

NPDES Permit No. IL0080059
Notice No. 6767c

Public Notice Beginning Date: **July 21, 2014**

Public Notice Ending Date: **August 20, 2014**

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
Percy, Illinois 62272

Name and Address of Facility:

Knight Hawk Coal, LLC
Prairie Eagle Mine – American Eagle Portal
4.6 miles northeast of Cutler, 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 additional surface facilities area to an existing underground coal mine (SIC 1222). 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>
006	Bonnie Creek	38° 04' 57.56"	89° 30' 45.96"

The stream segment NCDC-01 of Bonnie Creek receiving the discharge from Outfall 006 is on the 2012 and the draft 2014 303(d) list of impaired waters. The following parameters have been identified as the pollutants causing impairment.

<u>Outfall</u>	<u>Pollutant</u>
006	Alteration in stream-side or littoral vegetative covers, sulfates

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

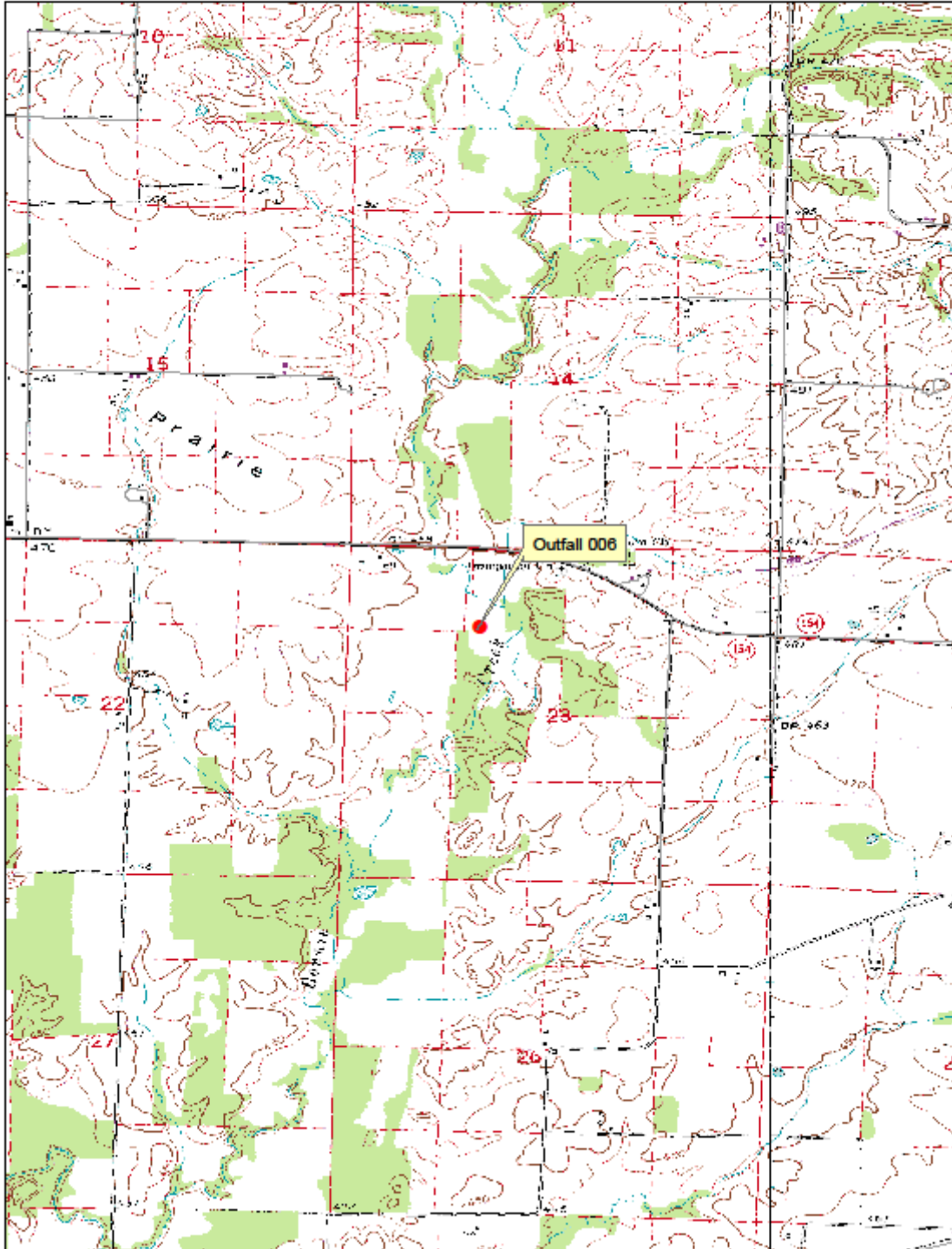
Outfall: 006

Discharge Condition	Parameters													
	Total Suspended Solids (mg/l) (3)		Iron (total) (mg/l) (3)(4)		pH (S.U.) (3)	Alkalinity/Acidity (3)	Sulfate (mg/l) (1)	Chloride (mg/l) (6)	Manganese (total) (mg/l.) (3) (6)		Hardness (5)	Mercury	Flow (MGD)	Settleable Solids (ml/l) (2)
	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	1887	500	2.0	4.0	Monitor only	Monitor Only	Measure When Sampling	-
II	-	-	-	-	6.0-9.0	-	1887	500	--	--	Monitor only	-	Measure When Sampling	0.5
III	-	-	-	-	6.0-9.0	-	1887	500	--	--	Monitor only	-	Measure When Sampling	-
IV	35	70	3.0	6.0	6.5-9.0	Alk.>Acid	1887	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 006, 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 Section 23, Township 5 South, Range 4 West, 3rd P.M., Perry County, Illinois.

Knight Hawk Coal, L.L.C. - Prairie Eagle Mine, American Eagle Portal
IL0080059
Perry County
Township 5 South, Range 4 West



