

NPDES Permit No. IL0080064  
Notice No. 6912c

Public Notice Beginning Date: **January 15, 2015**

Public Notice Ending Date: **February 17, 2015**

National Pollutant Discharge Elimination System (NPDES)  
Permit Program

Draft New NPDES Permit to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency  
Bureau of Water, Division of Water Pollution Control  
Permit Section  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276  
217/782-0610

Name and Address of Discharger:

Knight Hawk Coal, LLC  
500 Cutler-Trico Road  
Percy, Illinois 62272

Name and Address of Facility:

Knight Hawk Coal, LLC  
Golden Eagle Mine  
5.8 miles southwest from Pinckneyville, Illinois  
(Perry County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue an NPDES permit to discharge into waters of the state and has prepared a draft permit and associated fact sheet for the above named discharger. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. Comments will be accepted until the Public Notice period ending date indicated above, unless a request for an extension of the original comment period is granted by the Agency. Interested persons are invited to submit written comments on the draft permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. The NPDES permit and notice number(s) must appear on each comment page.

The application, engineer's review notes, Public Notice/Fact Sheet, draft permit, comments received, and other documents are available for inspection and may be copied at the IEPA between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

As provided in Section 309.115(a) of the Act, any person may submit a request for a public hearing and if such written comments or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. The Agency shall issue public notice of such hearing no less than thirty (30) days prior to the date of such hearing in the manner described by Sections 309.109 through 309.112 of the Act for public notice. The Agency's responses to written and/or oral comments will be provided in the Responsiveness Summary provided when the final permit is issued.

The applicant proposes a new surface coal mine (SIC 1221). Mine operations result in the discharge of alkaline mine drainage.

Application is made for one (1) new discharge which is located in Perry County, Illinois. The following information identifies the discharge points, receiving streams and stream classifications:

| <u>Outfall</u> | <u>Receiving Stream</u>                 | <u>Latitude (North)</u> | <u>Longitude (West)</u> |
|----------------|---|-------------------------|-------------------------|
| 001            | Unnamed tributary to Little Galum Creek | 38° 00' 59"             | 89° 26' 55"             |

The stream segment NCDB of Little Galum Creek receiving the flow from the unnamed tributary into which Outfall 001 discharges is on the 2014 303(d) list of impaired waters. The following parameters have been identified as the pollutants causing impairment:

| <u>Outfall</u> | <u>Pollutant</u>   |
|----------------|--|
| 001            | Alteration in stream-side or littoral vegetative covers, Sedimentation/Siltation, Loss of instream Cover |

The alkaline mine discharge from this facility shall be monitored and limited at all times as follows:

