

NPDES Permit No. IL0000043
Notice No. SMT:11062801.bah

Public Notice Beginning Date: **November 7, 2013**

Public Notice Ending Date: **December 9, 2013**

National Pollutant Discharge Elimination System (NPDES)
Permit Program

Draft Reissued 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:

Dynegy Midwest Generation, LLC
604 Pierce Boulevard
O'Fallon, Illinois 62269

Name and Address of Facility:

Baldwin Energy Complex
10901 Baldwin Road
Baldwin, Illinois 62217
(Randolph County and St. Clair County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES permit to discharge into the 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. The last day comments will be received will be on the Public Notice period ending date unless a commentor demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. 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. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the permit applicant. The NPDES permit and notice number(s) must appear on each comment page.

The application, engineer's review notes including load limit calculations, 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.

If 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. Public notice will be given 45 days before any public hearing. Response to comments will be provided when the final permit is issued. For further information, please call Shu-Mei Tsai at 217/782-0610.

The applicant is engaged in the operation of a coal-fired steam electric generating facility consisting two wet-bottom cyclone boilers, one pulverized coal dry bottom boiler and three turbine generators with a net generating capacity of 1778 MW (SIC 4911). All cooling and service waters for plant operations are obtained from a 2000 acre cooling pond. Make up water for the cooling pond is obtained from the Kaskaskia River. Once through cooling systems are used to cool the main condensers of each unit with the condenser cooling water being discharged to the cooling pond. Service water is used for ash sluicing, equipment heat exchangers and to supply the water treatment plant. Plant operations result in an average discharge of 16 MGD of ash pond discharge from outfall 001, 0.01375 MGD of aerated lagoon sewage treatment plant from outfall A01, intermittent discharge of chemical and non-chemical metal cleaning wastes from outfall B01, an intermittent discharge of Baldwin cooling pond overflow from Outfall 002, an average discharge of 0.6 MGD of coal pile runoff from outfall 003, and an average discharge of 0.018 MGD of river intake screen backwash from outfall 004.

The following modifications are proposed:

1. The discharger name was changed from Dynegy Midwest Generation Inc. to Dynegy Midwest Generation LLC.
2. Outfall C01 was removed from the permit as the activated carbon treatment system tributary has never been used and will not be used.
3. Outfall A03 was removed from the permit as the special waste storage area has been out of service and will no longer be used.
4. Fly ash transport water was removed from the permit as an authorized discharge from outfall 001 as fly ash is no longer wet sluiced but is placed in the pond dry.
5. Low volume SDA sump wastewaters and other miscellaneous floor drainage wastewaters from the Unit 1, 2, and 3 lime slurry prep buildings, recycle slurry prep buildings, and SDA buildings were added as contributory wastestreams to outfall 001.

6. SDA compressor cooling waters, compressor building floor drains, and stormwater from the SDA areas and bottom ash effluent was added as contributory wastestreams to outfall 002.
7. Non-chemical metal cleaning wastes will be limited at B01 because it is a regulated wastestream in the Steam Electric Effluent Guideline and BPT limits must be met prior to dilution with other wastestreams.
8. Aerated Lagoon Sewage Treatment Plant has been added as an authorized discharge from outfall 002.

Application is made for the existing discharges which are located in Randolph County and St. Clair Counties. The following information identifies the discharge point, receiving stream and stream classifications:

Outfall	Receiving Stream	Latitude		Longitude		Stream Classification	Biological Stream Characterization
001	Kaskaskia River	38° 11' 17"	North	88° 07' 30"	West	General Use	C
002	Kaskaskia River	38° 12' 21"	North	89° 52' 25"	West	General Use	C
003	Doza Creek	41° 29' 15"	North	88° 07' 30"	West	General Use	Not Rated
004	Kaskaskia River	38° 12' 18"	North	89° 51' 19"	West	General Use	C

To assist you further in identifying the location of the discharge please see the attached map.

The stream segment O-97 receiving the discharge from outfall(s) 001, 002, and 004 is on the draft 2012 Illinois Integrated Water Quality Report and Section 303(d) List. The receiving water has 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*. The impaired designated uses and pollutants causing impairment are tabulated below:

<u>Designated Uses</u>	<u>Pollutants Causing Impairment</u>
Fish Consumption	Mercury
Public Food Processing Water Supply	Manganese
Aquatic Life	Changes in Stream Depth and Velocity Patterns (non-pollutant), Low Flow Alterations (non-pollutant), Fish-Passage Barrier (non-pollutant), Loss of In-stream Cover (non-pollutant), Low Flow Alterations (non-pollutant), and Sedimentation/Siltation

The stream segment OZD receiving the discharge from outfall 003 is on the draft 2012 Illinois Integrated Water Quality Report and Section 303(d) List. The receiving water 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*. The impaired designated uses and pollutants causing impairment are tabulated below:

<u>Designated Uses</u>	<u>Pollutants Causing Impairment</u>
Aquatic Life	Manganese, Dissolved Oxygen (non-pollutant), Aquatic Plants (macrophytes) (non-pollutant), Phosphorus (total), Sludge, and Sedimentation/Siltation

