

NPDES Permit No. IL0077844
Notice No. 6801c

Public Notice Beginning Date: **November 19, 2014**

Public Notice Ending Date: **December 19, 2014**

National Pollutant Discharge Elimination System (NPDES)
Permit Program

Draft Renewed and Modified 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:

Randolph Land Holding Company, LLC
3872 County Highway 12
Marissa, Illinois 62257

Name and Address of Facility:

Randolph Land Holding Company, LLC
Jordan Grove Mine
2 miles southwest of Marissa, Illinois
(Randolph 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 operates and is reclaiming the surface facilities of a previous surface coal mine (SIC 1221).

Public comments are invited on the following proposed modifications incorporated into this Permit renewal:

Operations plan was revised to incorporate facilities in support of site reclamation.

Operation and Reclamation (abandonment) plan was revised with the reduced coal combustion waste area footprint to cover approximately 435 acres.

Removal of Outfall 002 with all flow directed to Outfall 001.

Groundwater Monitoring Well Nos. MW-12, MW-17, MW-18, MW-20 and MW-21 have been deleted and Groundwater Monitoring Well Nos. MW-28, MW-29 and MW-30 have been added.

This facility has one (1) existing discharge which is located in Randolph County, Illinois. The following information identifies the discharge points, receiving streams, and outfall locations:

<u>Outfall</u>	<u>Receiving Stream</u>	<u>Latitude (North)</u>	<u>Longitude (West)</u>
001	Unnamed tributary to Doza Creek	38° 12' 57"	89° 48' 04"

The stream segment (no segment code) of Doza Creek receiving the discharge from Outfall 001 is not on the 2012 303(d) or the draft 2014 303(d) list of impaired waters.

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

Outfall: 001

Discharge Condition	Parameters											
	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)	Hardness (5)	Flow (MGD)	Boron	Settleable Solids (2) (ml/l)
	30 day average	daily maximum	30 day average	daily maximum								
I	35	70	3.5	7.0	6.5-9.0	Alk.>Acid	1599	500	Monitor only	Measure When Sampling	2.45	-
II	-	-	-	-	6.0-9.0	-	1599	500	Monitor only	Measure When Sampling	2.45	0.5
III	-	-	-	-	6.0-9.0	-	1599	500	Monitor only	Measure When Sampling	2.45	-
IV	35	70	3.5	7.0	6.5-9.0	Alk.>Acid	1599	500	Monitor only	Measure When Sampling	2.45	-

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.

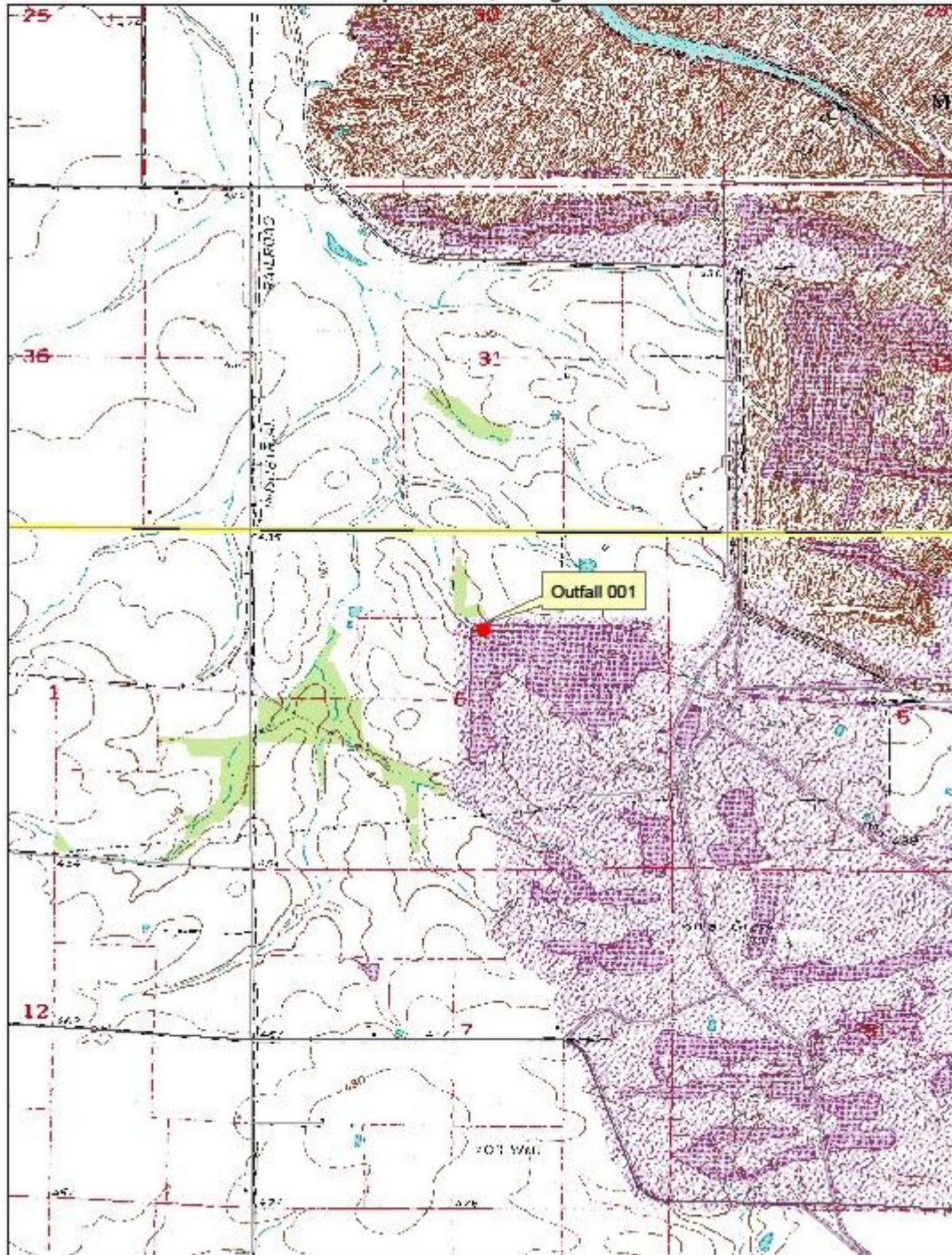
III In accordance with 35 Ill. Adm. Code 406.110(d), any discharge or increase in volume of a discharge caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the indicated limitations instead of those 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 prior to July 27, 1987, are subject to a 30-day average effluent limitation for Iron of 3.5mg/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, 6, 7 and 8, Township 4 South, Range 6 West and Section 34, Township 3 South, Range 2 East, 3rd P.M., Randolph County, Illinois.