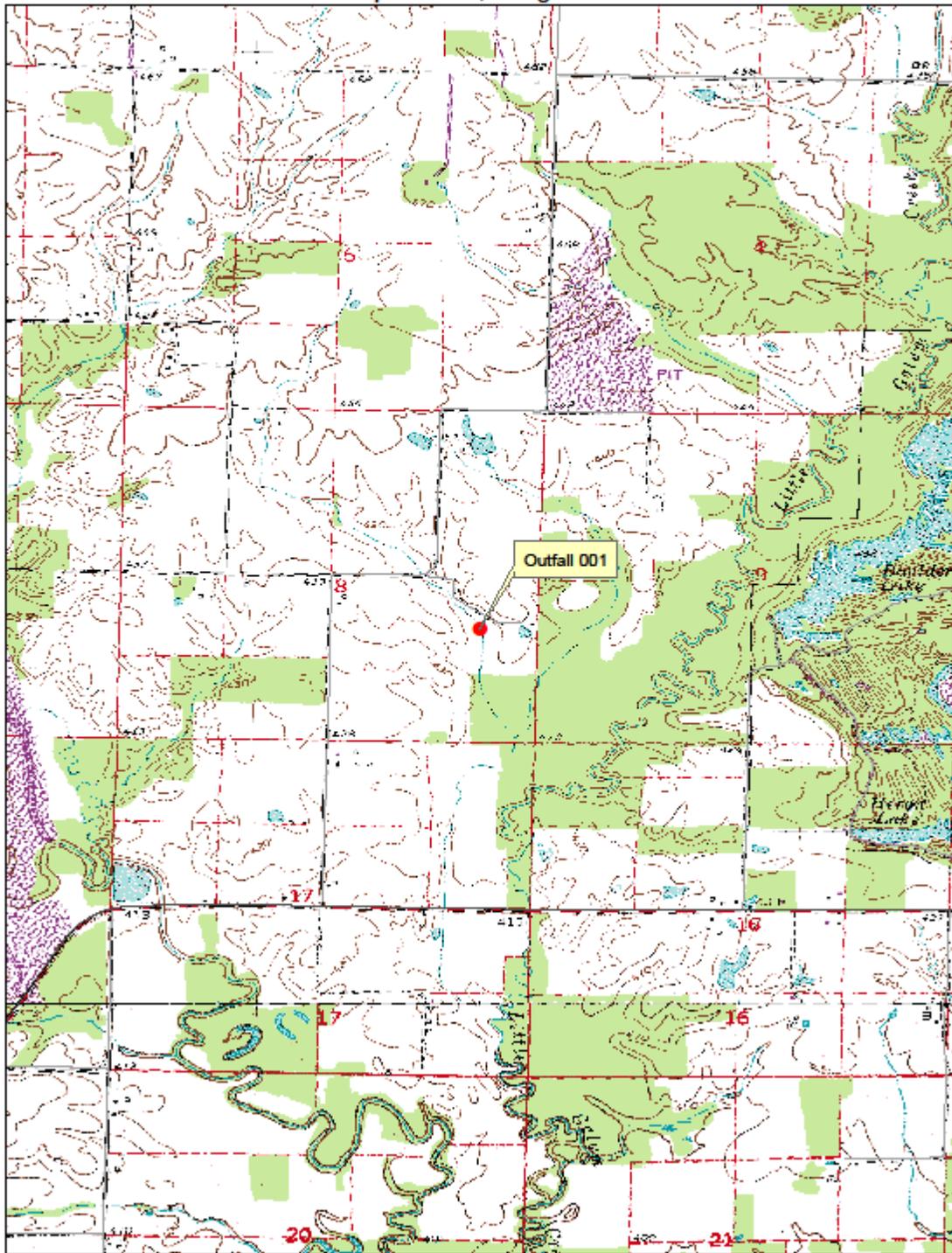
Outfall: 001

| Discharge Condition | Parameters                        |               |                             |               |               |                         |                    |                 |                   |               |              | Flow (MGD)   | Settleable Solids (2) (ml/l) |         |
|---------------------|-----------------------------------|---------------|-----------------------------|---------------|---------------|-------------------------|--------------------|-----------------|-------------------|---------------|--------------|--------------|------------------------------|---------|
|                     | Total Suspended Solids (3) (mg/l) |               | Iron (total) (3) (4) (mg/l) |               | pH (3) (S.U.) | Alkalinity/ Acidity (3) | Sulfate (1) (mg/l) | Chloride (mg/l) | Mn (total) (mg/l) |               | Hardness (5) |              |                              | Mercury |
|                     | 30 day average                    | daily maximum | 30 day average              | daily maximum |               |                         |                    |                 | 30 day average    | daily maximum |              |              |                              |         |
| I                   | 35                                | 70            | 3.0                         | 6.0           | 6.5-9.0       | Alk.>Acid               | 2194               | 500             | 2.0               | 4.0           | Monitor only | Monitor only | Measure When Sampling        | -       |
| II                  | -                                 | -             | -                           | -             | 6.0-9.0       | -                       | 2194               | 500             | -                 | -             | Monitor only | -            | Measure When Sampling        | 0.5     |
| III                 | -                                 | -             | -                           | -             | 6.0-9.0       | -                       | 2194               | 500             | -                 | -             | Monitor only | -            | Measure When Sampling        | -       |
| IV                  | 35                                | 70            | 3.0                         | 6.0           | 6.5-9.0       | Alk.>Acid               | 2194               | 500             | 2.0               | 4.0           | Monitor only | Monitor only | Measure When Sampling        | -       |

- I Dry weather discharge (base flow or mine pumpage) from the outfall.
  - II In accordance with 35 Ill. Adm. Code 406.110(a), any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period less than or equal to the 10-year, 24 hour precipitation event (or snowmelt or equivalent volume) shall comply with the indicated limitations instead of those in 35 Ill. Adm. Code 406.106(b). The 10-year, 24-hour precipitation event for this area is considered to be 4.76 inches.
  - III In accordance with 35 Ill. Adm. Code 406.110(d), any discharge or increase in volume of a discharge caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the indicated limitations instead of those in 35 Ill. Adm. Code 406.106(b).
  - IV Discharges continuing 24 hours after cessation of precipitation event that resulted in discharge. For outfalls which have no allowed mixing, monitoring requirements and permit limitations of Discharge Condition IV are identical to Discharge Condition I to which the outfall discharge has reverted.
- (1) Sulfate water quality standards and effluent limitations determined in accordance with 35 Ill. Adm. Code 302.208(h).
  - (2) Settleable solids are monitored only as a result of a discharge due to precipitation events which exceed a predetermined 24-hour duration or snowmelt total. Settleable solids effluent limitations for alkaline mine discharges are contained in 35 Ill. Adm. Code 406.110.
  - (3) Effluent standards for mine discharges are contained in 35 Ill. Adm. Code 406.106.
  - (4) Discharges from Outfall 001, being approved after July 27, 1987, are subject to a 30-day average effluent limitation for Iron of 3.0 mg/l. Daily maximum effluent concentrations are calculated as twice the 30-day average.
  - (5) Hardness monitoring is required to determine the appropriateness of the sulfate permit limit.

To assist you in identifying the location of the discharges, please refer to the attached map. The permit area for this facility is located in Sections 5 and 8, Township 6 South, Range 3 West, 3rd P.M., Perry County, Illinois.

**Knight Hawk Coal, L.L.C. - Golden Eagle Mine**  
**NPDES No. IL0080064**  
Perry County  
Township 6 South, Range 3 West



**Antidegradation Assessment  
Knight Hawk Coal, LLC – Golden Eagle Mine  
NPDES Permit No. IL0080064  
Perry County**

Knight Hawk Coal, LLC (“Applicant”) is applying for an NPDES permit for discharges associated with a new surface coal mine (OMM Permit No. 414) located 4 miles southwest of Pinckneyville in Perry County, Illinois. A summary of the activities to occur onsite was provided by the Applicant in the document *Assessment of Alternatives for Minimal Environmental Degradation and Economic Benefit Analysis, Golden Eagle Mine, Knight Hawk Coal, LLC, Perry County, Illinois*, dated September 4, 2014. The proposed permitted area covers 297.4 acres of which 283.2 acres are planned for disturbance. The mine will recover the approximately 5.2’ thick Herrin #6 seam which lies 60 to 80’ below the overburden and the approximately 2.7’ thick Springfield #5 seam located approximately 22’ below the Herrin #6 seam. The seams, which will produce approximately 6 million tons of coal, will be extracted utilizing conventional surface mining and underground highwall mining methods.

Stormwater runoff from 283.8 acres of the site will be retained by Sedimentation Pond 001 and discharges from the overflow structure (Outfall 001) will be received by an unnamed tributary of Little Galum Creek. The remaining 13.6 acres of the permit area are not proposed for disturbance and will follow existing flow patterns that lead offsite without passing through Sedimentation Pond 001. Effluent from Outfall 001 will be comprised of pit pumpage and stormwater runoff that may contact coal stockpiles, coal crushing and screening areas, and soil stockpiles. Pit pumpage will primarily consist of stormwater runoff collecting in the pit, but 20,000 GPD of pit pumpage from groundwater infiltration is expected to occur. Sedimentation Pond 001 possesses a treatment volume of 10.5 million gallons, thereby providing adequate retention and dilution for groundwater pumpage that may contain elevated dissolved parameter such as sulfate and chloride. The coal stockpile area, crushing and screening areas, drainage channels, and the sedimentation pond will be lined with a minimum of 2’ of compacted clay liner or an HDPE geomembrane liner to eliminate the potential for ground water contamination. Coal crushing, screening, stockpiling, and loading into hauling units for transport away from the mine site are the only processing activities that will occur onsite. A coal preparation plant is not proposed onsite, as all coal will be hauled directly to the consumer or to Prairie Eagle Mine for processing. Coal combustion waste disposal is not proposed at this mine site. Upon completion of mining, a 12.9 acre lake will be created and the entire site will be deeded to the State of Illinois for inclusion into Pyramid State Park following all regulatory requirements and agreements. Nearly all of Pyramid State Park is located upon land that was previously surface coal mined and reclaimed commensurate with reclamation laws.

**Identification and Characterization of the Affected Water Body.**

The unnamed tributary of Little Galum Creek is a General Use water with zero 7Q10 flow. Given its small size, it has not been assessed under the Agency’s 305(b)/303(d) program. The unnamed tributary has not been given an integrity rating or been listed as biologically significant in the 2008 Illinois Department of Natural Resources publication *Integrating Multiple Taxa in a Biological Stream Rating System*. It is not enhanced in regards to the dissolved oxygen water quality standard.

Given the small size of the receiving water and the lack of information collected by the Agency, the Applicant contracted Midwest Reclamation Resources to further characterize water resources located in the project area. In September and December 2011 and January 2012, site surveys were conducted throughout the permit area. A survey of the unnamed tributary of Little Galum Creek near the proposed Outfall 001 discharge location found that the stream consists of a grassy swale that collects runoff from the adjacent agricultural fields. The stream has a bankfull depth of 2 inches, a bankfull width of 36 inches, and has no measurable sinuosity. The stream has a watershed size of 0.47 square miles at the proposed discharge location, thus categorizing this stream as possessing zero 7Q1.1 flow. In this region of Illinois, 7Q1.1 zero flow streams are streams with a watershed area of 5 square miles or less. These streams will exhibit no flow for at least a continuous seven day period nine out of ten years. Aquatic life communities in these headwater streams are tolerant of the effects of drying. Depending on the rainfall received before biological surveys, either a very limited aquatic life community, or no community at all would be found. Given this flow regime, a biological characterization of the stream was not conducted. A chemical characterization of water quality within the stream, which is comprised primarily of stormwater runoff, near the proposed Outfall 001 discharge location was provided by the Applicant and was comprised of monthly sampling from fall 2009 to summer 2014. The stream was found to be attaining water quality standards for the parameters that are commonly associated with coal mining (e.g., chloride, iron, manganese and sulfate).

