

**GENERAL ENVIRONMENTAL ASSESSMENT**

Revised for Inclusion of Borrow Area

CUCUMBER RUN

ABANDONED MINE LAND PROJECT

PROJECT NO. AMD 26(2768)101.1  
STEWART TOWNSHIP  
FAYETTE COUNTY

AMD ABATEMENT PROJECT

PREPARED BY:

THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF ABANDONED MINE RECLAMATION  
DIVISION OF FIELD OPERATIONS

IN COOPERATION WITH:

U. S. DEPARTMENT OF INTERIOR  
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT  
HARRISBURG FIELD OFFICE

April 22, 1997

## A. DESCRIPTION OF THE PROPOSED ACTION

This project will upgrade acid mine drainage (AMD) treatment facilities installed in and adjacent to Ohiopyle State Park in the mid 1980's. This will be accomplished by collecting additional seeps, improving upslope diversion controls, and constructing alkalinity producing facilities to improve the efficiency of the existing passive wetland facilities.

## B. NEED FOR THE PROPOSED ACTION

The discharge of acid mine drainage (AMD) into Cucumber Run from the project site was first documented by the Pennsylvania Department of Environmental Resources (DER) Bureau of Abandoned Mine Reclamation (BAMR) in a study completed under Operation Scarlift in 1975. This study resulted in the completion of a mine sealing and reclamation project by BAMR in the mid 1970's. In the mid 1980's, BAMR again used Scarlift funds to construct passive treatment facilities using the technology available at that time. The watershed was investigated under BAMR's AMD Set Aside program starting on June 30, 1993. This investigation showed that although the quality of Cucumber Run has improved as a result of the previous two projects, some degradation remains. Cucumber Run flows over Cucumber Falls, a scenic waterfall that is a very popular attraction in the heavily used Ohiopyle State Park. Cucumber Falls continues to show the affects of AMD, with iron staining of the stream bottom evident. Laboratory results of samples taken of Cucumber Run and North Branch Cucumber Run (which receives most of the AMD) upstream and downstream show degradation of the watershed as a result of these discharges. Biological samples taken of benthic macroinvertebrates upstream and downstream also reflect this degradation. More specific documentation of the affects on the receiving stream is available in the Cucumber Run AMD Abatement and Treatment Plan prepared by BAMR and being submitted with this document.

The Cucumber Run AMD discharges meet the OSM criteria for an AMD Set Aside Project. A revised Inventory Update Form (OSM-76) was completed and submitted to OSM. The features are included in PA 2768, Cucumber Run. The discharges are depicted as AML features numbered 7, 8, 9, 19. AML feature number 14, a closed portal, will also be affected by this project. These features qualify as OSM Priority 3 problems.

## C. ALTERNATIVES CONSIDERED

**Alternative 1: Issue an authorization to proceed with the proposed project.**

Under this alternative, the OSM - Harrisburg Field Office Director (FOD) would approve a federal construction grant in the amount of \$144,000.00 for use by the PA DER, Bureau of Abandoned Mine Reclamation in implementing the AML reclamation proposal described in the following:

The AMD abatement project will include the collection of one of two seeps that are discharging directly to the North Branch Cucumber Run. This seep will be directed into existing passive treatment facilities (known as wetland #1). The second seep surfaces too close to stream level to intercept or treat. However, an existing diversion ditch upslope of this seep is blocked, allowing surface water to seep through a reclaimed spoil area, and is probably contributing flow to the seep. The diversion ditch will be opened to allow unrestricted flow as part of this project. Alkalinity addition facilities (anoxic limestone drains) will be installed to improve the treatment being provided by the largest of the three existing wetlands. A two

acre borrow area will be developed in conjunction with this project. All disturbed areas will be reclaimed and revegetated.

The contractor will be granted 210 days to complete the project but will likely complete the construction in less time.

Design features of the project which will minimize or mitigate environmental harm during the construction phase of the project include:

Limiting the work area to a very small area immediately around the project area.

Diverting all water pumped from the construction area through a settling basin or appropriate filter before being discharged into any stream or watercourse.

Restoring and/or revegetating all areas disturbed to prevent on-site erosion and off-site sedimentation problems. BAMR will be responsible for developing an erosion and sedimentation control plan.

**Alternative 2: Do not issue an authorization to proceed with the proposed project (No Action).**

Under this alternative, the OSM - Harrisburg FOD would deny a federal construction grant in the amount of \$144,000.00 to implement the AML reclamation proposal described above as Alternative 1. As a result, current conditions would continue at about the same level.

The mine drainage problem would continue to adversely impact Cucumber Run.