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The Applicant is applying for a new NPDES permit for the development and operation of the proposed American Eagle Portal. Underground room-and-pillar mining would be used to extract coal which would then be stockpiled on site and transported to the nearby Prairie Eagle Mine preparation plant for processing. The proposed permit area contains 28.5 surface acres and a shadow area of 5,215 acres. A sediment basin (006) and discharge structure (Outfall 006) would be constructed to collect and treat stormwater runoff and underground mine pumpage. Discharge from Outfall 006 would be intermittent based on rainfall and the volume of mine pumpage, but is expected to not exceed an average of 35 gallons per minute, with an average of 20-25 gallons per minute being comprised of underground mine pumpage. Discharges from Outfall 006 would be received by Bonnie Creek.

Identification and Characterization of the Affected Water Body.

Bonnie Creek (NCDC-01) is a General Use stream with zero 7Q10 flow. It has not been assessed by the Agency since 1995, but the Agency has continued to make 305(b)/303(d) listings using the determinations made from the last survey. Based on the 1995 survey, it is listed on the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for aquatic life use (causes = alteration in streamside or littoral vegetative cover (non-pollutant) and sulfate). It should be noted that the old sulfate water quality standard (500 mg/l) was used in the determination of sulfate being a potential cause of impairment. Based on stream data collected by the Applicant from June 2012 – December 2013 (n=15), the average sulfate concentration within Bonnie Creek is 159 mg/l. Based on the average chloride (22.8 mg/l) and hardness (298 mg/l) concentrations collected by the Applicant, the current sulfate water quality standard that is applicable to the Bonnie Creek is 1,887 mg/l. Therefore, sulfate is no longer a potential cause of aquatic life use impairment. The stream 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.

