRM, and OEPA will confer to determine if processing of the modified Remining NPDES application proposal should continue or if that portion of the application should be removed.

If both parties (DMRM and OEPA) agree that the proposed remining permit is eligible for a modified numeric or non-numeric Remining NPDES permit, the normal SMCRA permit review and revision process will continue. DMRM staff will use their best professional judgment to review and recommend to OEPA remining operations where post mining effluent for Total Suspended Solids (TSS) and Settleable Solids (SS) are infeasible or not practical based on site specific conditions (soil, climate, topography, etc.) as long as the applicant demonstrates through incorporation of sediment control through BMPs into the pollution abatement plan. DMRM staff will also recommend to OEPA a non-numeric NPDES permit for coal mining operation where it is infeasible or uneconomical to collect samples for establishing the baseline pollution levels and where remining will result in significant water quality improvements that would not otherwise occur.

For permits eligible for a modified numeric Remining NPDES permit, the DMRM hydrologist will perform statistical analyses of the reported load values, using procedures in accordance to 40 CFR 434 Appendix B described in the January 23, 2002 Federal Register and in the United States Environmental Protection Agency (USEPA) document *EPA-821-B-01-011, Coal Remining Statistical Support Document, December 2001*. When DMRM believes the remining application has met all requirements for eligibility, the DMRM Remining Coordinator will forward to OEPA the DMRM review, analysis, and if applicable, laboratory analyses with DMRM's recommendation for the Remining NPDES permit application. Should OEPA disagree with DMRM's recommendation, further revisions may be necessary.

## **Permit Issuance**

DMRM may conditionally issue coal mining permits containing pollution abatement areas in cases where the OEPA has not yet approved and issued the modified Remining effluent NPDES permit. In some instances, it may be necessary for the applicant to obtain a General Coal Mining NPDES permit until the Remining NPDES permit has been granted.

Interested parties can obtain a copy of the Remining NPDES Permit application form and guidelines that are available at the Division's website (<http://minerals.ohiodnr.gov>). Any questions concerning the remining program should be directed to the Division's Remining Coordinator at 330-339-2207.

**DESCRIPTION OF REMINING AREAS WITH PRE-EXISTING DISCHARGES**

1. Operator Name: \_\_\_\_\_

2. Site Information:

County: \_\_\_\_\_ Township: \_\_\_\_\_

Section/Lot: \_\_\_\_\_ U.S.G.S. Quad: \_\_\_\_\_

HUC/Drainage Basin: \_\_\_\_\_

3. Total Acres Proposed for Mining Permit: \_\_\_\_\_

4. Total Acres of Abandoned Mined Land to be remined/reclaimed: \_\_\_\_\_

Linear feet of highwall: \_\_\_\_\_ Open pit acreage: \_\_\_\_\_

Underground mines acreage to be reclaimed: \_\_\_\_\_

5. Would remining be based on modified effluent limitations? Y N

If so, type of Remining NPDES permit requested:

\_\_\_\_ Numeric

\_\_\_\_ Non-Numeric

*(Please refer to DMRM Guidance Directive- Permitting of Pollution Abatement Areas and Establishing Modified Effluent Limits for more specific information regarding Remining NPDES permits)*

6. Has any background water sampling been completed for this application?

Y N How many months of sampling have been completed? \_\_\_\_\_

Please attach a location map (8 1/2" x 11") delineating the proposed permit area along with this form and forward to the Division's Remining Coordinator as early as possible in the planning process. Please recognize that qualified abandoned mine lands may be eligible for AML No-cost or Direct Negotiated contracts for reclamation of areas adjacent to potential coal mining sites.

**OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF MINERAL RESOURCES MANAGEMENT**

**REMINING – MODIFIED EFFLUENT LIMITATIONS  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT**

Applicant's Name  \_\_\_\_\_

A. **Eligibility.** On an addendum, describe how the proposed area meets the applicability requirements at 1501:13-4-15(A) of the Ohio Administrative Code.

B. **Type of Modified Remining NPDES Permit Requested:**

**Numeric**

**Non-Numeric:** On an addendum, explain how the proposed area meets the requirements for a non-numeric NPDES permit, according to 1501:13-4-15(C)(4) of the Ohio Administrative Code.

C. **Pre-Existing Discharge Locations:**

For each pre-existing discharge point, list both latitude and longitude.