The discharge(s) from the facility shall be monitored and limited at all times as follows:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)			CONCENTRATION LIMITS mg/l		
	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION
Outfall 001: Ash Pond Discharge (Intermittent)						
Flow (MGD)						
pH						40CFR423.12(b)(1)
Total Suspended Solids				15	30	35 IAC 304.204
Oil and Grease				15	20	40CFR423.12(b)(3)
Boron					9.9	AS 96-1
Manganese				Monitor Only		35 IAC 309.146
Mercury				Monitor Only		35 IAC 309.146
Outfall A01: Sanitary Sewage Aerated Lagoon System (DAF = 0.01375 MGD)						

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		REGULATION	CONCENTRATION LIMITS mg/l		REGULATION
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	
Flow (MGD)						
BOD ₅				30	60	35 IAC 304.120(a)
Total Suspended Solids				37	74	35 IAC 304.120(a)
Fecal Coliform						35 IAC 302.209
Outfall B01: Chemical and Non-Chemical Metal Cleaning Waste (Intermittent Discharge)						
Flow (MGD)						
Total Suspended Solids				30	100	40CFR423.12(b)(5)
Oil and Grease				15	20	40CFR423.12(b)(5)
Iron				1.0	1.0	40CFR423.12(b)(5)
Copper				0.5	1.0	35 IAC 304.124
Outfall 002: Overflow from Baldwin Cooling Pond (DAF = Intermittent Discharge)						
Flow (MGD)						
pH						35 IAC 304.125
Temperature				Monitor Only		35 IAC 309.146
Total Suspended Solids				15	30	35 IAC 304.124
Oil and Grease				15	20	40CFR423.12(b)(5)
Outfall 003: Coal Pile Runoff (DAF = 0.6 MGD)						
Flow (MGD)						
pH						40CFR423.12(b)(1)
Total Suspended Solids				15	30	35 IAC 304.124
Oil and Grease				15	20	40CFR423.12(b)(5)
Mercury				Monitor Only		35 IAC 309.146
Outfall 004: River Intake Screen Backwash (DAF = 0.018 MGD)						
Flow (MGD)						

The following explain the conditions of the proposed permit:

The facility utilizes a closed-cycle recirculating system, a 2000 acre cooling pond, for cooling of plant condensers and is determined to be equivalent to Best Technology Available (BTA) for cooling water intake structures to prevent/minimize impingement mortality in accordance with the best professional judgment provisions of 40 CFR 125.3. The cooling pond system allows the facility to only withdraw the amount of water necessary to maintain the cooling pond level rather than the entire volume used for cooling of the plant condensers. The use of a cooling pond is determined to meet the equivalent of BTA for control of thermal discharges in accordance with the Best Professional Judgment provisions of 40 CFR 125.3 because thermal discharges are first tempered in the cooling pond and then only occur during overflow events driven by precipitation rather than the entire volume used for condenser cooling.

Given the size of the receiving water, 104 cfs of 7Q10 flow existing upstream of the facility, and the infrequency of overflows from Baldwin Lake there is no reasonable potential to exceed thermal water quality standards in the receiving water and allowed mixing pursuant to 35 IAC 302.102 is granted for the thermal discharges from outfall 002, overflows from the cooling pond.

If operational conditions allow the treated effluent from the sanitary sewage lagoon system is used as make-up water for the ash wetting system and therefore no discharges to the cooling pond or the Kaskaskia River would occur and the limits at outfall A01 do not apply.

Special Conditions clarify: flow, pH, temperature, monitoring location, DMR's, operator requirements, water treatment additives, re-opener, and metals monitoring.

The subject facility has applied for a renewed NPDES permit which includes modifications that necessitate an antidegradation assessment. New wastewater discharges will be created as the result of the construction and operation of new dry flue gas desulfurization systems (Spray Dryer Absorbers or SDAs) at all three units at the complex. The installation of these systems was required by the terms and conditions of a 2005 Consent Decree between Dynegy, the state of Illinois, USEPA, and the U.S. Department of Justice. Construction of the Unit 3 SDA system and baghouse has been completed and they were put into service prior to December 31, 2010. The Unit 1 SDA system and baghouse were placed into service by December 31, 2011. The Unit 2 SDA system and baghouse were placed into service by December 31, 2012. The new discharges from these systems would consist of sump discharges, air compressor noncontact cooling waters, and miscellaneous floor and storm drainage waters. Dynegy is requesting authorization to discharge these wastewaters to the existing bottom ash pond system and include these discharges as contributory wastewater streams to Outfall 001. Sump discharges are not expected to occur more than once per week with each discharge lasting approximately five minutes. Based on the current operation of the Unit 3 sumps (projected discharge of 0.127 MG/year), it is expected that sump discharges for all units would contribute 0.38 MG/year of flow to the ash pond. Air compressor noncontact cooling waters from the new SDA systems (6.5 MGD) and miscellaneous floor and storm drainage waters would be received by the cooling pond and would be potentially discharged from Outfall 002 during overflow conditions.

