

U. S. DEPARTMENT OF THE INTERIOR  
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT  
ENVIRONMENTAL ASSESSMENT  
for  
Abandoned Mine Land Project  
Site 2148 –McElroy Subdivision Mine Stabilization Project Phase III  
Warrick County, Indiana

A. Description of the Proposed Action

This project is located just southeast of Boonville, Indiana, in Warrick County. It is located an area of very shallow mining where multiple emergency and non-emergency subsidence events have already occurred.

According to the Indiana Coal Mine Information System (<http://dnrmaps.dnr.in.gov/apps/cmisis.htm>), the Big Four Miami #1, #2 and #3 Mines operated in this location from 1900 to 1921 at an unknown depth and coal thickness of 5 feet. An exploratory drilling project in this area revealed mine voids at an average depth of 30 feet and void thickness of 6.0 feet.

This proposed project is the third phase of work within this residential area. This project area is located within the rights-of-way of several city streets. Surrounding land use is residential. A location map is attached.

B. Need for the Proposed Action

The reclamation project submitted by the Indiana Abandoned Mine Land (AML) program proposes to reclaim AML Site 2148, the McElroy Subdivision Mine Stabilization Project Phase III. The Office of Surface Mining Reclamation and Enforcement (OSMRE) will decide whether or not to grant approval for this proposed project.

This action is necessary for the applicant to receive OSMRE Authorization to Proceed for the proposed project. The proposed project will remediate the impacts of the abandoned mine land on the quality of the human environment in accordance with AML program objectives.

C. Alternatives Considered

1) Alternative One: Grant Authorization to Proceed

Under this alternative, the OSMRE/Alton Field Division Director would grant the State of Indiana an Authorization to Proceed to implement the Abandoned Mine Land reclamation proposal described in the following.

Under this alternative, The Indiana Abandoned Mine Land program would conduct a grouting and stabilization project at this site. The goal of this project is to enhance public safety by stabilizing the underground mine voids under the roads and public utilities in this area. This would be accomplished by pumping a concrete grout mixture into the old mine workings in an attempt to completely fill the mine voids. Filling the voids would prevent the collapse of the mine roof and eliminate the likelihood

of future surface subsidence and possible damage to roads and utilities. This proposed project will consist of an estimated two hundred eighty (280) - six (6) inch diameter vertical and angled boreholes for grout injection. The total length of injection boreholes is estimated to be eleven thousand five hundred, (11,500) linear feet. The estimated amount of grout required to fill the mine void is fifteen thousand four hundred (15,400) cubic yards. The concrete grout shall consist of a flowable mixture of water, cement, coarse aggregate, fine aggregate and Type "F" fly ash and have a minimum unconfined compressive strength of five hundred (500) psi after twenty-eight (28) days of curing. The reclamation contractor will take all means reasonably necessary to protect the lives of employees on the job and the safety of the public and property in connection with the performance of the work at this site. All work shall be conducted in a manner that will ensure the least obstruction to public road traffic. The reclamation contractor will utilize all necessary traffic control devices and will take all necessary precautions to ensure the protection of the work and safety of the public during this reclamation project.

2) Alternative 2: Do not grant Authorization to Proceed (No Action)

Under this alternative, the OSMRE/Alton Field Division Director would not grant the State of Indiana an Authorization to Proceed to implement the abandoned mine land reclamation proposal described above under Alternative 1. As a result, current conditions would continue, most growing worse. Further discussion of the "no action" alternative is included in Section D-2.