At the proposed discharge location, Bonnie Creek flows for approximately 3 miles before being received by Galum Creek. Galum Creek (NCD-03) is a General use stream with 7Q10 flow. It has not been assessed by the Agency since 2003, but the Agency has continued to make 305(b)/303(d) listings using the determinations made from the last survey. Based on the 2003 survey, it is listed on the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for aquatic life use (causes = dissolved oxygen, sedimentation/siltation, and sulfate). It should be noted that the old sulfate water quality standard (500 mg/l) was used in the determination of sulfate being a potential cause of impairment. Upon review of the data collected by the Agency in 2003, the average sulfate concentration within Galum Creek was 676 mg/l. Based on the average chloride (26.7 mg/l) and hardness (380 mg/l) concentrations, the current sulfate water quality standard that is applicable to Galum Creek is 2,165 mg/l. Therefore, sulfate is no longer a potential cause of aquatic life use impairment. The stream 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 that Bonnie Creek has not been assessed by the Agency since 1995, the Applicant contracted Midwest Reclamation Resources to conduct a stream survey to assess the physical, chemical, and biological characteristics of Bonnie Creek near the proposed discharge location. A full report of the stream survey was provided in the report entitled *Bonnie Creek Stream Biotic Characterization* which was included in the Applicant's document entitled *Assessment of Alternatives for Minimal Environmental Degradation and Economic Benefit Analysis* submitted to the Agency on June 2, 2014. A summary of the stream survey is provided below.

A physical habitat assessment of Bonnie Creek was conducted using the USEPA Rapid Bio-assessment Protocol (RBP) for Wadeable and headwater streams and the Rosgen morphological assessment methodology. The drainage area for the surveyed portion of Bonnie Creek is 15.16 square miles. Near the proposed discharge location, Bonnie Creek has an average bankfull width of approximately 29.2 ft and a bankfull mean depth of 2.28 ft. The average entrenchment ratio for the surveyed portion of Bonnie Creek was 1.26, indicating a moderate level of entrenchment. The average width/depth ratio was 13.3, indicating a shallow-wide stream cross-section. Bonnie Creek is moderately sinuous (1.47) with a valley length of 1344.8 ft. and a channel length of 1974.9 ft. The overall slope of the stream is flat with a drop of 2.5 feet for every 1,000 feet. The streambed substrate was predominantly sand (44%), with a smaller amount of clay (20%), cobble (13%), silt (12%), and gravel (11%). The major habitat types within the stream were runs (83%) with the remaining habitats characterized as riffles and pools. Based on the above information the surveyed stream would primarily be characterized as a "F5" stream type according to Rosgen methodology, although some short segments of the stream may also be described as a "G5" stream type. The RBP habitat assessment produced a total score of 98 which indicates Marginal to Suboptimal habitat quality.

Water quality measurements from Bonnie Creek were taken on May 8, 2012 to assess temperature, total suspended solids, total dissolved solids, conductivity, dissolved oxygen, pH, alkalinity, iron, manganese, zinc, chloride, sulfate, nitrate, and fluoride. Dissolved oxygen was measured at 5.4 mg/l, which was within the acute water quality standard but was below the 7 day mean standard (6.0 mg/l) for this stream for this time of year. Drought conditions and low stream flow may have contributed to this result. None of the remaining parameters were found to violate acute or chronic water quality standards.

Benthic macroinvertebrates were sampled on May 31, 2012 using the multihabitat technique. A 100-ft. section of stream with a wide variety of stream habitats was sampled using a 12" D-net. Stream habitats included vegetated stream banks, unvegetated stream banks, pools, runs, riffles, and various substrate types. The different habitats were sampled proportionally to their relative occurrence. A total of 10 half-meter jabs were conducted and then preliminarily sorted to remove large substrate and detritus. Macroinvertebrates were identified to genus or species and larval chironomids to sub-family. There were a total of 15 taxa collected within the sampled portion of

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Bonnie Creek. The macroinvertebrates collected have a wide range of pollution tolerance values with an Index of Biological Integrity of 4.7, placing the stream in a “good” category according to the USEPA RBP. The majority of specimens collected were predatory or gatherer/collector feeders. A third of the sampled invertebrates were of the order Odonata. Fingernail clams made up a large proportion of the collected sample. No threatened or endangered invertebrates were found within Bonnie Creek.