In addition to the modifications listed above, the facility has implemented or is in the process of implementing several additional activities that are not subject to an antidegradation assessment, but are noteworthy due to their positive impact on atmospheric emission reductions, beneficial reuse of fly ash, and reductions of pollutant loadings into the ash pond system.

Activated Carbon Addition / Beneficial Reuse of Fly Ash

The Illinois Pollution Control Board (IPCB) required implementation of mercury reduction controls on all three units by July 2009. Dynegy chose to comply with this requirement by injecting activated carbon into the flue gas from each unit's boiler and/or by applying mercury oxidizing chemicals onto the coal fed to the boilers.

Because the Unit 1 and Unit 2 baghouses were not yet constructed or operational in July 2009, activated carbon was injected into the flue gas upstream of each unit's electrostatic precipitator. The presence of this activated carbon made the fly ash from the Unit 1 and Unit 2 precipitators un-marketable. Dynegy received a temporary variance from the IPCB for Unit 3 from the 2009 requirement and activated carbon was not injected into Unit 3 until after its baghouse was placed into service in 2010. Therefore, DMG has been able to continuously market Unit 3 fly ash.

Presently, activated carbon residues and SDA residues collected by all three baghouses are not disposed on-site. All three units apply an oxidizing agent directly to the raw coal and activated carbon may be injected after the electrostatic precipitator to remove mercury from the flue gases. The oxidized mercury absorbs to the fly ash particle in the flue gases and is removed both in the electrostatic precipitator and baghouse of each unit. Oxidized mercury absorbed on fly ash and collected in the electrostatic precipitators will be dry disposed in a dry area of the ash pond system. All mercury sorbent activated carbon residues collected in the baghouse of each unit are being offsite disposed. Therefore, Dynegy no longer requests authorization to dispose of activated carbon mercury sorbent residues into the ash pond.

Ash Handling

Under the previous NPDES permit, bottom slag (from Units 1 and 2 cyclone boilers), bottom ash (from Unit 3 pulverized coal boiler), all three unit's fly ash, economizer, and air heater ash were transported with water to the ash pond system. In the spring of 2005, the facility began dry handling all its electrostatic precipitator fly ash. All fly ash that is not marketed for beneficial reuse is hauled dry and stored in a dry area of the fly ash pond system. Unit 1 and Unit 2 boiler slag, Unit 3 bottom ash, economizer, and air heater ash are sluiced with water to the bottom ash pond. Much of the boiler slag is subsequently reclaimed for beneficial reuse. Because water is no longer being used for fly ash transport, water flows to and from the ash pond system have been substantially reduced. Approximately 10 MGD of water was previously used daily for transporting fly ash to the ash pond system. That flow to and from the ash pond system has now been eliminated, which subsequently has led to significant reduction in the amount of flow (and associated pollutant loads) discharged from Outfall 001.

Identification and Characterization of the Affected Water Body.

Discharge from Outfalls 001 and 002 is received by Segment O-97 of the Kaskaskia River, a General Use water with 104 cfs of 7Q10 flow existing upstream of the facility. This segment of the Kaskaskia River is listed as impaired for aquatic life use (causes = changes in stream depth and velocity patterns (non-pollutant), fish-passage barrier (non-pollutant), loss of instream cover (non-pollutant), low flow alterations (non-pollutant), and sedimentation/siltation), fish consumption (cause = mercury), and public and food processing water supply (cause = manganese) on the draft 2010 Illinois Integrated Water Quality Report and Section 303(d) List. The receiving water is not listed as a biologically significant stream but is listed as having a C integrity rating based on the 2008 Illinois Department of Natural Resources publication *Integrating Multiple Taxa in a Biological Stream Rating System*. The receiving water is not enhanced in regards to the dissolved oxygen standard. The final TMDL report for the Lower Kaskaskia River Watershed does not recommend a wasteload allocation for manganese or mercury discharges from this facility, but does recommend allocations for fecal coliform (<http://www.epa.state.il.us/water/tmdl/report-status.html#lower>).

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

Sump discharge waters from the spray dryer absorber, lime slurry preparation, and lime recycle slurry building for the three units would contain high pH and high dissolved and suspended solids. Solids within the sump discharges are primarily comprised of lime slurry (calcium and magnesium) but due to the small volume and concentrated discharge, other solids (including metals) are expected to be

present at elevated concentrations. The applicant has estimated that the intermittent, low-volume sump discharges would contribute an annual loading of 1.52 and 0.0006 lbs of manganese and mercury into the ash pond system. However, in order to be present at Outfall 001, the sump discharges would be subject to treatment in four clarification basins prior to outfall. Furthermore, compared to previously permitted conditions, a net reduction of pollutant loading is expected at Outfall 001 due to the off-site disposal of activated carbon and SDA residues and the conversion to dry fly ash handling, which has decreased flows into and from the ash impoundment. Since 2007, when the applicant began internal monitoring of mercury and manganese at Outfall 001, the applicant has estimated that annual manganese and mercury loads from Outfall 001 have decreased by approximately 1,500 and 11.6 lbs, respectively.