Randolph Land Holding Company, L.L.C. - Jordan Grove Mine
NPDES No. IL0077844
Randolph County
Township 4 South, Range 6 West
Township 3 South, Range 2 East



NPDES Permit No. IL0077844

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

Renewed and Modified NPDES Permit

Expiration Date:

Issue Date:
Effective Date:

Name and Address of Permittee:

Randolph Land Holding Company, LLC
3872 County Highway 12
Marissa, Illinois 62257

Facility Name and Address:

Randolph Land Holding Company, LLC
Jordan Grove Mine
2 miles southwest of Marissa, Illinois
(Randolph County)

Discharge Number and Classification:

001 Alkaline Mine Drainage

Receiving waters

Unnamed tributary to Doza 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/6801c/11-07-14

NPDES Coal Mine Permit
 NPDES Permit No. IL0077844
 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) ***	Boron (mg/l) *** See Special Condition No. 16	Hardness ***	Flow (MGD)	Settleable Solids (ml/l)
	30 day average	daily maximum	30 day average	daily maximum								
I	35	70	3.0	6.0	6.5-9.0	Alk.>Acid	1599	500	2.45	Monitor only	Measure When Sampling	-
II	-	-	-	-	6.0-9.0	-	1599	500	2.45	Monitor only	Measure When Sampling	0.5
III	-	-	-	-	6.0-9.0	-	1599	500	2.45	Monitor only	Measure When Sampling	-
IV	35	70	3.0	6.0	6.5-9.0	Alk.>Acid	1599	500	2.45	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 Doza Creek receiving such discharges. Also discharges from Outfall 001 shall be subject to the limitations, and monitoring and reporting requirements of Special Condition No. 17.

** 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

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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*: 001 (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	1599	500	Monitor only	Measure When Sampling	0.5
II	6.0-9.0	1599	500	Monitor only	Measure When Sampling	0.5
III	6.0-9.0	1599	500	Monitor only	Measure When Sampling	-
IV	6.5-9.0	1599	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 of 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 001 and the unnamed tributary to Doza 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:

Outfalls: 001 (Stormwater Discharge)

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

Stormwater discharge monitoring is subject to the following reporting requirements:

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

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.

** 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. IL0077844

Construction Authorization No. 6630-12

C.A. Date: October 1, 2014

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

Surface mining and coal combustion waste disposal will be conducted on the 1063.8 acres in Section 5, 6, 7 and 8, Township 4 South, Range 6 West, 3rd P.M., Randolph County, Illinois.

The facilities at this site include rail loop, rail car positioner and dumper, office building, maintenance building, parking area, soil stockpiles, one (1) sedimentation pond and diversion ditch.