At the proposed discharge location, the unnamed tributary flows approximately 0.5 miles before being received by Little Galum Creek (Segment NCDB). Little Galum Creek is a General Use Water with zero 7Q10 flow. It is listed on the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List as being impaired for aquatic life use (causes = alteration in stream-side or littoral vegetative covers (non-pollutant), loss of instream cover (non-pollutant), and sedimentation/siltation). It has not been given an integrity rating or been listed as biologically significant in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*. It is not enhanced in regards to the dissolved oxygen water quality standard.

**Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.**

Effluent discharged from Outfall 001 will contain manganese and suspended solids loadings that are similar to those occurring from the land in its present use (primarily cropland and wildlife areas). No increases of these pollutants are expected. Chloride and sulfate will potentially increase in loading to the receiving streams as a result of the mining activities. At the request of the Agency, the Applicant conducted an in depth review of the potential for groundwater near the coal seam to increase chloride loadings to the receiving stream (*Golden Eagle Mine Anti-Degradation Assessment*, November 3, 2014). Based on information reviewed by the Agency and additional information provided by the Applicant, chloride and sulfate water quality standards are expected to be attained in the discharged effluent. No adverse impact to the receiving stream is anticipated.

**Antidegradation Assessment  
Knight Hawk Coal, LLC – Golden Eagle Mine  
NPDES Permit No. IL0080064  
Perry County**

**Fate and Effect of Parameters Proposed for Increased Loading.**

Sulfate and chloride will remain dissolved in the water and will move through the downstream continuum. Small amounts will be removed by organisms as these substances are necessary for life. No adverse impacts to the unnamed tributary will occur, as all water quality standards are expected to be met in the receiving waters.

**Purpose and Social & Economic Benefits of the Proposed Activity.**

The purpose of the activity is to recover approximately 6 million tons of coal reserves from the permit area. The mine will generate approximately \$240 million in open market revenue, based on current coal prices, and employ approximately 40 direct and contractor employees with annual payroll and benefits package totaling over \$6 million. The opening of the Golden Eagle Mine will bring an influx of revenues to a depressed area of the state where according to the Bureau of Labor Statistics (January 2014), approximately 17.1% of the population in Perry County lives below the poverty level and unemployment is 12.3% compared to the Illinois average of 9.4%. The Applicant plans to spend in excess of \$15 million to develop the site prior to beginning mining operations and approximately the same amount each year during the life of the mine on material, supplies, and services. The mining operation will provide local and state tax revenue as well as provide an affordable and reliable fuel source for the region and surrounding area. Nearly 50% of Illinois' electricity is generated from coal, the production of Illinois coal helps keep the cost of electricity low and provides affordable energy to Illinois' citizens and businesses. Social benefits will also occur following completion of the mining, as the Applicant has made a commitment to the State of Illinois to donate the Golden Eagle Mine property to the state at no charge. The property will be donated for the purpose of incorporating the acreage into Pyramid State Park once mining and reclamation activities are completed.

**Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.**

The use of a sedimentation basin and permitted NPDES outfall for treatment of stormwater runoff and pit pumpage is the most practical method of minimizing pollutant loading from the proposed project. A comprehensive assessment of alternatives and options to minimize the potential increases in pollutant loading from the project was conducted by the Applicant and provided in the document *Assessment of Alternatives for Minimal Environmental Degradation and Economic Benefit Analysis, Golden Eagle Mine, Knight Hawk Coal, LLC, Perry County, Illinois*, dated September 4, 2014. This assessment included consideration of the following alternatives, each of which was considered infeasible or impractical: no mining; alternative sediment pond location, no discharge of flows from the site, underground injection, discharge of water to publicly-owned treatment works; and alternative onsite treatment technologies including reverse osmosis, filtration, bioremediation, coagulation, ion exchange, cost effective sulfate removal, supervac, and manganese treatment. It is impractical to further evaluate these alternatives given that pollutant load increases are expected to be negligible and all water quality standards for parameters associated with this facility are expected to be met in Outfall 001 effluent and within the unnamed tributary of Little Galum Creek. In the unforeseen circumstances where catastrophic drought conditions could lead to elevated concentrations of dissolved solids, the Applicant has stated that effluent would be hauled off-site with tanker trucks for disposal at acceptable locations.

**Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities.**

An EcoCAT endangered species consultation submitted on September 03, 2014 to the Illinois Department of Natural Resources resulted in the identification of two protected resources, American Bittern (*Botaurus lentiginosus*) and Northern Harrier (*Circus cyaneus*) in the vicinity of the project location. IDNR has evaluated the EcoCAT information, concluded that adverse effects are unlikely, and terminated consultation for IDNR Project #1503263 on September 03, 2014.

**Agency Conclusion.**

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time the draft permit was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving stream will be maintained; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will benefit the community at large by providing jobs, an influx of additional revenue through purchases of goods and services, increased tax revenues in an economically depressed area of the state, affordable energy to Illinois's citizens and businesses, and recreational opportunities due to the donation of land to Pyramid State Park. Comments received during the NPDES permit public notice period will be evaluated before a final decision is made by the Agency.

NPDES Permit No. IL0080064

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue, East

P.O. Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

New NPDES Permit

Expiration Date:

Issue Date:  
Effective Date:

Name and Address of Permittee:

Knight Hawk Coal, LLC  
500 Cutler-Trico Road  
Percy, Illinois 62272

Facility Name and Address:

Knight Hawk Coal, LLC  
Golden Eagle Mine  
5.8 miles southwest from Pinckneyville, Illinois  
(Perry County)

Discharge Number and Classification:

001                      Alkaline Mine Drainage

Receiving waters

Unnamed tributary to Little Galum Creek

In compliance with the provisions of the Illinois Environmental Protection Act, Subtitle C and/or Subtitle D Rules and Regulations of the Illinois Pollution Control Board, and the Clean Water Act, the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Joseph D. Stitely, P.E., Acting Permit Manager  
Mine Pollution Control Program  
Bureau of Water

JDS:IW:cs/6912c/12-4-14

NPDES Coal Mine Permit  
 NPDES Permit No. IL0080064  
 Effluent Limitations and Monitoring

From the effective date of this Permit until the expiration date, the effluent of the following discharge shall be monitored and limited at all times as follows:

Outfall\*: 001 (Alkaline Mine Drainage)

| Discharge Condition | Parameters                        |               |                         |               |                 |                         |                    |                     |                       |               |              |                                      |                       |                          |
|---------------------|-----------------------------------|---------------|-------------------------|---------------|-----------------|-------------------------|--------------------|---------------------|-----------------------|---------------|--------------|--------------------------------------|-----------------------|--------------------------|
|                     | Total Suspended Solids (mg/l) *** |               | Iron (total) (mg/l) *** |               | pH** (S.U.) *** | Alkalinity/ Acidity *** | Sulfate (mg/l) *** | Chloride (mg/l) *** | Mn (total) (mg/l) *** |               | Hardness *** | Mercury see Special condition No. 17 | Flow (MGD)            | Settleable Solids (ml/l) |
|                     | 30 day average                    | daily maximum | 30 day average          | daily maximum |                 |                         |                    |                     | 30 day average        | daily maximum |              |                                      |                       |                          |
| I                   | 35                                | 70            | 3.0                     | 6.0           | 6.5-9.0         | Alk.>Acid               | 2194               | 500                 | 2.0                   | 4.0           | Monitor only | Monitor only                         | Measure When Sampling | -                        |
| II                  | -                                 | -             | -                       | -             | 6.0-9.0         | -                       | 2194               | 500                 | -                     | -             | Monitor only | -                                    | Measure When Sampling | 0.5                      |
| III                 | -                                 | -             | -                       | -             | 6.0-9.0         | -                       | 2194               | 500                 | -                     | -             | Monitor only | -                                    | Measure When Sampling | -                        |
| IV                  | 35                                | 70            | 3.0                     | 6.0           | 6.5-9.0         | Alk.>Acid               | 2194               | 500                 | 2.0                   | 4.0           | Monitor only | Monitor only                         | Measure When Sampling | -                        |

- I Dry weather discharge (base flow or mine pumpage) from the outfall.
- II In accordance with 35 Ill. Adm. Code 406.110(a), any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period less than or equal to the 10-year, 24-hour precipitation event (or snowmelt or equivalent volume) shall comply with the indicated limitations instead of those in 35 Ill. Adm. Code 406.106(b). The 10-year, 24-hour precipitation event for this area is considered to be 4.76 inches.
- III In accordance with 35 Ill. Adm. Code 406.110(d), any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the indicated limitations instead of those in 35 Ill. Adm. Code 406.106(b).
- IV Discharges continuing 24 hours after cessation of precipitation event that resulted in discharge. For outfalls which have no allowed mixing, monitoring requirements and permit limitations of Discharge Condition IV are identical to Discharge Condition I to which the outfall discharge has reverted.

Sampling during all Discharge Conditions shall be performed utilizing the grab sampling method.

\*\*\* There shall be a minimum of nine (9) samples collected during the quarter when the pond is discharging. Of these 9 samples, a minimum of one sample each month shall be taken during either Discharge Condition I or IV should such discharge condition occur. A "no flow" situation is not considered to be a sample of the discharge. In the event that Discharge Conditions II and/or III occur, grab sample of each discharge caused by the above precipitation events (Discharge Conditions II and/or III) shall be taken and analyzed for the parameters identified in the table above during at least 3 separate events each quarter. For quarters in which there are less than 3 such precipitation events resulting in discharges, a grab sample of the discharge shall be required whenever such precipitation event(s) occur(s). Should a sufficient number of discharge events occur during the quarter, the remaining three (3) quarterly samples may be taken during any of the Discharge Conditions described above.

The water quality standards for sulfate and chloride must be met in discharges from the above referenced outfall as well as in the receiving stream.

\* The Permittee is subject to the limitations, and monitoring and reporting requirements of Special Condition No. 13 for the discharges from Outfall 001 and unnamed tributary to Little Galum Creek receiving such discharges. Also, discharges from Outfall 001 shall be subject to the limitations, and monitoring and reporting requirements of Special Condition No. 16.

\*\* No discharge is allowed from any above referenced permitted outfall during "low flow" or "no flow" conditions in the receiving stream unless such discharge meets the water quality standards of 35 Ill. Adm. Code 302.204 for pH.

NPDES Coal Mine Permit  
NPDES Permit No. IL0080064  
Effluent Limitations and Monitoring

Upon completion of Special Condition 10 and approval from the Agency, the effluent of the following discharge shall be monitored and limited at all times as follows:

Outfall\*: 001 (Reclamation Area Drainage)

| Discharge Condition | Parameters            |                          |                           |                 |                             |                                       |
|---------------------|-----------------------|--------------------------|---------------------------|-----------------|-----------------------------|---------------------------------------|
|                     | pH**<br>(S.U.)<br>*** | Sulfate<br>(mg/l)<br>*** | Chloride<br>(mg/l)<br>*** | Hardness<br>*** | Flow<br>(MGD)               | Settleable<br>Solids<br>(ml/l)<br>*** |
| I                   | 6.5-9.0               | 2194                     | 500                       | Monitor<br>only | Measure<br>When<br>Sampling | 0.5                                   |
| II                  | 6.0-9.0               | 2194                     | 500                       | Monitor<br>only | Measure<br>When<br>Sampling | 0.5                                   |
| III                 | 6.0-9.0               | 2194                     | 500                       | Monitor<br>only | Measure<br>When<br>Sampling | -                                     |
| IV                  | 6.5-9.0               | 2194                     | 500                       | Monitor<br>only | Measure<br>When<br>Sampling | 0.5                                   |

- I Dry weather discharge (base flow, if present) from the outfall.
- II In accordance with 35 Ill. Adm. Code 406.109(b), any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period less than or equal to the 10-year, 24-hour precipitation event (or snowmelt or equivalent volume) shall comply with the indicated limitations. The 10-year, 24-hour precipitation event for this area is considered to be 4.76 inches.
- III In accordance with 35 Ill. Adm. Code 406.109(c), any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt or equivalent volume) shall comply with the indicated limitations instead of those in 35 Ill. Adm. Code 406.109(b).
- IV Discharges continuing 24 hours after cessation of precipitation event that resulted in discharge. For reclamation area discharges, monitoring requirements and permit limitations of Discharge Condition IV are identical to Discharge Condition I to which the outfall discharge has reverted.

Sampling during all Discharge Conditions shall be performed utilizing the grab sampling method. A "no flow" situation is not considered to be a sample of the discharge.

\*\*\* One sample per month (1/month) shall be collected if and/or when a discharge occurs under either Discharge Condition I, II or IV and analyzed for the parameters identified in the table above. In addition, at least three (3) grab samples shall be taken each quarter from separate precipitation events under Discharge Condition III and analyzed for parameters indicated in the above table. For quarters in which there are less than 3 such precipitation events, a grab sample of the discharge shall be required whenever such precipitation event(s) occur(s).

The water quality standards for sulfate and chloride must be met in discharges from the above referenced outfall as well as in the receiving stream.

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\* The Permittee is subject to the limitations, and monitoring and reporting requirements of Special Condition No. 13 for the discharges from Outfall 001 and unnamed tributary to Little Galum Creek receiving such discharges.

\*\* No discharge is allowed from any above referenced permitted outfall during "low flow" or "no flow" conditions in the receiving stream unless such discharge meets the water quality standards of 35 Ill. Adm. Code 302.204 for pH.