Noncontact cooling water for the SDA air compressor systems (6.5 MGD) would be withdrawn from and returned to the cooling pond. The only potential pollutant associated with this activity is temperature, but given the size of the pond (2000 acres) and the amount of cooling water currently used for the condensers of the three units (1720 MGD), the small increase in thermal loading should not have an impact on the receiving water. Similarly, the floor and storm water drainage flows associated with the SDA systems should have a negligible impact on the cooling pond and the receiving water. Any waters that have the potential to contact external equipment will be treated for oil and grease prior to discharge into the cooling pond.

Fate and Effect of Parameters Proposed for Increased Loading.

Given that negligible, if any, pollutant loading would occur as a result of these activities, an adverse impact to the existing uses of the receiving water is not anticipated. Appropriate permit limits and monitoring will be established in the renewed permit.

Purpose and Social & Economic Benefits of the Proposed Activity.

The new and modified wastewaters associated with this renewed permit are the result of the installation of advanced control measures to reduce air emissions of mercury and sulfur dioxide from all three units at the facility. Given that the air in the vicinity of the plant will contain less atmospheric mercury and sulfur dioxide, some of which previously precipitated into the Kaskaskia River watershed, the loading of these pollutants to the Kaskaskia River watershed will be substantially reduced.

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

There is no way to avoid the generation of wastewater from the SDA systems, as these high solids wastewaters are an inherent part of these systems. Onsite treatment and disposal in the existing ash pond system is the most viable disposal option, as offsite disposal options are not practical. Offsite disposal in a landfill would require dewatering, which would still result in wastewater discharges. The SDA wastewaters would contain approximately 10 percent solids and pH ranging from 11.5 to 12.0, therefore making them unacceptable for receipt by publically owned treatment works. Similarly, land application for agronomic purposes is not practical given the high solids content and low nutrient content of the wastewater.

As previously discussed, the Applicant has made substantial improvements at this facility to minimize pollutant loadings into the ash pond system. Fly ash will continue to be handled dry and marketed for beneficial reuse where possible. Release of the intermittent, low-volume sump discharges into the ash pond system would have a negligible impact on the water quality of Outfall 001 effluent and should not adversely impact the existing uses of the receiving water.

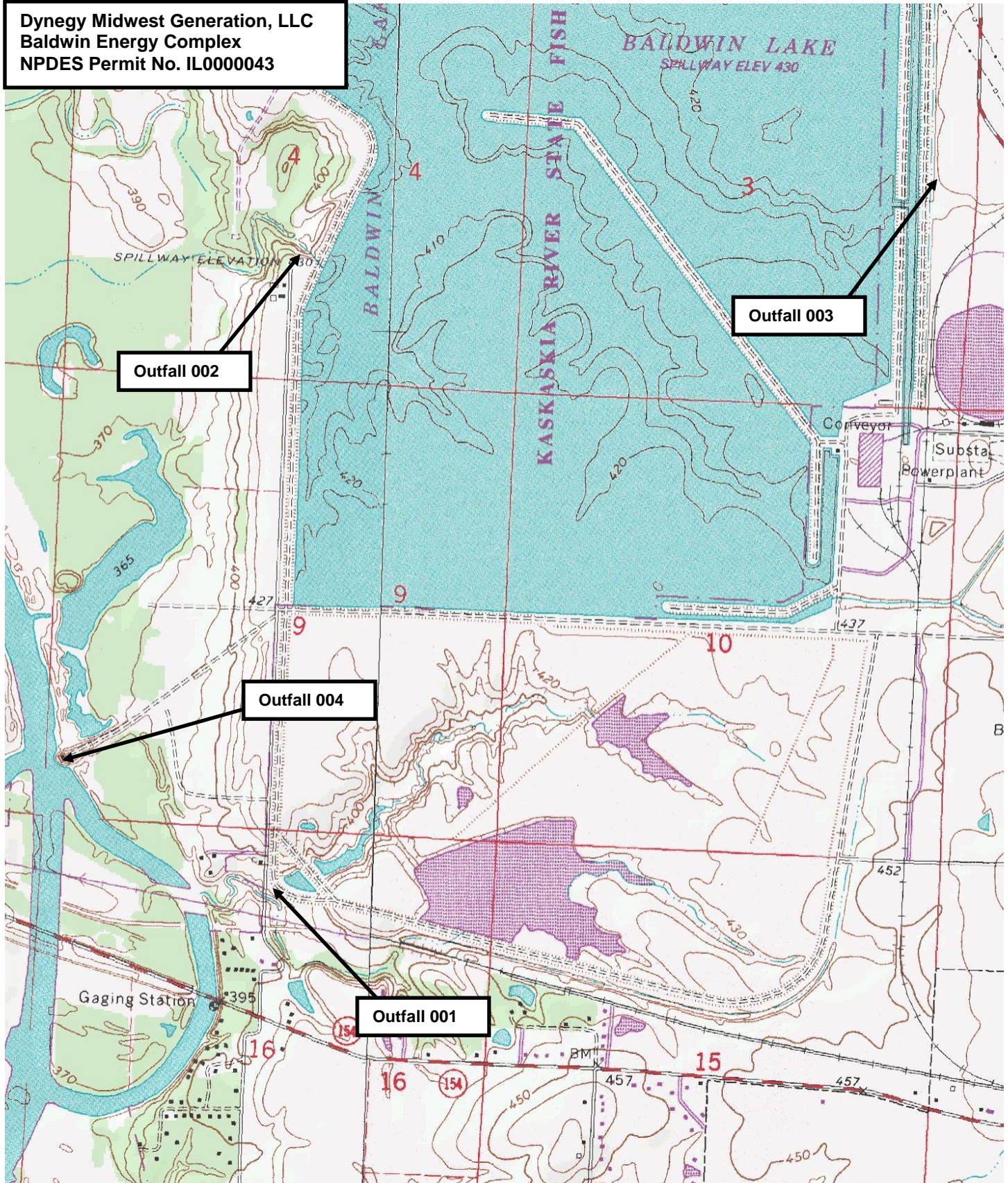
Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities.