Pre-Existing Discharge	Latitude, decimal degrees	Longitude, decimal degrees

D. **Treatment Ponds:** For each pond that will receive water from a pre-existing discharge site, provide the following:

Pond #	Latitude			Longitude			Anticipated Date for Commencement of Discharge
	Deg	Min	Sec	Deg	Min	Sec	

**Data Collection and Analysis:**

E. **Numeric Permit Application:**

1. Submit 12 months of sampling for all hydrologic sites determined to be pre-existing discharge sites. If a stream flows through the pollution abatement area, then submit upstream and downstream samples. Report the laboratory analyses on Ohio Department of Natural Resources, Division of Mineral Resources Management Hydrologic Analyses form. The sampling should occur once a month for 12 months at regular intervals.
2. Submit completed Pre-Existing Discharge Inventory and Pollution Load Values forms.

**Non- Numeric Permit Application:**

1. Submit sampling to represent seasonal variations for all hydrologic sites determined to be pre-existing discharge sites. If a stream flows through the pollution abatement area, then submit upstream and downstream samples. Report the laboratory analyses on Ohio Department of Natural Resources, Division of Mineral Resources Management Hydrologic Analyses form.
2. Submit a completed Pre-Existing Discharge Inventory form.

F. **Hydrology Map:**

Submit a map which clearly delineates the proposed pollution abatement area, per 1501:13-4-15 of the Ohio Administrative Code and which meets the requirements of 1501:13-4-08, 1501:13-4-09, and 1501:13-4-10 of the Ohio Administrative Code.

G. **Geo Technical:**

Submit test hole data (Drilling Report – Surface) as required by OAC 1501:13-4-15(C)(5)(b): If spoil exists on the pollution abatement area, at least one additional test hold per 25 acres of pollution abatement area must be drilled through the spoil.

H. **Pollution Abatement Plan:**

1. On an addendum, provide a detailed description of the pollution abatement plan. “Abatement plan” is defined at 1501:13-1-02 of the Ohio Administrative Code.
  - a) Include best management practices, cross sections, and schematic drawings. “Best management practice” is defined at 1501:13-1-02 of the Ohio Administrative Code.
  - b) List the best management practices and either describe the practices in detail or provide a table that references the specific response in the coal mining and reclamation permit application that describes each best management practice. Best management practices may include, but are not limited to, regrading of spoil, backfilling of highwalls, daylighting of abandoned underground mines and auger holes, special handling of acid-forming and toxic-forming materials, addition of alkaline material, hydrologic control measures (e.g. diversions, seals, underdrains), resoiling, revegetation, creation of positive drainage, and removal of gob.
  - c) Address the number of acres of previously mined area, both surface and underground, that will be reclaimed or daylighted in relation to the total number of acres of existing previously mined area on the application area. For previously mined surface areas, address the existing linear feet of abandoned highwall and the total linear feet of abandoned highwall to be eliminated by the re-mining operation. Attach a copy of the pollution abatement plan to this application.
2. On an addendum, address the anticipated pollution reduction benefit resulting from implementation of the abatement plan, and provide a description of the projected impacts on surface water and/or ground water infiltration, quality, recharge, quantity and flow rates.

**OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF MINERAL RESOURCES MANAGEMENT**

**PRE-EXISTING DISCHARGE INVENTORY**

Pre-Existing Discharge Sample ID	Point/Non-Point	Encountered/Not Encountered	Hydrologic Unit <sub>1</sub>	Relationship To Other Discharges <sub>2</sub>	Flow Path <sub>3</sub>	Comments

- Hydrologic units may be defined in cases where two or more discharges occur within a hydrologically discrete ground water flow system. If no hydrologic unit is defined, leave blank.
- Code usage: NC = discharge does not combine with other discharges, CN = discharge naturally combines/coalesces with other discharges, DM = discharge is presently combined with other discharges by man-made control (ditch, culvert, etc.), CP = discharge will be combined with other discharges following permit issuance.
- Indicate the pond where the pre-existing discharge water from the individual sampling site will be directed. Show the natural or constructed drainage paths and the receiving pond on the hydrology map.

**OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF MINERAL RESOURCES MANAGEMENT**

**POLLUTION LOAD VALUES**

Pre-Existing Discharge Sample ID  \_\_\_\_\_

Date	Flow (GPM)	Total Acidity Load	Total Fe Load	Total Mn Load	Total Suspended Solids load	Total Sulfates Load
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Note: All load values to be reported in pounds per day (concentration in mg/l x flow in gallons/minute x 0.01202 = load in lbs./day)