NPDES Coal Mine Permit  
NPDES Permit No. IL0080064  
Effluent Limitations and Monitoring

Upon completion of Special Condition No. 11 and approval from the Agency, the effluent of the following discharge shall be monitored and limited at all times as follows:

Outfall: 001 (Stormwater Discharge)

| Parameters          |                                   |
|---------------------|-----------------------------------|
| pH*<br>(S.U.)<br>** | Settleable Solids<br>(ml/l)<br>** |
| 6.0-9.0             | 0.5                               |

Stormwater discharge monitoring is subject to the following reporting requirements:

Analysis of samples must be submitted with second quarter Discharge Monitoring Reports.

Annual stormwater monitoring is required for all discharges until Final SMCRA Bond is released and approval to cease such monitoring is obtained from the Agency.

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\* No discharge is allowed from any above referenced permitted outfalls during "low flow" or "no flow" conditions in the receiving stream unless such discharge meets the water quality standards of 35 Ill. Adm. Code 302.204 for pH.

\*\* One (1) sample per year shall be collected and analyzed for the indicated parameter; however, such sampling and analysis is required only if and/or when a discharge occurs from the individual Outfall(s) identified above.

NPDES Permit No. IL0080064

Construction Authorization No. 5507-13

C.A. Date: December 1, 2014

Authorization is hereby granted to the above designee to construct and operate the mine facilities described as follows:

A new surface mine containing a total of 297.4 acres, identified as OMM Permit 414, as described and depicted in IEPA Log Nos. 5507-13 and located in Sections 5 and 8, Township 6 South, Range 3 West, 3<sup>rd</sup> P.M., Perry County, Illinois.

The surface facilities at this mine contain topsoil and subsoil stockpiles, coal storage areas, sediment control structure, drainage control structure, mobile office and bathhouse, haulage/access roads, parking lots, coal crushing and screening area, surface mining pit and highwall mining activities.

Surface drainage control is provided by one (1) sedimentation pond with discharge designated as Outfalls 001, classified as alkaline mine drainage.

Location and receiving stream of the Outfalls at this facility is as follows:

| Outfall Number | Latitude        |     |     | Longitude       |     |     | Receiving Water                     |
|----------------|-----------------|-----|-----|-----------------|-----|-----|-------------------------------------|
|                | DEG             | MIN | SEC | DEG             | MIN | SEC |                                     |
| 001            | 38 <sup>o</sup> | 00' | 59" | 89 <sup>o</sup> | 26' | 55" | Unnamed trib. to Little Galum Creek |

Sedimentation Pond 001 will collect stormwater runoff from disturbed areas, soil stockpiles, coal storage areas, coal crushing and screening areas. Pit pumpage from the surface and highwall mining operation may be directed to Basin 001. It is noted that highwall mining shall not be performed beneath Sedimentation Basin 001

Sanitary wastewater will be treated by an on-site sand filter, septic tank, seepage field, etc., permitted by the local County Health Department.

Coal waste materials from the coal crushing and screening area will be disposed in the active mining pit.

Compacted clay liners will be constructed for the coal crushing, screening and stockpile areas, and for Sedimentation Pond No. 001 which will receive pit pumpage, runoff from the coal storage areas as well as runoff from miscellaneous disturbed areas. In addition, compacted clay liners will also be constructed beneath the raw and clean coal storage areas and within Collector Ditch "A" (Sta. 39+00 to Sta. 65+12) carrying runoff from coal storage areas. Compacted clay liners constructed for these areas are subject to the specifications and testing requirements of Condition No. 12. It is noted that in the event that a synthetic liner is proposed to be installed rather than the two (2) foot compacted clay, supplemental approval from the Agency will be required.

Groundwater monitoring for this facility will consist of Monitoring Well Nos. GEMW-1, GEMW-2, GEMW-3 and GEMW-4. Groundwater monitoring requirements are outlined in Condition No. 13.

The abandonment plan shall be executed and completed in accordance with 35 Ill. Adm. Code 405.109.

All water remaining upon abandonment must meet the requirements of 35 Ill. Adm. Code 406.202. For the constituents not covered by Parts 302 or 303, all water remaining upon abandonment must meet the requirements of 35 Ill. Adm. Code 406.106.

This Authorization is issued subject to the following Conditions. If such Conditions require additional or revised facilities, satisfactory engineering plan documents must be submitted to this Agency for review and approval to secure issuance of a Supplemental Authorization to Construct.

1. If any statement or representation is found to be incorrect, this permit may be revoked and the permittee thereupon waives all rights thereunder.
2. The issuance of this permit (a) shall not be considered as in any manner affecting the title of the premises upon which the mine or mine refuse area is to be located; (b) does not release the permittee from any liability for damage to person or property caused by or resulting from the installation, maintenance or operation of the proposed facilities; (c) does not take into consideration the structural stability of any units or parts of the project; and (d) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or with applicable local laws, regulations or ordinances.
3. Final plans, specifications, application and supporting documents as submitted by the person indicated on Page 1 as approved shall constitute part of this permit in the records of the Illinois Environmental Protection Agency.
4. There shall be no deviations from the approved plans and specifications unless revised plans, specifications and application shall first have been submitted to the Illinois Environmental Protection Agency and a supplemental permit issued.