The IDNR EcoCAT system was consulted on November 14, 2011. It was determined that the Least Tern (*Sterna antillarum*), a protected species, may be in the vicinity of the project location, thereby requiring further IDNR review. IDNR had indicated that they will conduct a review within 30 days; the permit will not be issued until IDNR terminates consultation.

Agency Conclusion.

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time the draft permit was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving stream will be maintained; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will benefit the local and regional community at large by improving air and water quality, producing electric power, and preserving jobs. Comments received during the NPDES permit public notice period will be evaluated before a final decision is made by the Agency.

Dynegy Midwest Generation, LLC
Baldwin Energy Complex
NPDES Permit No. IL0000043



Public Notice of Draft Permit

Public Notice Number SMT:11062801.bah is hereby given by Illinois EPA, Division of Water Pollution Control, Permit Section, 1021 North Grand Avenue East, Post Office Box 19276, Springfield, Illinois 62794-9276 (herein Agency) that a draft National Pollutant Discharge Elimination System (NPDES) Permit Number IL0000043 has been prepared under 40 CFR 124.6(d) for Dynegy Midwest Generation, LLC, 604 Pierce Boulevard, O'Fallon, Illinois 62269 for discharge into Kaskaskia River from the Baldwin Energy Complex, 10901 Baldwin Road, Baldwin, Illinois 62217, (Randolph County and St. Clair County). The applicant is engaged in the operation of a coal-fired steam electric generating facility consisting two wet-bottom cyclone boilers, one pulverized coal dry bottom boiler and three turbine generators with a net generating capacity of 1778 MW (SIC 4911). All cooling and service waters for plant operations are obtained from a 2000 acre cooling pond. Make up water for the cooling pond is obtained from the Kaskaskia River. Once through cooling systems are used to cool the main condensers of each unit with the condenser cooling water being discharged to the cooling pond. Service water is used for ash sluicing, equipment heat exchangers and to supply the water treatment plant. Plant operations result in an average discharge of 16 MGD of ash pond discharge from outfall 001, 0.01375 MGD of aerated lagoon sewage treatment plant from outfall A01, intermittent discharge of chemical and non-chemical metal cleaning wastes from outfall B01, an intermittent discharge of Baldwin cooling pond overflow from outfall 002, an average discharge of 0.6 MGD of coal pile runoff from outfall 003, and an average discharge of 0.018 MGD of river intake screen backwash from outfall 004.

The application, draft permit and other documents are available for inspection and may be copied at the Agency between 9:30 a.m. and 3:30 p.m. Monday through Friday. A Fact Sheet containing more detailed information is available at no charge. For further information, call the Public Notice Clerk at 217/782-0610.

Interested persons are invited to submit written comments on the draft permit to the Agency at the above address. The NPDES Permit and Joint Public Notice numbers must appear on each comment page. All comments received by the Agency not later than 30 days from the date of this publication shall be considered in making the final decision regarding permit issuance.

Any interested person may submit written request for a public hearing on the draft permit to the Agency at the above address. The NPDES Permit and joint public notice must appear on each comment page. All comments received by the Agency not later than 30 days from the date of this publication shall be considered in making the final decision regarding permit issuance.

If written comments and/or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing.

NPDES Permit No. IL0000043

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date:

Issue Date:

Effective Date:

Name and Address of Permittee:

Dynegy Midwest Generation, LLC
604 Pierce Boulevard
O'Fallon, Illinois 62269

Facility Name and Address:

Baldwin Energy Complex
10901 Baldwin Road
Baldwin, Illinois 62217
(Randolph County and St. Clair County)

Discharge Number and Name:

001 Ash Pond Discharge
A01 Aerated Lagoon Sewage Treatment Plant
B01 Chemical and Non-Chemical Metal Cleaning Waste
002 Overflow from Baldwin Cooling Pond
003 Coal Pile Runoff
004 River Intake Screen Backwash

Receiving Waters:

Kaskaskia River

Kaskaskia River
Doza Creek
Kaskaskia River

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of Ill. Adm. Code, Subtitle C and/or Subtitle D, Chapter 1, and the Clean Water Act (CWA), 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.