**Alternative 3: Other reasonable alternative(s).**

The alternative of using conventional chemical treatment such as soda ash briquettes to provide alkalinity was considered. This alternative is not considered to be feasible from an economic or environmental standpoint. Conventional treatment facilities require the use of chemicals and the permanent installation of man made facilities to store and disperse the chemicals. With chemical treatment there will be ongoing, continuous operation and maintenance costs. For these reasons, conventional alkalinity addition is considered economically and environmentally inferior to passive treatment systems for small flow AMD discharges.

**D. AFFECTED ENVIRONMENT**

**1. General Setting**

The project site is located in Stewart Township, Fayette County. The location of the project can be found on the Fort Necessity USGS 7.5' Quadrangle in the vicinity of north latitude 39° 51' 30" and west longitude 79° 30' 48".

The project area is located partially within Ohiopyle State Park on land owned by the Commonwealth of Pennsylvania, and partially on privately owned land. Existing wetlands were constructed in a narrow

wooded valley along the North Branch Cucumber Run. They can be accessed by a previously constructed access road off a township road, a short distance from State Route 0381. Some of the construction will take place in a previously reclaimed area upslope of wetland #1. This area is an open field with an access road already in place. The project area is the location of former deep and surface mines operated by several companies from the 1880's to the early 1960's. The Western Pennsylvania Conservancy purchased a large amount of surface land and coal rights in 1964, which ended mining in the area. The coal seam mined was the Lower Kittanning. The mining operations in the area were small, and the areas mined were not extensive.

The 2 acre borrow site is located in an area used for pasture, approximately 4000' southwest of the main project area. The surrounding area is woodland and pasture land.

The site lies in the drainage basin of North Branch Cucumber Run. The future land use will be unchanged from the present land use.

## 2. Other Affected Resources, Including Special Areas of Consideration

### RESOURCE VALUES

a. *Historic and Cultural Resources:* No historical or cultural resources are known to exist within or near the project area.

b. *Hydrology:* The entire project area lies within the Cucumber Run drainage basin. The water quality of North Branch Cucumber Run is good upstream of the site and poor downstream of the site. The water quality of Cucumber Run is good upstream of the North Branch and average downstream (see Cucumber Run AMD Abatement and Treatment Plan being submitted to OSM for documentation).

c. *Vegetation:* The work area for the project includes reclaimed surface mine areas, and constructed wetlands. The surface mine is vegetated with grasses and the wetlands were planted with and contain cattails (*Typha sp.*). The area surrounding the wetlands was planted in grasses. The borrow area is vegetated with pasture grasses.

The Fort Necessity USGS National Wetland Inventory Map indicates no wetlands in the vicinity of the project area. However, a field review has shown that wetlands exist adjacent to constructed wetlands #2 and 3.

d. *Fish and Wildlife Resources:* No threatened or endangered plant or animal species are known to exist within the project work area. Numerous species of wildlife (birds, insects, reptiles and small and large mammals) can be found throughout the general vicinity of the project work area.

e. *Soils:* No prime or unique farmland is located within the project work area. The project area previously disturbed by mining is classified as strip mine spoil in the USDA Soil Survey of Fayette County, Pa. The area adjacent to North Branch Cucumber Run is classified as Philo silt loam. The soil within the borrow area is classified as Gilpin silt loam.

d. *Fish and Wildlife Resources:* Short term and long term minor impacts to non-endangered native wildlife can be expected. Short term impacts include the displacement of some wildlife (small to large mammals and birds) during construction of the project primarily due to elevated noise levels and increased human activity which may frighten the wildlife. Long term impacts include the destruction of small wildlife (insects, reptiles and small mammals) during construction of the project. Long term minor beneficial impacts to aquatic life will occur with the improved treatment of AMD discharged to North Branch Cucumber Run. Short term impacts will be minimized by the relatively short time required for construction of the project.

The Pennsylvania Natural Diversity Index (PNDI) was reviewed for this project site on February 3, 1994 with no threatened or endangered plant or animal species or other features of concern indicated to be present at or in the vicinity of the proposed project. The PNDI was reviewed for the borrow area on April 16, 1997, with the same results.

The United States Fish and Wildlife Service (USFWS) provided informal Section 7 consultation for this project site by letter dated March 2, 1994. Section 7 consultation was provided for the borrow area on April 22, 1997.

e. *Soils:* The project will have minor impacts to soils located within the project area. Much of this area has been previously disturbed by the various mining activities. The impacts will be minimized by the use of erosion and sedimentation control facilities as well as the expeditious revegetation of disturbed areas.

f. *Recreational Resource Values:* The project will provide a minor short term impact to local recreational resource values since construction will take place within a State Park that is visited by the public. This impact will be minimized by limiting the length of time for construction. The project will provide a minor beneficial long term impact by improving the aesthetics of Cucumber Run and Cucumber Falls.