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5. The permit holder shall notify the Environmental Protection Agency (217/782-3637) immediately of an emergency at the mine or mine refuse area which causes or threatens to cause a sudden discharge of contaminants into the waters of Illinois and shall immediately undertake necessary corrective measures as required by 35 Ill. Adm. Code 405.111. (217/782-3637 for calls between the hours of 5:00 p.m. to 8:30 a.m. and on weekends.)
6. The termination of an NPDES discharge monitoring point or cessation of monitoring of an NPDES discharge is not authorized by this Agency until the permittee submits adequate justification to show what alternate treatment is provided or that untreated drainage will meet applicable effluent and water quality standards.
7. Initial construction activities in areas to be disturbed shall be for collection and treatment facilities only. Prior to the start of other activities, surface drainage controls shall be constructed and operated to avoid violations of the Act or Subtitle D. At such time as runoff water is collected in the sedimentation pond, a sample shall be collected and analyzed, for the parameters designated as 1M through 15M under Part 5-C of Form 2C and the effluent parameters designated herein with the results sent to this Agency. Should additional treatment be necessary to meet the standards of 35 Ill. Adm. Code 406.106, a Supplemental Permit must be obtained. Discharge from ponds is not allowed unless applicable effluent and water quality standards are met in the basin discharge(s).
8. This Agency must be informed in writing and an application submitted if drainage, which was previously classified as alkaline (pH greater than 6.0), becomes acid (pH less than 6.0) or ferruginous (base flow with an iron concentration greater than 10 mg/l). The type of drainage reporting to the basin should be reclassified in a manner consistent with the applicable rule of 35 Ill. Adm. Code 406 as amended in R84-29 at 11 Ill. Reg. 12899. The application should discuss the treatment method and demonstrate how the discharge will meet the applicable standards.
9. A permittee has the obligation to add a settling aid if necessary to meet the suspended solids or settleable solids effluent standards. The selection of a settling aid and the application practice shall be in accordance with a. or b. below
  - a. Alum ( $Al_2(SO_4)_3$ ), hydrated lime ( $Ca(OH)_2$ ), soda ash ( $Na_2CO_3$ ), alkaline pit pumpage, acetylene production by-product (tested for impurities), and ground limestone are acceptable settling aids and are hereby permitted for alkaline mine drainage sedimentation ponds.
  - b. Any other settling aids such as commercial flocculents and coagulants are permitted only on prior approval from the Agency. To obtain approval a permittee must demonstrate in writing to the Agency that such use will not cause a violation of the toxic substances standard of 35 Ill. Adm. Code 302.210 or of the appropriate effluent and water quality standards of 35 Ill. Adm. Code parts 302, 304, and 406.
10. A general plan for the nature and disposition of all liquids used to drill boreholes shall be filed with this Agency prior to any such operation. This plan should be filed at such time that the operator becomes aware of the need to drill unless the plan of operation was contained in a previously approved application.
11. Any of the following shall be a violation of the provisions required under 35 Ill. Adm. Code 406.202:
  - a. It is demonstrated that an adverse effect on the environment in and around the receiving stream has occurred or is likely to occur.
  - b. It is demonstrated that the discharge has adversely affected or is likely to adversely affect any public water supply.
  - c. The Agency determines that the permittee is not utilizing Good Mining Practices in accordance with 35 Ill. Adm. Code 406.204 which are fully described in detail in Sections 406.205, 406.206, 406.207 and 406.208 in order to minimize the discharge of total dissolved solids, chloride, sulfate, iron and manganese. To the extent practical, such Good Mining Practices shall be implemented to:
    - i. Stop or minimize water from coming into contact with disturbed areas through the use of diversions and/or runoff controls (Section 406.205).
    - ii. Retention and control within the site of waters exposed to disturbed materials utilizing erosion controls, sedimentation controls, water reuse or recirculation, minimization of exposure to disturbed materials, etc. (Section 406.206).
    - iii. Control and treatment of waters discharged from the site by regulation of flow of discharges and/or routing of discharges to more suitable discharge locations (Section 406.207).

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- iv. Utilized unconventional practices to prevent the production or discharge of waters containing elevated contaminant concentrations such as diversion of groundwater prior to entry into a surface or underground mine, dewatering practices to remove clean water prior to contacting disturbed materials and/or any additional practices demonstrated to be effective in reducing contaminant levels in discharges (Section 406.208).
12. The two foot compacted clay liner to be constructed beneath the Coal Yard (coal crushing, screening and stockpile area), Sedimentation Pond No. 001 and Collector Ditch "A" shall be subject to the following specifications and the procedures as detailed in IEPA Log No. 5507-13-A, Attachment IV-8D.
- a. All sites of proposed liner installation will have topsoil excavated to a depth of 10-12 inches and stockpiled for future use. Any soft, sandy, or otherwise unsuitable material will be excavated and replaced with adequate clay soils.
  - b. Each clay soil lift shall be placed to a six to eight inch loose thickness prior to compaction.
  - c. Each clay soil lift shall be compacted to a minimum standard proctor (ASTM D698) density of 95% at moisture contained from 2% below to 3% above optimum moisture content.
  - d. Inter-lift surfaces shall be adequately scarified to ensure inter-lift bonding.
  - e. This process shall be repeated and continued until a compacted clay liner with a minimum thickness of two (2) feet has been constructed.
  - f. The compacted clay liner shall be constructed in a manner to achieve a uniform barrier with a hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec.
  - g. Compaction and permeability testing shall be performed at a minimum frequency of one test per every 7500 cubic yards of material placed. Testing locations shall be on a random grid pattern and shall not be disclosed to the earth work contractor prior to lift placement.
  - h. In the event of a failing compaction and/or conductivity test, the soil may be reprocessed, re-compacted or removed or replaced and retested until an acceptable test result is obtained.
13. Groundwater monitoring requirements for Well Nos. GEMW-1, GEMW-2, GEMW-3 and GEMW-4 are as follows:
- a. Ambient background monitoring shall be performed for all referenced wells. Such ambient monitoring shall consist of six (6) samples collected during the first year (approximately bi-monthly) following well installation but no later than during the first year of operation or disturbance to determine ambient background concentrations. Background monitoring shall include the following list of constituents:
 

|           |                       |                        |
|-----------|-----------------------|------------------------|
| Aluminum  | Fluoride              | Sulfate                |
| Antimony  | Iron (dissolved)      | Thallium               |
| Arsenic   | Iron (total)          | Total Dissolved Solids |
| Barium    | Lead                  | Vanadium               |
| Beryllium | Manganese (dissolved) | Zinc                   |
| Boron     | Manganese (total)     | pH                     |
| Cadmium   | Mercury               | Acidity                |
| Chloride  | Molybdenum            | Alkalinity             |
| Chromium  | Nickel                | Hardness               |
| Cobalt    | Phenols               | Static Water Elevation |
| Copper    | Selenium              |                        |
| Cyanide   | Silver                |                        |
  - b. Following the ambient monitoring as required under Condition No. 13 above, routine monitoring shall continue on a quarterly basis as follows:
    - i. Monitoring Well Nos. GEMW-3 and GEMW-4 shall continue to be monitored quarterly for the contaminants identified in Condition No. 13a above.

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- ii. Monitoring Well Nos. GEMW-1 and GEMW-2 shall be monitored quarterly as required by IDNR/OMM for the following list of constituents:

|                       |                        |
|-----------------------|------------------------|
| Chloride              | Total Dissolved Solids |
| Iron (dissolved)      | Hardness               |
| Iron (total)          | Acidity                |
| Manganese (dissolved) | Alkalinity             |
| Manganese (total)     | pH                     |
| Sulfate               | Static Water Elevation |

- c. Following completion of active mining and reclamation, post-mining monitoring of the above referenced wells shall consist of six (6) samples collected during a 12-month period (approximately bi-monthly) to determine post-mining concentrations. Post-mining monitoring shall include the list of constituents identified in Condition No. 13a above.
- d. Groundwater monitoring reports shall be submitted to the Agency in accordance with Special Condition Nos. 3 and 5 of this NPDES permit.
- e. A statistically valid representation of background and/or post mining water quality required under Condition No. **(NUMBER)** above shall be submitted utilizing the following method. This method shall be used to determine the upper 95 percent confidence limit for each parameter listed above.

Should the Permittee determine that an alternate statistical method would be more appropriate based on the data being evaluated, the Permittee may request utilization of such alternate methodology. Upon approval from the Agency, the alternate methodology may be utilized to determine a statistically valid representation of background and/or post mining water quality.

This method should be used to predict the confidence limit when single groundwater samples are taken from each monitoring (test) well.