D. Environmental Impacts of the Proposed Action and Alternatives

1) Alternative One: Grant Authorization to Proceed

a) Resource Elements

Below is a list of resource elements that may be affected by this AML project. The proposed project site and immediately surrounding area has been reviewed to determine whether any of the resource elements may be affected by the activities of the proposed project. If a resource element is not present on site or will not be affected by the reclamation activities, it will be so identified. Any resource element that may be potentially impacted by the reclamation activities will also be identified along with the corresponding design features to mitigate those impacts. A discussion of the environmental consequences relating to AML projects is included in OSM-EIS-11, Sections 4.1 (Generic Analysis of Beneficial and Adverse Effects), 4.2 (General Impacts), and 4.3 (Impacts Associated with AMLR Projects). Definitions of terms relating to degrees of impact used in this section are located in Section D-3.

i) Cultural and Historic Resources

According to the State Historic Preservation Officer, there are no known historic, architectural, or archaeological sites that are eligible for the State or National registers that will be affected by this proposed project (see attached). However, as part of our agreement with the Division of Historic Preservation and Archaeology, if at any time during the reclamation project, historical or archaeological artifacts are discovered, all construction activities shall cease until the staff archaeologist can review the area and determine the proper course of action. Therefore, there will be no adverse impacts to this resource.

ii) Water Quality

It is not anticipated that any water will be encountered and carried to the surface during the drilling process, however, if this does occur, all water shall be contained and either hauled to the batch plant where it will be utilized in the grout manufacturing process, reinjected into the mine void, or hauled to the local water treatment facility to be treated. It is also anticipated that no water will be discharged off-site; however, the contractor will be required to obtain an NPDES permit for this project and adhere to best management practices to control erosion and sedimentation during the project.

To ensure compliance with USEPA's Underground Injection Control Program, which is intended to prevent contamination of underground sources of drinking water from fluids released by underground injection wells, an Underground Discharge System (Class V) Inventory application was submitted to Region 5 Headquarters. USEPA reviewed this data and authorized the proposed project by rule (see attached). Therefore, water quality values will not be adversely affected by the proposed reclamation activities.

iii) Wetlands

There are no wetlands in, or adjacent to, any of the areas to be grouted. Also, the reclamation activities at this site fall under the review criteria set forth in a letter of agreement between the Department of Army, Corps of Engineers, Louisville District and the Indiana Department of Natural Resources, Division of Reclamation, Abandoned Mine Lands Program dated May 3, 1999. This agreement essentially states that no Department of Army Permit will be required for Abandoned Mine Land reclamation projects that consist entirely of activities that have no impacts on wetlands or other waters of the United States. Therefore, wetland values will not be adversely affected by the proposed reclamation activities.

iv) Floodplains

Upon review by the staff Hydrogeologist, it has been determined that the proposed project is not within a floodway and that a Construction in a Floodway permit is not required (see attached). Therefore, floodplain values will not be adversely affected by the proposed reclamation activities.

v) Fish and Wildlife Resources

The reclamation activities at this site fall under the Memorandum of Agreement between the USDOJ, Fish and Wildlife Service and the Indiana Department of Natural Resources, Division of Reclamation, Abandoned Mine Lands Program dated March 5, 1999. This agreement essentially states that no individual response is necessary for reclamation projects that have no impact on endangered wildlife or wetlands. This precludes the need for further consultation on this project. Therefore, wildlife values will not be adversely affected by the proposed reclamation activities.

vi) Land Use

Due to the fact that the entire proposed project will be conducted within the road rights-of-way

and is within a residential area, there will be no prime or unique farmlands, ecologically critical or significant areas, natural landmarks, wilderness areas or refuge lands that will be impacted by this project. Therefore, this resource will not be adversely affected by the proposed reclamation activities.

vii) Recreational Resources

Due to the fact that the entire proposed project will be conducted within the road rights-of-way and is within a residential area, there will be no public recreation resources that will be impacted by this project. Therefore, this resource will not be adversely affected by the proposed reclamation activities.

viii) Air Quality

There will be no permanent air emissions produced by this proposed project, however, as a result of the proposed construction activities, the potential for dust and airborne pollutants may increase. The increased particulate matter in the air will only last for the duration of the construction period and will be confined to the general area of the construction project. Dust suppression measures, such as sprinkling, will be required when needed as part of the construction contract. Motorized equipment will have proper working emission control devices to reduce abnormal exhaust pollutants. Therefore, the disturbance to air quality will be negligible, short term in nature and restricted in size.