Freshwater fish were sampled on June 8, 2012 using a 10'x4' 1/8" minnow seine. The net was hauled approximately 10 feet across the stream at 7 locations. Fish were stored in a container of water and then immediately identified to species in the field. Juvenile specimens smaller than 20mm were not identified and immediately released following enumeration. Following identification and enumeration all fish were returned to location from which they were collected. There were a total of 10 species of fish collected among all seven sampling locations within the stream. Common adult fishes encountered included *Fundulus notatus* (blackstripe topminnow), *Labidesthes siculus* (brook silverside), *Lythrurus umbratilis* (redfin shiner), *Cyprinella lutrensis* (red shiner), *Etheostoma nigrum* (Johnny darter), *Pimephales notatus* (Bluntnose minnow), *Notropis atherinoides* (emerald shiner), *Semotilus atromaculatus* (creek chub), *Lepomis cyanellus* (green sunfish), and *Gambusia affinis* (mosquitofish). There were a total of 240 individual fish collected; of which, 35 were adults and 205 were juvenile. Two *Ictalurus punctatus* (channel catfish) and one *Micropterus dolomieu* (smallmouth bass) were visually observed in the stream on subsequent visits to the stream. No threatened or endangered fish species were found within Bonnie Creek.

The freshwater mussel community was assessed on June 15, 2012 using USEPA methods as described in *An Introduction to Freshwater Mussels as Biological Indicators*. Hand searching techniques were used to thoroughly search for freshwater mussels within the stream. Two 70-ft. sections of stream and two 50-ft. sections of stream were clearly demarcated and then completely searched over an allotted length of time. Due to the drought conditions many of the pools and runs in which mussels were located were extremely shallow and in danger of drying up completely. A total of 17 freshwater mussels were located within Bonnie Creek representing 7 species. Only 3 species were located alive while 4 species were located dead. All 7 species are widespread and common in small streams throughout Illinois. No threatened or endangered freshwater mussels were encountered.

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

Effluent discharged from Outfall 006 would contain manganese and total suspended solids (TSS) loadings that are similar to those occurring from the land in its present use (25.9 acres of cropland, 2.6 acres of herbaceous wildlife land). No increases of these pollutants are expected. Along with chemical analysis of water quality in Bonnie Creek, the Applicant also performed chemical analysis of underground mine pumpage collected from an active mining area two miles west of the portal. All parameters analyzed, which included an array of metals, were found to be below acute and chronic water quality standards. When compared to stream results, chloride, sulfate, fluoride, and hardness would potentially increase in loading to the receiving stream due to underground pit pumpage contributions, but increases would be negligible given the permit area constitutes 0.3% of the Bonnie Creek watershed and that water quality standards for these parameters are being attained in Bonnie Creek and the underground mine pumpage. Adverse impacts to the uses of Bonnie Creek are not anticipated.

Fate and Effect of Parameters Proposed for Increased Loading.

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

Purpose and Social & Economic Benefits of the Proposed Activity.

The proposed activity would allow the Applicant to extract the coal resources at the site. The Applicant's document entitled *Assessment of Alternatives for Minimal Environmental Degradation and Economic Benefit Analysis* included a comprehensive summary of the project benefits, including but not limited to: providing an affordable, reliable, and secure fuel for electricity production; staffing of approximately 160 direct employees with an annual payroll of \$24.96 million; staffing of approximately 160 indirect employees with an annual payroll of \$15.36 million; and providing direct and indirect tax revenue to the local and regional economy.

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 underground mine 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 entitled *Assessment of Alternatives for Minimal Environmental Degradation and Economic Benefit Analysis*. This assessment included consideration of the following alternatives, each of which was considered infeasible or impractical: no mining; 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, supevac, 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 would be met in Outfall 006 effluent and in Bonnie Creek.

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

The IDNR EcoCAT system was consulted on June 17, 2014 in regards to the proposed activities. It was determined that a protected resource, the Rice Rat (*Oryzomys palustris*), may be in the vicinity of the project area. IDNR staff evaluated this information and concluded that adverse effects are unlikely. Consultation was terminated in the June 17, 2014 letter from IDNR. The Applicant has proposed a protection and enhancement plan for the reclaimed permit area following mining. The permit area would be restored entirely into herbaceous wildlife habitat with the exception of a small, 1.5 acre pond. The restored grassland habitat would provide suitable habitat for rice rat colonization.

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 would result in the attainment of water quality standards; that all existing uses of the receiving stream would 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 would benefit the community at large by providing jobs and boosting the local and regional economy. Comments received during the NPDES permit public notice period will be evaluated before a final decision is made by the Agency.