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

SAK: SMT:11062801.bah

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall: 001 Ash Pond Discharge (Intermittent)

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Contributory Streams:	Bottom Ash Transport Water Demineralizer Regenerate Waste Unit 1 Boiler Sump Unit 1 Boiler Lowpoint Drains Water Treatment System Wastes Sewage Treatment Effluent (combined) Oil/Water Separator (Stack No. 1) Miscellaneous Discharges Chemical and Non-Chemical Metal Cleaning Wastes Dredge Spoils Low Volume SDA Sump and Other Miscellaneous Floor Drainage		Flow 13.0 MGD (Max.) 0.2 MGD (Max.) 0.41 MGD (Max.) Intermittent 0.06 MGD (Max.) 0.1 MGD (Max.) 0.03 MGD (Max.) 0.03 MGD (Max.) Intermittent Intermittent 0.38 MG per year			
Flow (MGD)	See Special Condition 1				1/Week	
pH	See Special Condition 2				1/Week	Grab
Total Suspended Solids			15	30	1/Week	24-Hour Composite
Oil and Grease			15	20	1/Week	Grab
Boron	See Special Condition 13			9.9	1/Week	24-Hour Composite
Manganese			Monitoring		1/Month	Grab
Mercury*			Monitoring**		1/Month	Grab

*Minimum reporting limit : 1.0 ng/L (1.0 ng/L = 1 part per trillion)

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

NPDES Permit No. IL0000043

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall: A01 Aerated Lagoon Sewage Treatment Plant (DAF = 0.01375 MGD)

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	See Special Condition 1				1/Month	
BOD ₅			30	60	1/Month	24-Hour Composite
Total Suspended Solids			37	74	1/Month	24-Hour Composite
Fecal Coliform	See Special Condition 16				1/Month	Grab

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall: B01 Chemical and Non-Chemical Metal Cleaning Wastes (Intermittent)

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	See Special Condition 1				1/Discharge Event	
Total Suspended Solids			30	100	1/Discharge Event	Grab
Oil and Grease			15	20	1/Discharge Event	Grab
Iron			1.0	1.0	1/Discharge Event	Grab
Copper			0.5	1.0	1/Discharge Event	Grab

Effluent Limitations and Monitoring

- From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall: 002 Overflow from Baldwin Cooling Pond (Intermittent)

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Contributory Streams:	Condenser Cooling Water # 1 and #2 Oil/Water Separator Cooling Pond Intake Screen Backwash Roof Drains and Area Runoff High Pressure Heater/Deaerating Heater Floor Drains Service Water Head Tank Overflow Unit 1 Slag Tank Overflow, Cyclone Jacket Cooling Water and Ash Line Drain Unit 2 Boiler Room Sump Unit 3 Boiler Room Sump Unit 2 Cyclone Jacket Cooling Water Unit 2 Slag Tank Overflow Unit 2 and 3 Ash Hopper Overflows Units 2 and 3 Boiler Low Point Drains Unit 3 Boiler Blowdown and Floor Drains Unit 3 Pyrite Transfer Tank Overflow Unit 3 Economizer Storage Hopper Overflow Units 1,2,3 SDA Compressor Cooling Bottom Ash Effluent Aerated Lagoon Sewage Treatment Plant (via A01)		Approximate Flow 1720 MGD (Max.) 0.06 MGD 3.69 MGD (Max.) Intermittent 0.002 MGD (Max.) Intermittent 7.74 MGD (Max.) 0.58 MGD 0.50 MGD 0.72 MGD (Max.) 7.1 MGD Intermittent 0.445 MGD 0.005 MGD (Max.) 0.037 MGD 6.5 MGD Intermittent 0.01375 MGD			
Flow (MGD)	See Special Condition 1				1/Week When Discharging	
pH	See Special Condition 2				1/Week When Discharging	Grab
Temperature	See Special Condition 3				1/Week When Discharging	Single Reading
Total Suspended Solids			15	30	1/Week When Discharging	Grab
Oil and Grease			15	20	1/Week When Discharging	Grab

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall: 003 Coal Pile Runoff (DAF = 0.6 MGD)

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Contributory Streams:	Coal Pile Runoff Cooling Pond Seepage Area Runoff					
Flow (MGD)	See Special Condition 1				1/Month	
pH	See Special Condition 2				1/Month	Grab
Total Suspended Solids			15	30	1/Month	24-Hour Composite
Oil and Grease			15	20	1/Month	Grab
Mercury**			Monitoring*		1/Quarter***	Grab

*Minimum reporting limit : 1.0 ng/L (1.0 ng/L = 1 part per trillion)

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

***Mercury monitoring results shall be submitted with the March, June, September, and December DMRs. If more than one sample is taken during the reporting period, the quarterly average shall be reported.