g. *Air Quality:* Short term minor impacts to the local air quality are expected during construction of the project due to exhaust emissions from the construction machinery and due to dust from construction. The impacts will be minimized through the use of properly inspected and maintained equipment and through the use of dust suppression water sprays whenever necessary.

h. *Noise:* Minor short term impacts due to elevated noise levels are expected from the operation of heavy equipment during construction of the project. These impacts will be minimized through the use of well maintained mufflers on the equipment utilized during construction of the project.

i. *Topography:* The project will have minor short term impacts to topography during construction that will be minimized by limiting construction time.

j. *Other:* There will be a minor short impact as the area will be unavailable for environmental education purposes. This will be minimized by limiting construction time. There will be a minor long term benefit provided as more up to date facilities will be available to review.

## 2. Cumulative Impacts

There are no known planned or ongoing projects within the immediate surrounding area of the proposed project which would have a cumulative impact on the above described resource values.

**Alternative 2: Do not issue an authorization to proceed with the proposed project (No Action).**

### 1. Resource Values

This alternative will have no impact on the following resources or environmental components (including no beneficial impacts):

- a) *Historic and Cultural Resources*
- b) *Hydrology*
- c) *Vegetation*
- d) *Fish and Wildlife Resources*
- e) *Soils*
- f) *Recreational Resource Values*
- g) *Air Quality*
- h) *Noise*
- i) *Topography*
- j) *Other*

## 2. Cumulative Impacts

Selection of this alternative would result in no cumulative impacts to the environmental conditions present at the site.

**Alternative 3: Approve a differently-designed construction project**

### 1. Resource Values

Since this alternative would require the use of similar types of equipment and the project work area would be in the same proximity, the same impacts would occur to the Resource Values as discussed in Alternative 1. The exception being that there would be a minor long term impact to recreational resource values due to the need to keep materials and equipment on site that would not be aesthetically pleasing. Also, routine operation and maintenance of facilities will cause minor long term impacts to air quality and noise levels due to the need to transport chemicals to the site.

## 2. Cumulative Impacts

Cumulative impacts would be the same as discussed in Alternative 1.

## F. SUMMARY

Selection of Alternative 1, to issue an authorization to proceed with the proposed AMD Abatement Project, would result in a short term disruption to the local community and the local environmental conditions on and immediately adjacent to the project site. Construction of the project will cause short term impacts to the vegetation, air quality, hydrology, noise, soils, recreational resource values, topography, and fish and wildlife values. Long term minor beneficial impacts will be realized in hydrology, fish and wildlife resources, and recreational resources values.

Selection of Alternative 2, to not issue an authorization to proceed with the proposed AMD Abatement Project, would result in no new impacts to the environmental conditions on or immediately adjacent to the site. However, existing adverse environmental impacts would continue. This includes the continued degradation of Cucumber Run, North Branch Cucumber Run, and Cucumber Falls, with the resulting loss of aquatic habitat, and loss of recreational resources.

Selection of Alternative 3 is not considered economically or environmentally feasible.

## G. PERSONS AND AGENCIES CONTACTED TO ASSIST IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT

1. The Pennsylvania Historic and Museum Commission
2. The United States Fish and Wildlife Service
3. Scott Johnson, Mining Engineer 2, BAMR-Harrisburg
4. J. Michael Bielo, Chief, Division of Field Operations, BAMR-Harrisburg
5. Douglas Hoene, Park Manager, Ohiopyle State Park
6. John Paone, Water Pollution Biologist, DER Bureau of Water Management, Southwest Region, Soils and Waterways Section

## H. PREPARERS

Pamela J. Milavec, Water Pollution Biologist 3  
Commonwealth of Pennsylvania  
Department of Environmental Protection  
Bureau of Abandoned Mine Reclamation  
Ebensburg District Office

I. REFERENCES

1. Pennsylvania DER, Bureau of Forestry, Pennsylvania Natural Diversity Index
2. OSM-EIS-11, Approval of State and Indian Reclamation Program Grants Under Title IV of the Surface Mining Control and Reclamation Act of 1977
3. Cucumber Run AMD Abatement and Treatment Plan; BAMR Set Aside Program
4. USDA Soil Survey of Fayette County
5. USFWS, National Wetland Inventory Map, Fort Necessity USGS Quadrangle
6. Mine Drainage Abatement Survey, Cucumber Run Watershed, 1975; DER-BAMR, Operation Scarlift
7. National Abandoned Lands Inventory System; DER-BAMR

J. NAME, TITLE AND SIGNATURE OF RESPONSIBLE STATE/TRIBE OFFICIAL

J. Paul Linnan  
J. Paul Linnan, Chief  
Division of Field Operations  
Bureau of Abandoned Mine Reclamation

Date: April 23, 1997