NPDES Permit No. IL0080059

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
Percy, Illinois 62272

Facility Name and Address:

Knight Hawk Coal, LLC
Prairie Eagle Mine – American Eagle Portal
4.6 miles northeast of Cutler, Illinois
Perry County

Discharge Number and Classification:

006 Alkaline Mine Drainage

Receiving waters

Bonnie 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.

Larry D. Crislip, P.E., Permit Manager
Mine Pollution Control Program
Bureau of Water

LDC:DM:cs/6767c/7-14-14

NPDES Coal Mine Permit
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 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*: 006 (Alkaline Mine Drainage)

Discharge Condition	Parameters											Flow (MGD)	Settleable Solids (ml/l)	
	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. 15
	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	1887	500	2.0	4.0	Monitor only	Monitor only	Measure When Sampling	-
II	-	-	-	-	6.0-9.0	-	1887	500	-	-	Monitor only	-	Measure When Sampling	0.5
III	-	-	-	-	6.0-9.0	-	1887	500	-	-	Monitor only	-	Measure When Sampling	-
IV	35	70	3.0	6.0	6.5-9.0	Alk.>Acid	1887	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 006 and Bonnie Creek receiving such discharges. Also discharges from Outfall 006 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.

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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*: 006 (Reclamation Area Drainage)

Discharge Condition	Parameters					
	pH** (S.U.) ***	Sulfate (mg/l) ***	Chloride (mg/l) ***	Hardness ***	Flow (MGD)	Settleable Solids (ml/l) ***
I	6.5-9.0	1887	500	Monitor only	Measure When Sampling	0.5
II	6.0-9.0	1887	500	Monitor only	Measure When Sampling	0.5
III	6.0-9.0	1887	500	Monitor only	Measure When Sampling	-
IV	6.5-9.0	1887	500	Monitor only	Measure When 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.

* The Permittee is subject to the limitations, and monitoring and reporting requirements of Special Condition No. 13 for the discharges from Outfall 006 and Bonnie 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.

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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*: 006 (Stormwater Discharge)

Parameters	
pH* (S.U.) 1/year	Settleable Solids (ml/l) 1/year
6.0-9.0	0.5

Stormwater discharge monitoring is subject to the following reporting requirements:

Analysis of samples must be submitted annually by the 15th of July.

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.

* 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.

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Construction Authorization No. 5219-13

C.A. Date: July 15, 2014

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

Surface facilities in support of an underground mine containing a total of 28.5 acres, as described and depicted in IEPA Log No. 5219-13, 5219-13-B, and 5219-13-E and located in Section 23, Township 5 South, Range 4 West, Perry County, 3rd P.M., Illinois.

These facilities in support of the underground mine contains the buildings, parking lot, equipment storage area, haulage/access roads, drainage control structures, texture/topsoil stockpile areas and a sediment pond.

Surface drainage control is provided by one (1) sedimentation pond with discharge designated as Outfall 006, classified as alkaline mine drainage.

The locations and receiving streams of the Outfall No. 006 at this facility is as follows:

Outfall Number	Latitude			Longitude			Receiving Waters
	Deg.	Min.	Sec.	Deg.	Min.	Sec.	
006	38	04'	57.56"	89	30'	45.96"	Bonnie Creek

Additional information provided in IEPA Log No. 5219-13-F indicates minor sedimentation basin revisions to ensure that Basin and Outfall 006 is located outside of areas subject to periodic flooding.

To ensure protection of any potential groundwater resource in the area, a compacted clay liner with a minimum thickness of four (4) feet will be constructed within Sedimentation Pond 006 which collects runoff from the referenced facilities as well as pumpage from the open pit and coal stockpile area. Pumpage from open pit which contains runoff from coal stockpile area shall be conveyed directly to Basin 006. Such pumpage shall not be directed to or conveyed by any unlined drainage control structure. The compacted clay "Quality Assurance/Quality Control Plan" is contained in Attachment IV(7)(D) of IEPA Log No. 5219-13-B. A subset of the Quality Assurance/Quality Control (QA/QC) requirements for the installation of the compacted clay liner is included in Condition No. 12.