Effluent Limitations and Monitoring

- From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall: 004 River Intake Screen Backwash (DAF = 0.018 MGD)

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	See Special Condition 1				1/Month	

Special Conditions

SPECIAL CONDITION 1. Flow shall be measured in units of Million Gallons per Day (MGD) and reported as a monthly average and a daily maximum value on the monthly Discharge Monitoring Report.

SPECIAL CONDITION 2. The pH shall be in the range 6.0 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 3. This facility meets allowed mixing criteria for thermal discharges pursuant to 35 IAC 302.102. No reasonable potential exists for the discharge to exceed thermal water quality standards. The permittee shall monitor the flow and temperature of the discharge prior to entry into the receiving water body. Monitoring results shall be reported on the monthly discharge Monitoring Report. This permit may be modified to include formal temperature limitations should the results of the monitoring show that there is a reasonable potential to exceed a thermal water quality standard. Modification of this permit shall follow public notice and opportunity for comment.

There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions. The normal daily and seasonal temperature fluctuations which existed before the addition of heat due to other than natural causes shall be maintained.

SPECIAL CONDITION 4. All samples for TRC shall be grab samples and analyzed by an applicable method contained in 40 CFR 136, equivalent in accuracy to low-level amperometric titration. Any analytical variability of the method used shall be considered when determining the accuracy and precision of the results obtained.

SPECIAL CONDITION 5. 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 6. 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 7. There shall be no discharge of polychlorinated biphenyl compounds. The Permittee shall monitor the effluent from outfalls 001, A01, B01, 002, 003, and 004 for polychlorinated biphenyl compounds on a semi-annual basis and submit the results to the Agency with the June, and December DMRs.

SPECIAL CONDITION 8. The facility utilizes a closed-cycle recirculating system, a 2000 acre cooling pond, for cooling of plant condensers and is determined to be equivalent to Best Technology Available (BTA) for cooling water intake structures to prevent/minimize impingement mortality in accordance with the best professional judgment provisions of 40 CFR 125.3. The cooling pond system allows the facility to only withdraw the amount of water necessary to maintain the cooling pond level rather than the entire volume used for cooling of the plant condensers. The use of a cooling pond is determined to meet the equivalent of BTA for control of thermal discharges in accordance with the Best Professional Judgment provisions of 40 CFR 125.3 because thermal discharges are first tempered in the cooling pond and then only occur during overflow events driven by precipitation rather than the entire volume used for condenser cooling.

The Permittee shall request and receive a modification to this permit prior to changing the use or operation of the cooling pond. This determination does not relieve the Permittee of submitting pertinent information regarding the intake structure and cooling pond operation with the renewal application for this permit as required under 40 CFR 122.21(r)(2), (3) and (5).

SPECIAL CONDITION 9. Sludge contained in the chemical and non-chemical metal cleaning waste treatment pond at the Baldwin Energy Complex may be applied to the active area of the coal pile for incineration in accordance with permits obtained from the Illinois EPA Division of Air Pollution Control. Sludge shall be applied within the following guidelines:

- 1) Chemical and non-chemical metal cleaning waste sludge shall be applied to an active area of the coal pile at a rate to prevent coal pile runoff.
- 2) Sludge application shall not be permitted if the coal pile has been wetted by rainfall within the 24-hour period preceding the intended application time.
- 3) Sludge application shall not be permitted on the coal pile during precipitation or when precipitation is imminent.
- 4) The filter cake from the portable sock filter may be disposed by application to the active area of the coal pile.
- 5) Chemical and non-chemical metal cleaning waste sludge or filter cake which is a hazardous waste shall not be placed on the coal pile.

This special condition does not relieve the permittee of any State or Federal requirements for management of hazardous waste. Documentation to support a hazardous waste determination pursuant to 40 CFR 262.11 shall be maintained by the permittee.

Special Conditions

SPECIAL CONDITION 10. During those times when the treated effluent from the sanitary sewage lagoon system is routed to the bottom ash pond system via outfall A01 and is recycled, used as make-up water for the ash wetting system, the effluent limitations for A01 do not apply and "No Discharge" shall be reported on the DMR.

SPECIAL CONDITION 11. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) Forms using one such form for each outfall each month.

In the event that an outfall does not discharge during a monthly reporting period, the DMR Form shall be submitted with no discharge indicated.

The Permittee may choose to submit electronic DMRs (eDMRs) instead of mailing paper DMRs to the IEPA. More information, including registration information for the eDMR program, can be obtained on the IEPA website, <http://www.epa.state.il.us/water/edmr/index.html>.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 15th day of the following month, unless otherwise specified by the permitting authority.