- i. Determine the arithmetic mean ( $\bar{X}_b$ ) of each indicator parameter for the sampling period. If more than one well is used, an equal number of samples must be taken from each well.

$$\bar{X}_b = \frac{X_1 + X_2 + \dots + X_n}{n}$$

Where:

$\bar{X}_b$  = Average value for a given chemical parameter

$X_n$  = Values for each sample

n = the number of samples taken

- ii. Calculate the background and/or post mining variance ( $S_b^2$ ) and standard deviation ( $S_b$ ) for each parameter using the values ( $X_n$ ) from each sample of the well(s) as follows:

$$S_b^2 = \frac{(X_1 - \bar{X}_b)^2 + (X_2 - \bar{X}_b)^2 + \dots + (X_n - \bar{X}_b)^2}{n - 1}$$

$$S_b = \sqrt{S_b^2}$$

- iii. Calculate the upper confidence limit using the following formula:

$$CL = \bar{X}_b \pm t \sqrt{1 + 1/n} (S_b)$$

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Where:

CL = upper confidence limit prediction  
 (upper and lower limits should be calculated for pH)  
 t = one-tailed t value at the required significance  
 level and at n-1 degrees of freedom from Table 1  
 (a two-tailed t value should be used for pH)

- iv. If the values of any routine parameter for any monitoring well exceed the upper confidence limit for that parameter, the permittee shall conclude that a statistically significant change has occurred at that well.
- v. When some of the background and/or post mining values are less than the Method Detection Limit (MDL), a value of one-half (1/2) the MDL shall be substituted for each value that is reported as less than the MDL. All other computations shall be calculated as given above.

If all the background and/or post mining values are less than the MDL for a given parameter, the Practical Quantitation Limit (PQL), as given in 35 Ill. Adm. Code Part 724 Appendix I shall be used to evaluate data from monitoring wells. If the analytical results from any monitoring well exceed two (2) times the PQL for any single parameter, or if they exceed the PQLs for two or more parameters, the permittee shall conclude that a statistically significant change has occurred.

Table 1  
Standard t-Tables Level of Significance

| Degrees of freedom | t-values<br>(one-tail) |       | t-values<br>(two-tail)* |       |
|--------------------|------------------------|-------|-------------------------|-------|
|                    | 99%                    | 95%   | 99%                     | 95%   |
| 4                  | 3.747                  | 2.132 | 4.604                   | 2.776 |
| 5                  | 3.365                  | 2.015 | 4.032                   | 2.571 |
| 6                  | 3.143                  | 1.943 | 3.707                   | 2.447 |
| 7                  | 2.998                  | 1.895 | 3.499                   | 2.365 |
| 8                  | 2.896                  | 1.860 | 3.355                   | 2.306 |
| 9                  | 2.821                  | 1.833 | 3.250                   | 2.262 |
| 10                 | 2.764                  | 1.812 | 3.169                   | 2.228 |
| 11                 | 2.718                  | 1.796 | 3.106                   | 2.201 |
| 12                 | 2.681                  | 1.782 | 3.055                   | 2.179 |
| 13                 | 2.650                  | 1.771 | 3.012                   | 2.160 |
| 14                 | 2.624                  | 1.761 | 2.977                   | 2.145 |
| 15                 | 2.602                  | 1.753 | 2.947                   | 2.131 |
| 16                 | 2.583                  | 1.746 | 2.921                   | 2.120 |
| 17                 | 2.567                  | 1.740 | 2.898                   | 2.110 |
| 18                 | 2.552                  | 1.734 | 2.878                   | 2.101 |
| 19                 | 2.539                  | 1.729 | 2.861                   | 2.093 |
| 20                 | 2.528                  | 1.725 | 2.845                   | 2.086 |
| 21                 | 2.518                  | 1.721 | 2.831                   | 2.080 |
| 22                 | 2.508                  | 1.717 | 2.819                   | 2.074 |
| 23                 | 2.500                  | 1.714 | 2.807                   | 2.069 |
| 24                 | 2.492                  | 1.711 | 2.797                   | 2.064 |
| 25                 | 2.485                  | 1.708 | 2.787                   | 2.060 |
| 30                 | 2.457                  | 1.697 | 2.750                   | 2.042 |
| 40                 | 2.423                  | 1.684 | 2.704                   | 2.021 |

Adopted from Table III of "Statistical Tables for Biological Agricultural and Medical Research" (1947, R.A. Fisher and F. Yates).

\* For pH only when required.

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Special Conditions

**Special Condition No. 1:** No effluent from any mine related facility area under this permit shall, alone or in combination with other sources, cause a violation of any applicable water quality standard as set out in the Illinois Pollution Control Board Rules and Regulations, Subtitle C: Water Pollution.

**Special Condition No. 2:** Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

**Special Condition No. 3:** All periodic monitoring and reporting forms, including Discharge Monitoring Report (DMR) forms, shall be submitted to the Agency according to the schedule outlined in Special Condition No. 4 or 5 below with one (1) copy forwarded to each of the following addresses:

Illinois Environmental Protection Agency  
 Division of Water Pollution Control  
 1021 North Grand Ave., East  
 P.O. Box 19276  
 Springfield, IL 62794-9276

Illinois Environmental Protection Agency  
 Mine Pollution Control Program  
 2309 West Main Street, Suite 116  
 Marion, Illinois 62959

Attn: Compliance Assurance Section

The Permittee may choose to submit electronic DMRs (NetDMR) instead of submitting paper DMRs. Information, including registration information for the NetDMR program can be obtained on the IEPA website, <http://www.epa.state.il.us/water/net-dmr/index.html>.

Should electronic filing (NetDMR) be elected for DMR monitoring and reporting requirements, a written notification shall be submitted to the Mine Pollution Control Program at the Marion, Illinois address indicated above that such electronic monitoring has been elected providing an indication of the date and/or quarter in which this electronic filing will be initiated.

**Special Condition No. 4:** Completed Discharge Monitoring Report (DMR) forms as well as upstream and downstream monitoring results, shall be retained by the Permittee for a period of three (3) months and shall be mailed and received by the IEPA at the addresses indicated in Special Condition No. 3 above in accordance with the following schedule, unless otherwise specified by the permitting authority.

| Period                      | Received by IEPA |
|-----------------------------|------------------|
| January, February, March    | April 15         |
| April, May, June            | July 15          |
| July, August, September     | October 15       |
| October, November, December | January 15       |

The Permittee shall record discharge monitoring results on Discharge Monitoring Report (DMR) forms using one such form for each Outfall and Discharge Condition each month. In the event that an Outfall does not discharge during a monthly reporting period or under a given Discharge Condition, the DMR form shall be submitted with "No Discharge" indicated.

In the event that electronic filing is being utilized, any and all monitoring results, other than NPDES outfall discharge results reported through NetDMR, shall be submitted to the Agency at the addresses indicated in Special Condition No. 3 above.

**Special Condition No. 5:** Completed periodic monitoring and reporting not required under Special Condition No. 4 above; such as, groundwater monitoring, coal combustion waste analyses, water treatment plant lime sludge analyses, etc., shall be retained by the Permittee for a period of three (3) months and shall be mailed and received by the IEPA at the addresses indicated in Special Condition No. 3 above in accordance with the following schedule, unless otherwise specified by the permitting authority.

| Period                      | Received by IEPA |
|-----------------------------|------------------|
| January, February, March    | May 1            |
| April, May, June            | August 1         |
| July, August, September     | November 1       |
| October, November, December | February 1       |

**Special Condition No. 6:** The Agency may revise or modify the permit consistent with applicable laws, regulations or judicial orders.