ix) Socioeconomic Factors

It is estimated that this project could employ as many as fifteen workers for a five month anticipated project duration. This project will depend heavily on the local economy for construction materials, food, fuel, lodging, etc. No other socioeconomic impacts are anticipated. Therefore, there will be no socioeconomic factors that will be adversely impacted by the proposed reclamation activities. If any, there will be short-term, local, minor beneficial impacts.

x) Environmental Justice

Due to the fact that the entire proposed project will be conducted within the road rights-of-way, it is not expected that any minority or low-income populations will incur any adverse human health or environmental effects as a result of this proposed project. Therefore, this resource will not be adversely affected.

b) Cumulative Impacts

Reclamation activities may adversely affect air quality; however these impacts will be local, negligible and short-term in nature. This mine stabilization project is the third in a series in the McElroy Subdivision, and when complete, the Indiana AML program will have stabilized all roads and public utilities in this highly subsidence prone area. This project will protect an even greater number of local residents from the threat of potentially catastrophic subsidence events in this neighborhood. Therefore, it is anticipated that most long-term benefits will be beneficial.

Cumulative impacts are also discussed and evaluated in OSM-EIS-11, Section 4.4 (Analysis of Cumulative Impacts).

## 2) Alternative Two: Do not grant Authorization to Proceed

Under this "no action" alternative, the existing public health and safety conditions would continue and worsen. The Office of Surface Mining Reclamation and Enforcement and the Indiana Abandoned Mine Lands program have addressed multiple emergency projects in this area, and would likely have to address more in the future. It is anticipated that the voids created from the past mining activities will continue to experience subsidence activity and will threaten the integrity of the roads and public utilities, potentially creating severe public health and safety hazards.

## 3) Degrees of Impact

### Intensity

Negligible = at lower levels of detection

Minor = detectable, but slight

Moderate = readily apparent environmental impact

Potential to become major = potentially severe adverse impact

Major = severe adverse impact

### Context - Defined by specific issue and concern

Regional = area that project is a part of

Local = project site

### Duration

Short term = construction period

Long term = after completion of construction

## E. Summary

If Authorization to Proceed is granted, this proposed grouting and stabilization project would enhance public safety by stabilizing the underground mine voids under the residential roads and public utilities in this area. Filling the voids would prevent the collapse of the mine roof and eliminate the likelihood of future surface subsidence and possible damage to these structures. If Authorization to Proceed is not granted, the existing subsidence potential would continue to pose safety hazards to the local population and general public, and future catastrophic subsidence events would be possible.

## F. Consultations

Nick Lorenzo, Project Manager  
Mark Bredehoft, Project Engineer  
Division of Reclamation  
Indiana Department of Natural Resources  
Jasonville, Indiana

## G. References

Jann, Stephen M. Agency Letter, September 26, 2016.  
Pearson, Ron. Division Memorandum, November 2, 2016.  
Wright, Timothy. Department Letter, October 19, 2016.

H. Preparer

Mark Stacy, CEP  
Environmental Specialist  
Division of Reclamation  
Indiana Department of Natural Resources  
Jasonville, Indiana

  
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Signature

  
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Date



## United States Department of the Interior



### OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Alton Field Division  
William L. Beatty Federal Building  
501 Belle Street, Suite 216  
Alton, Illinois 62002

November 10, 2016

Mr. Mark Stacy  
Restoration Program, Division of Reclamation  
Indiana Department of Natural Resources  
14619 W State Road 48  
Jasonville, Indiana 47438-9517

Dear Mr. Stacy:

The Office of Surface Mining Reclamation and Enforcement (OSMRE) completed a review of the November 3, 2016, request for an Authorization to Proceed for the McElroy Subdivision Grouting Part C Site 2148 Abandoned Mine Land Reclamation Project by the Indiana Division of Reclamation (DOR).