Permittees not using eDMRs shall mail Discharge Monitoring Reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Attention: Compliance Assurance Section, Mail Code # 19

SPECIAL CONDITION 12. The Agency has determined that the effluent limitations in this permit constitute BAT/BCT for storm water (including stormwater associated with U.S. Minerals' operations), which is treated in the existing treatment facilities for purposes of this permit reissuance, and no pollution prevention plan will be required for such storm water. In addition to the chemical specific monitoring required elsewhere in this permit, the permittee shall conduct an annual inspection of the facility site to identify areas contributing to a storm water discharge associated with industrial activity, and determine whether any facility modifications have occurred which result in previously-treated storm water discharges no longer receiving treatment. If any such discharges are identified the permittee shall request a modification of this permit within 30 days after the inspection. Records of the annual inspection shall be retained by the permittee for the term of this permit and be made available to the Agency on request.

SPECIAL CONDITION 13. In accordance with the adjusted water quality standard granted by the Illinois Pollution Control Board in AS 96-1, the discharge from Outfall 001 may not cause the boron concentration in the Kaskaskia River to exceed the following concentrations:

1. 2.7 mg/l for boron from 310 feet upstream of Outfall 001, to the water intake structure located 1,300 feet upstream of Outfall 001;
2. 9.9 mg/l for boron from 310 feet upstream of Outfall 001, to 300 feet downstream of Outfall 001;
3. 2.7 mg/l for boron from 300 feet downstream of Outfall 001, to 2000 feet downstream of Outfall 001.
4. 1.2 mg/l for boron from 2,000 feet downstream of Outfall 001, to the confluence of the Kaskaskia River with the Mississippi River.

SPECIAL CONDITION 14. The use or operation of this facility shall be by or under the supervision of a Certified Class K operator.

SPECIAL CONDITION 15. In the event that the permittee must request a change in the use of water treatment additives, the permittee must request a change in this permit in accordance with Standard Conditions - - Attachment H.

SPECIAL CONDITION 16. The daily maximum fecal coliform count shall not exceed 200 per 100 ml nor the waste load allocation of 104 million colonies per day.

SPECIAL CONDITION 17. The Permittee shall monitor the effluent from outfalls 001, 002, and 003 for the following parameters on a semi-annual basis. This Permit may be modified with public notice to establish effluent limitations if appropriate, based on information obtained through sampling. The sample shall be a 24-hour effluent composite except as otherwise specifically provided below and the results shall be submitted to the address in special condition 11 in June and December. The parameters to be sampled and the minimum reporting limits to be attained are as follows:

Special Conditions

<u>STORET CODE</u>	<u>PARAMETER</u>	<u>Minimum reporting limit</u>
01002	Arsenic	0.05 mg/L
01007	Barium	0.5 mg/L
01027	Cadmium	0.001 mg/L
00940	Chloride	2.0 mg/L
01032	Chromium (hexavalent) (grab)	0.01 mg/L
01034	Chromium (total)	0.05 mg/L
01042	Copper	0.005 mg/L
00718	Cyanide (grab) (available * or amendable to chlorination)	5.0 ug/L
00720	Cyanide (grab not to exceed 24 hours) (total)	5.0 ug/L
00951	Fluoride	0.1 mg/L
00900	Hardness (as CaCO ₃)	5.0 mg/L
01045	Iron (total)	0.5 mg/L
01046	Iron (Dissolved)	0.5 mg/L
01051	Lead	0.05 mg/L
01055	Manganese	0.5 mg/L
01067	Nickel	0.005 mg/L
00556	Oil (hexane soluble or equivalent) (Grab Sample only)	5.0 mg/L
32730	Phenols (grab)	0.005 mg/L
01147	Selenium	0.005 mg/L
01077	Silver (total)	0.003 mg/L
00945	Sulfate	0.01 mg/L
01092	Zinc	0.025 mg/L

Unless otherwise indicated, concentrations refer to the total amount of the constituent present in all phases, whether solid, suspended or dissolved, elemental or combined, including all oxidation states.

*USEPA Method OIA-1677

SPECIAL CONDITION 18. The permittee shall maintain a groundwater monitoring program for the existing ash pond system. The groundwater shall be monitored as follows:

- Monitoring wells MW-104S, MW-104D, MW-150, MW-350, MW-152, MW-252, MW-352, MW-153, MW-253, MW-154, MW-155, and MW-355 shall be monitored for the parameters below:

Manganese (total)	Chloride	Specific Conductance
Iron (total)	Nitrate	Temperature
Sulfate	Boron	Depth to Water (bls)
Total Dissolved Solids	pH	Depth to Water (bmp)
Elevation of MP	Elevation of Groundwater Surface	

- Monitoring wells MW-156, and MW-157S shall be monitored for the parameters below only:

Specific Conductance
Temperature
Depth to Water (bls)
Depth to Water (bmp)
Elevation of MP
Elevation of GW Surface

- Groundwater sampling at the monitoring wells listed in Item #1 above, including MW-156 and MW-157S, will be performed on a quarterly basis and reported annually to the following address by February 28th of the following year:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Illinois Environmental Protection Agency
Hydrogeology and Compliance Unit
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276