As proposed and depicted in IEPA Log No. 8008-10, a railroad loop will be developed adjacent to the northwest portion of the existing rail facilities. Runoff from this railroad loop will be controlled by silt fence, mulching, seeding, vegetation, rock check dams, erosion control blankets, etc.

Surface drainage for the above referenced area is controlled by one (1) existing sedimentation pond. The existing basin has a discharge assigned as Outfall 001. Outfall 001 is classified as alkaline mine drainage. Outfall 001 will report to an unnamed tributary to Doza Creek.

As described in IEPA Log No. 6630-12, Outfall 002 has been removed and associated drainage will be directed to Outfall 001.

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°	12'	57"	89°	48'	04"	Unnamed tributary to Doza Creek

As described and depicted in IEPA Log No. 8070-10, the surface drainage control plan has been revised to include a diversion ditch adjacent to the soil stockpile located in the eastern portion of the permit area. Runoff from the soil stockpile will be conveyed to Sedimentation Basin 001.

Disposal of coal combustion waste (CCW) from Prairie State Generating will be disposed, as proposed in Log Nos. 3430-05, 3430-05-A and 3430-05-B. Coal combustion waste (CCW) analyses shall be conducted as described in Condition No. 12. Condition No. 13 contains the construction and operating requirements for the CCW disposal area.

The footprint of the coarse refuse/coal combustion waste disposal area has been reduced to cover an area of approximately 435 acres as described and depicted in IEPA Log Nos. 8559-10 and 7098-11-A.

The liner proposed to be constructed within Phase 1A coal combustion waste (CCW) disposal area was approved to consist of a one (1) foot compacted clay layer covered by an 18" protective cover. The liner discussed and described in IEPA Log Nos. 7098-11 and 7098-11-A will be modified as proposed in IEPA Log No. 7151-11 to include a 60 mil HDPE geomembrane liner and leachate collection system. It is noted that the soil portion of this composite liner system was compacted throughout the entire thickness to arrive at a compacted clay liner of 30" depth.

The Mine Operations Plan is revised as described and depicted in IEPA Log No. 8007-10 to modify the footprint of the CCW disposal area along the eastern boundary.

The CCW disposal plan may be revised as proposed and described in IEPA Log No. 6148-12 to develop and construct Cell No. 1B. The liner and leachate collection system for this Cell will be identical to that used for Cell No. 1A. Coal combustion waste analysis and facility construction and operating requirements for this area shall continue as outlined in Condition Nos. 12 and 13, respectively.

Groundwater Monitoring Well No. MW -12 and MW -20 have been removed from the monitoring plan due to not be accessible and replaced by Well Nos. MW -28 and MW -29 as described in IEPA Log Nos. 7072-11-A and 7098-11-A. Also, additional Monitoring Well Nos. MW -30 will be installed as depicted down-gradient of the leachate collection pond.

In accordance with the well plugging information contained in IEPA Log No. 8049-10, Monitoring Well Nos. MW -17 and MW -21 have been deleted from the groundwater monitoring program.

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C.A. Date: October 1, 2014

As proposed in IEPA Log No. 7467-11 additional Groundwater Monitoring Well No. 31 will be installed on the western boundary of the phase 1A CCW disposal area.

As proposed in IEPA Log No. 5299-13 Monitoring Well No. MW-18 is removed from the monitoring program and replaced by Monitoring Well No. MW-32.

Groundwater monitoring is required in accordance with Condition No. 14.

This Construction Authorization supersedes and replaces Construction Authorization No. 3430-05 previously issued for the herein permitted facilities and activities.

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.
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.

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C.A. Date: October 1, 2014

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 ($\text{Al}_2(\text{SO}_4)_3$), hydrated lime ($\text{Ca}(\text{OH})_2$), 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).
 - 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. Coal combustion waste disposal operations shall be subject to the following monitoring, analysis and reporting requirements.
 - a. An initial analysis is required of a representative sample of the individual coal combustion waste source (Prairie State Generating Station) for the contaminants listed in 12(b) below. The initial sample shall be obtained and analyzed within 30 days of the start of the generating station operation. This initial testing shall include analyses utilizing both the Toxicity Characteristics Leaching Procedure (TCLP) and the ASTM 3987-85 methods. Based on the Agency's review of the initial analyses of the Prairie State Generating CCW, this permit may be modified should it be determined that additional monitoring or permit limits are required to insure that water quality standards in the receiving streams are not exceeded.