As an alternative to the compacted clay liner required within Basin 006 as discussed above, an HDPE Geomembrane liner with a minimum thickness of 60 mils may be utilized. In the event that such a synthetic liner is utilized, this liner shall be installed in accordance with the "Quality Assurance/Quality Control Plan" as contained in Attachment IV(7)(D) of IEPA Log No. 5219-13-B and as per the manufacturer's guidelines and recommendations.

Coal is approved for stockpiling only within the open pit which is used for access to the underground mining operation.

This facility is not approved for coal refuse disposal.

Groundwater monitoring for this area includes Monitoring Well Nos. AEMW-1, AEMW-2, AEMW-3, AEMW-4 and AEMW-5 with monitoring subject to the requirements of 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).

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- 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).
 - 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 four (4) foot compacted clay liner to be constructed within Sedimentation Basin 006 shall be subject to the specifications and procedures presented in IEPA Log No. 5219-13-B, as well as the following:
- a. All soils to be used for the compacted clay liner shall be free of grass, vines, vegetation and rock or stones greater than four (4) inches in diameter.
 - b. Inter-lift surfaces shall be adequately scarified to ensure inter-lift bonding.
 - c. The placement of frozen material or the placement material on frozen ground is prohibited.
 - d. Contemporaneous placement or protective covering shall be provided to prevent drying, desiccation and/or freezing where necessary.
 - e. Soil lifts shall be placed in loose thicknesses of six (6) to eight (8) inches. Compactive effort shall be applied to each lift to obtain a liner permeability of 1×10^{-7} cm/sec. or less.
 - f. Each soil lift shall be compacted to ninety-five (95) percent standard proctor within two (2) percent below or three (3) percent above optimum moisture content. Compaction shall be determined utilizing ASTM Test Method D698.
 - g. Moisture and density testing shall be conducted at a rate of at least one (1) test per 7,500 cubic yards of material place.
 - h. After liner placement tube samples shall be used to determine permeability utilizing ASTM Test Method D5084. Permeability testing shall be conducted at a rate of at least one (1) test per 7,500 cubic yards of material place.
13. Groundwater monitoring requirements for Well Nos. AEMW-1, AEMW-2, AEMW-3, AEMW-4 and AEMW-5 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	

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b. Following the ambient monitoring as required under Condition No. 13(a) above, routine monitoring shall continue on a quarterly basis as follows:

- i. Monitoring Well Nos. AEMW-4 and AEMW-5 shall continue to be monitored quarterly for the contaminants identified in Condition No. 13(a) above.
- ii. Monitoring Well Nos. AEMW-1, AEMW-2 and AEMW-3 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. 13(a) 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. 13(a) 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:

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

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

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

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

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 (one-tail)		t-values (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

Should electronic filing be available and elected for any periodic monitoring and reporting requirements, written notification shall be provided to the Agency that such electronic filing has been elected and the date on which this filing will be initiated.

Special Condition No. 4: Completed Discharge Monitoring Report (DMR) forms and stream 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 forms (DMR's) using one such form for each applicable Discharge Condition each month.

Special Condition No. 5: Completed periodic monitoring and reporting, other than DMR's and stream monitoring (i.e., groundwater monitoring, coal combustion waste analysis reports, 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 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 Conditions

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 006):

- 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 006 shall be monitored and reported for Discharge Rate, Sulfate, Chloride and Hardness.
- b. The following sampling and monitoring requirements are applicable to flow in Bonnie Creek which receives discharges from Outfall 006.
 - 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. Bonnie 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. Bonnie Creek shall be monitored and reported annually for Discharge Rate, Chloride, Sulfate and Hardness upstream of the associated outfall.

Special Condition No. 14: Data collected in accordance with Special Condition No. 13 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.

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Special Conditions

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. 006 shall be monitored twice annually with such monitoring spaced at approximately 6-month intervals during the entire 5-year term of this NPDES. 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 reported on Discharge Monitoring Report (DMR) forms and submitted to the Agency in January and July of each calendar year. The parameters to be sampled and the detection limits (minimum reporting levels) 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