OSMRE's evaluation of the Environmental Assessment prepared by the DOR finds that all environmental issues and impacts associated with the project have been adequately discussed. Based on these findings, OSMRE has determined that reclamation of this abandoned mine site would not have significant effects on the quality of the human environment and therefore conclude that no Environmental Impact Statement is necessary. Accordingly, pursuant to Section 4-160-50 D.3 of the Federal Assistance Manual, you are authorized to proceed with this project and expend Federal funds in accordance with AML grant terms and conditions.

OSMRE has confirmed that the required project information has been included in the Abandoned Mine Land Inventory System (e-AMLIS) for Problem Area(s) IN-2148.

Any significant changes to the nature or scope of the project will require reevaluation of the environmental issues and impacts associated with the project. OSMRE's authorization to proceed for the McElroy Subdivision Grouting Part C Site 2148 Abandoned Mine Land Reclamation Project will expire on November 11, 2018. Construction must begin on the project site prior to that date.

If you have any questions, please contact Adam Hardesty at 618-463-6463 ext. 5145, or e-mail at [chardesty@osmre.gov](mailto:chardesty@osmre.gov).

Sincerely,  
  
Len Meier, Chief,  
Alton Field Division

Enclosure - FONSI



# United States Department of the Interior



## OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Alton Field Division  
William L. Beatty Federal Building  
501 Belle Street, Suite 216  
Alton, Illinois 62002

### FINDING OF NO SIGNIFICANT IMPACTS

November 10, 2016

McElroy Subdivision Grouting Part C, Site 2148  
Abandoned Mine Land Reclamation Project  
Project Number: IN-2148, E008-269  
Warrick County, Indiana

OSMRE has thoroughly reviewed the attached environmental assessment, prepared by the Indiana Division of Reclamation. OSMRE has determined that it adequately discusses the environmental issues and impacts of abandoned mine lands reclamation construction activities for authorization purposes.

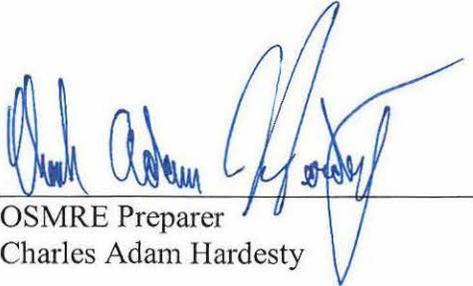
Based on the analysis in this environmental assessment, I find that reclamation of this abandoned mine site would not have significant effects on the quality of the human environment. I therefore conclude that no detailed statement (EIS) is necessary.

My specific reasons are as follows:

1. The following resource values are either not present at the project site, or if present, will not be affected by project activities: cultural or historical resource values; water quality values; wetland values; floodplain values; prime and unique farmland values; recreational values; socioeconomic values; threatened or endangered species and other wildlife values; political factors (land use).
2. The following resource values will be impacted with an explanation of the outcome:
  - a. Air quality values - A short-term, non-permanent increase in air and noise pollution will occur during the estimated five (5) months duration of construction activity and will be minimized through dust suppression measures and confined to the general area.
  - b. Other factors – The proposed project will have short-term, non-permanent effects on the local-residential traffic patterns. All work shall be conducted in a manner that will ensure the least obstruction to public road traffic. There could be temporary road closures or lane blockages that may be mildly inconvenient to the commuters that use these roads for general traffic, but all local residents will always have access to their

properties. The contractor will utilize all necessary traffic control devices and will take all necessary precautions to protect the workers and public during this project.

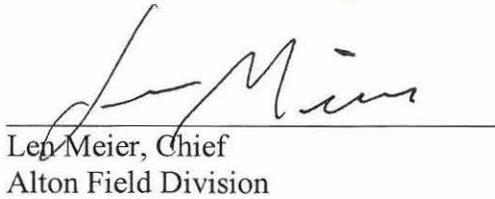
3. Cumulative Impacts. All impacts of the project described above are local, negligible and short-term in nature, and will have no cumulative effect.



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OSMRE Preparer  
Charles Adam Hardesty

Date: 11/10/16



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Len Meier, Chief  
Alton Field Division

Date: 11/10/16