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C.A. Date: October 1, 2014

- b. Routine quarterly analysis will be required utilizing the Toxicity Characteristics Leaching Procedure (TCLP) and shall be conducted for the following contaminants:

Aluminum	Cobalt	Phenol
Antimony	Copper	Selenium
Arsenic	Iron	Silver
Barium	Lead	Thallium
Beryllium	Manganese	Vanadium
Boron	Mercury	Zinc
Cadmium	Molybdenum	
Chromium	Nickel	

An appropriate leaching procedure shall be conducted for the following contaminants:

Chloride	Fluoride	Sulfate
Cyanide		

An appropriate laboratory analysis on a slurry paste shall include the following:

Acidity (CaCO₃)
Equivalent Alkalinity
(CaCO₃) Equivalent pH
Total Dissolved Solids
Net Neutralization Potential

- c. Should a new or revised leachate test methodology be approved by U.S. Environmental Protection Agency, such methodology shall be utilized for coal combustion waste (CCW) analysis in lieu of TCLP analysis required under Condition 12(b) above.

- d. Two (2) copies of the analysis results shall be forwarded to the following address:

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

- e. Fugitive dust from the coal combustion waste material shall not leave the permit area. Timely covering, incorporation and/or wetting shall be utilized, as necessary, to protect exposed surfaces from wind erosion. If during disposal operations, such procedures do not sufficiently control fugitive dust, disposal activities shall cease until such time that more favorable conditions exist or modified operation procedures are proposed and approved by the Agency.

Data collected in accordance with this Condition will be utilized to evaluate the appropriateness of the effluent limits established herein. Should the Agency's evaluation of this data indicate revised effluent limits are warranted, this permit may be re-opened and modified to incorporate more appropriate effluent limitations; otherwise, this data will be used for determination of effluent limitations at the time of permit renewal.

- 13. Requirements for preparation of the disposal area surface and liner construction are as proposed in Log No. 3430-05-B and are addressed below:

- a. Preparation of the CCW disposal site shall consist of creating a surface of placed and in-situ mine spoil which will be compacted to provide a suitable base for construction of a clay liner. The surface shall be proof rolled and compacted by a loaded tandem truck. Any soft materials will be removed to a depth of two (2) feet and replaced with competent compacted clay.

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C.A. Date: October 1, 2014

- b. The clay liner shall be constructed to a minimum one-foot thickness and compacted to achieve a permeability of 1×10^{-7} cm/sec, or less. The liner shall be constructed in six (6) inch lifts with compactive effort applied to each placed lift. Compaction testing is to be conducted on each lift at a rate of one (1) test per each 10 acres of liner area. In addition, following liner construction a minimum of one (1) permeability test per 40 acres of liner area shall be performed on the compacted clay liner. The compacted liner shall be kept moist sufficiently to prevent cracking prior to placement of CCW. The compaction and permeability testing of the clay liner shall be evaluated and certified by a professional engineer. Documentation of the testing shall be submitted in duplicate to the Agency at the address noted in Special Condition 12(d) above.
 - c. A synthetic liner may be utilized for protection of groundwater in lieu of the compacted clay liner discussed in Condition Nos. 13(a) and 13(b) above. Prior to implementation of such a change in liner type and construction, a plan including liner design, specifications, construction details and quality control shall be submitted to and approved by the Agency.
 - d. CCW will be placed in a manner such that water does not inundate the pile; that is, no ponding of water is permitted on the placed CCW.
 - e. CCW will not be disposed within 50 feet of the permit boundary.
 - f. CCW may not be disposed in the spoil or final cut, unless the material meets the CCB requirements of Section 3.135(a)(9) of the Environmental Protection Act.
14. Groundwater monitoring requirements for Well Nos. MW-22, MW-23, MW-24, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-31 and MW-32 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. 14(a) above, routine monitoring shall continue on a quarterly basis as follows:
 - i. Monitoring Well Nos. MW-22, MW-28, MW-29, MW-30 and MW-31 shall continue to be monitored quarterly for the contaminants identified in Condition No. 14(a) above.
 - ii. Monitoring Well Nos. MW-23, MW-24, MW-25, MW-26, MW-27 and MW-32 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

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- 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. 14(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 Nos. 14(a) and 14(c) 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 (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 Nos. 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 DMR's (NetDMR) instead of submitting paper DMR's. 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 the 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.

<u>Period</u>	<u>Received by IEPA</u>
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 address 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 analysis, 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.

<u>Period</u>	<u>Received by IEPA</u>
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.

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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 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 tributaries to Doza Creek which receives 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 tributaries to Doza 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.

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- iii. Unnamed tributaries to Doza Creek shall be monitored and reported annually for Discharge Rate, Chloride, Sulfate, Boron 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.

Special Condition No. 15: Boron monitoring is not required to be initiated until such time that coal combustion waste is located within the watershed of the basin and outfall.

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 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 reported limits) to be achieved 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