**Special Condition No. 7:** If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

Special Conditions

**Special Condition No. 8:** The permittee shall notify the Agency in writing by certified mail within thirty days of abandonment, cessation, or suspension of active mining for thirty days or more unless caused by a labor dispute. During cessation or suspension of active mining, whether caused by a labor dispute or not, the permittee shall provide whatever interim impoundment, drainage diversion, and wastewater treatment is necessary to avoid violations of the Act or Subtitle D.

**Special Condition No. 9:** Plans must be submitted to and approved by this Agency prior to construction of a sedimentation pond. At such time as runoff water is collected in the sedimentation pond, a sample shall be collected and analyzed for the parameters designated as 1M-15M under Part 5-C of Form 2C and the effluent parameters designated herein with the results sent to this Agency. Should additional treatment be necessary to meet these standards, a Supplemental Permit must also be obtained. Discharge from a pond is not allowed unless applicable effluent and water quality standards are met.

**Special Condition No. 10:** The special reclamation area effluent standards of 35 Ill. Adm. Code 406.109 apply only on approval from the Agency. To obtain approval, a request form and supporting documentation shall be submitted to request the discharge be classified as a reclamation area discharge. The Agency will notify the permittee upon approval of the change.

**Special Condition No. 11:** The special stormwater effluent standards apply only on approval from the Agency. To obtain approval, a request with supporting documentation shall be submitted to request the discharge to be classified as a stormwater discharge. The documentation supporting the request shall include analysis results indicating the discharge will consistently comply with reclamation area discharge effluent standards. The Agency will notify the permittee upon approval of the change.

**Special Condition No. 12:** Annual stormwater monitoring is required for all discharges not reporting to a sediment basin until Final SMCRA Bond is released and approval to cease such monitoring is obtained from the Agency.

- A. Each discharge must be monitored for pH and settleable solids annually.
- B. Analysis of samples must be submitted with second quarter Discharge Monitoring Reports. A map with discharge locations must be included in this submittal.
- C. If discharges can be shown to be similar, a plan may be submitted by November 1 of each year preceding sampling to propose grouping of similar discharges and/or update previously submitted groupings. If updating of a previously submitted plan is not necessary, a written notification to the Agency indicating such is required. Upon approval from the Agency, one representative sample for each group may be submitted.

**Special Condition No. 13:** Sediment Pond Operation and Maintenance (Outfall 001):

- a. For discharges resulting from precipitation events, in addition to the alternate effluent (Discharge Condition Nos. II and III) monitoring requirements, as indicated on the applicable effluent pages of this Permit, discharges from Outfall 001 shall be monitored and reported for Discharge Rate, Sulfate, Chloride and Hardness.
- b. The following sampling and monitoring requirements are applicable to flow in the unnamed tributary to Little Galum Creek which receive discharges from Outfall 001.
  - i. All sampling and monitoring required under 13(b)(ii) and (iii) below shall be performed during a discharge and monitoring event from the associated outfall.
  - ii. Unnamed tributary to Little Galum Creek shall be monitored and reported quarterly for Discharge Rate, Chloride, Sulfate and Hardness downstream of the associated outfall. This downstream monitoring shall be performed a sufficient distance downstream of the associated outfall to ensure that complete mixing has occurred. At such time that sufficient information has been collected regarding receiving stream flow characteristics and in-stream contaminant concentrations the permittee may request a re-evaluation of the monitoring frequency required herein for possible reduction or elimination. For the purpose of re-evaluating the downstream monitoring frequency of the receiving stream, "sufficient information" is defined as a minimum of ten (10) quarterly sampling events.

In the event that downstream monitoring of the receiving waters is eliminated during the term of this permit based on an evaluation of the quarterly data, a minimum of three (3) additional samples analyzed for the parameters identified above must be submitted with the permit renewal application a minimum of 180 days prior to expiration of this permit.

- iii. Unnamed tributary to Little Galum Creek shall be monitored and reported annually for Discharge Rate, Chloride, Sulfate and Hardness upstream of the associated outfall.

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**Special Condition No. 14:** Data collected in accordance with Special Condition No. (SCNO) above will be utilized to evaluate the appropriateness of the effluent limits established in this Permit. Should the Agency's evaluation of this data indicate revised effluent limits are warranted; this permit may be reopened and modified to incorporate more appropriate effluent limitations. This data will also be used for determination of effluent limitations at the time of permit renewal.

**Special Condition No. 15:** Mercury shall be monitored quarterly until a minimum of ten (10) samples have been collected. This Mercury monitoring is required only under Discharge Condition Nos. I and/or IV and only during quarters in which there are discharges from the outfall which occur under Discharge Condition Nos. I and/or IV. Samples shall be collected and tested in accordance with USEPA 1631E using the option at Section 11.1.1.2 requiring the heating of samples at 50°C for 6 hours in a BrCl solution in closed vessels. This test method has a Method Detection Limit (MDL) of 0.5 ng/l (nanograms/liter). The results of such testing must be reported in "ng/l" (nanograms/liter) and submitted with the quarterly Discharge Monitoring Reports (DMRs). The Permittee may submit a written request to the Agency to discontinue quarterly Mercury monitoring if the sampling results show no reasonable potential to exceed the Mercury water quality standard.

**Special Condition No. 16:** Discharges from Outfall No. 001 shall be monitored twice annually with such monitoring spaced at approximately 6-month intervals during the entire 5-year term of this NPDES Permit. Sampling of the discharges shall be performed utilizing the grab sampling method and analyzed for total (unfiltered) concentrations. The results of the sampling required under this Special Condition shall be submitted twice annually to the Agency in January and July of each calendar year to the addresses indicated in the Special Condition No. 2 above. The parameters to be sampled and the detection limits (minimum reported limits) are as follows:

| <u>Parameter</u>      | <u>Detection Limit</u> |
|-----------------------|------------------------|
| Arsenic               | 0.05 mg/l              |
| Barium                | 0.50 mg/l              |
| Cadmium               | 0.001 mg/l             |
| Chromium (hexavalent) | 0.01 mg/l              |
| Chromium              | 0.05 mg/l              |
| Copper                | 0.005 mg/l             |
| Lead                  | 0.05 mg/l              |
| Manganese             | 0.50 mg/l              |
| Mercury*              | 1.00 ng/l**            |
| Nickel                | 0.005 mg/l             |
| Phenols               | 0.005 mg/l             |
| Selenium              | 2.000 µg/l***          |
| Silver                | 0.003 mg/l             |
| Zinc                  | 0.025 mg/l             |

\* Utilize USEPA Method 1631E and the digestion procedure described in Section 11.1.1.2 of 1631E.

\*\* 1.00 ng/l (nanogram/liter) = 1 part per trillion.

\*\*\* µg/l = micrograms/liter