IEPA Log No.: **C-0227-12**
CoE appl. #: **P-2818**

Public Notice Beginning Date: **December 19, 2014**
Public Notice Ending Date: **January 9, 2015**

Section 401 of the Federal Water Pollution Control Act
Amendments of 1972

Section 401 Water Quality Certification to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-3362

Name and Address of Discharger: Prairie State Generating Company, LLC – 3872 County Hwy. 12, Marissa, Illinois 62257

Discharge Location: Near Marissa in Sections 7, 8, and 18 of Township 3S, Range 5W of the 3rd P.M. in Washington County.

Name of Receiving Water: Mud Creek tributaries and unnamed wetlands

Project Description: Proposed monofill for coal combustion residuals generated at the onsite power generation facility.

The Illinois Environmental Protection Agency (IEPA) has received an application for a Section 401 water quality certification to discharge into the waters of the state associated with a Section 404 permit application received by the U.S. Army Corps of Engineers. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. The last day comments will be received will be on the Public Notice period ending date unless a commenter 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 project to the IEPA at the above address. Commenters shall provide their names and addresses along with comments on the certification application. Commenters may include a request for public hearing. The certification and notice number(s) must appear on each comment page.

The attached Fact Sheet provides a description of the project and the antidegradation assessment.

The application, Public Notice/Fact Sheet, comments received, and other documents are available for inspection and may be copied at the IEPA at the address shown above 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 certification application, the IEPA may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing. If a Section 401 water quality certification is issued, response to relevant comments will be provided at the time of the certification. For further information, please call Darren Gove at 217/782-3362.

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Fact Sheet for Antidegradation Assessment
For Prairie State Generating Company, LLC
IEPA Log No. C-0227-12
COE Log No. P-2818
Contact: Diane Shasteen (217) 558-2012
Public Notice Start Date: December 19, 2014

Prairie State is proposing to construct a 500-acre monofill on a 740-acre site, referred to as the Near Field Monofill, to dispose of coal fly and bottom ash, flue gas desulfurization (FGD) gypsum, and mine waste, collectively referred to as coal combustion residuals (CCR). The CCR is generated by Prairie State's 1,600 MW state-of-the-art coal-fueled power plant and mine located northeast of Marissa, IL in Washington County. Prairie State anticipates a minimum 40-year life for the power plant. In order to meet the long-term disposal needs of the power plant, Prairie State needs a dedicated on-site monofill facility with a total storage capacity to handle the 40-plus years of anticipated waste. Currently, Prairie State estimates 3.94 million tons of CCR and 350,000 tons of mine breaker reject will be produced per year at the new plant. Over the anticipated 40-year lifespan of the plant, a total storage capacity for 157.6 million tons of CCR and 14 million tons of mine breaker reject is required.

The purpose of the proposed project is to provide the minimum 40-year storage capacity, reduce pollution emissions and reduce the cost per mega-watt of electricity.

Identification and Characterization of the Affected Water Body.

To accommodate the construction of the monofill, two tributaries and two emergent wetlands would be impacted. Tributary 1 has been previously straightened in sections, contains areas of concentrated trash, several low water crossings and contains a narrow to non-existent riparian corridor. A habitat assessment was conducted within the unnamed tributary using the U.S. Environmental Protection Agencies' Rapid Bioassessment Protocols for Use in Streams and Wadable Rivers (EPA RBP). Habitat and biological integrity within the unnamed tributary was between poor and marginal. Tributary 2 is a man-made straight channel with somewhat unstable banks and a narrow riparian corridor.

The watershed for Tributary 1 is 3.9 square miles and the watershed for Tributary 2 is 0.29 square miles. The unnamed tributaries of Mud Creek are located at a point where 0 cfs of flow exists upstream during critical 7Q10 low-flow conditions. The unnamed tributaries of Mud Creek are classified as General Use Waters. The unnamed tributaries of Mud Creek are not listed as biologically significant streams in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor are they given an integrity rating in that document. The unnamed tributaries of Mud Creek, tributary to Waterbody Segment, OE-02, are not listed on the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List since they have not been assessed. The unnamed tributaries of Mud Creek are not subject to enhanced dissolved oxygen standards.

During the project planning process for the monofill, baseline assessment of the existing conditions of Unnamed Tributary #1 including, stream habitat, fish, aquatic macroinvertebrates, and unionids (freshwater mussels) were evaluated at three sites. The survey was conducted by Ecological Specialists, Inc. (ESI) in conjunction with Hanson. Results of the survey concluded

habitat and biological integrity at each sampling site was between poor and marginal. The original report indicated three weed shiners (*Notropis texanus*) were found at the upstream site (Site 1). Concern that a potential state listed endangered species was discovered just upstream of the proposed project, Hanson and Prairie State requested ESI further verify the identification of the species was correct, as weed shiners are not known to occur in Washington County, Illinois. ESI re-examined their preserved specimens collected during the original survey and contacted Mr. Robert Hrabik with the Missouri Department of Conservation for definitive verification. Mr. Hrabik confirmed the three specimens were misidentified in the February 2011 report and were actually juvenile golden shiners.

The impacted wetlands are man-made, occasionally farmed, surrounded by active agricultural fields, contain low plant diversity, have a minimal capacity for flood storage and lack connective wildlife habitat. Based upon an initial assessment, it is believed the manmade wetlands were constructed under an expired Wetland Reserve Program through the Natural Resources Conservation Service.

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

The pollutant load increases that would occur from this project include some possible increases in total suspended solids (TSS) which will occur during construction of the relocated tributaries. The project will relocate 10,545 linear feet of stream to the north and west of the proposed monofill and will fill in two wetlands for a total of 3.75 acres.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids will be local and temporary, during construction of the new stream.

Prairie State proposes to offset the impacts to both unnamed tributaries by relocating the tributaries and creating a riparian corridor along the northern and western edges of the proposed new monofill. The 11,700 linear foot relocated creek channel would be designed to contain a meandering channel with riffle and pool features, stable banks and a wider riparian corridor. The applicant's intent is to create the relocated channel with improved water quality, food chain support and habitat creation. Prairie State proposes to install two access road crossing structures in the relocated tributary. For additional mitigation, Prairie State proposes to construct a 160-foot wide riparian corridor along the entire length of the relocated channel for a total of 43 acres. The riparian corridor creation area will be planted with large caliber trees on a 20 foot x 20 foot spacing (109 trees per acre) for a total of 4,687 trees.

To compensate for the 3.75 acres of manmade wetland impacts, Prairie State proposes to create a 5.6-acre emergent wetland adjacent to the riparian corridor of Mud Creek, just south of the power plant. The 5.6-acre emergent wetland will provide improved water quality protection, food chain support, breeding and migration habitat for migratory birds, breeding and over-wintering habitat for amphibians and increased connectivity of habitat types that currently is non-existent in the wetlands within the farm fields. Overall the created emergent wetland goal

would be to have a higher quality and function than the impacted manmade wetlands and the relocated stream segment and riparian corridor goal would be to provide increased channel stability, habitat creation and improve water quality within the Lower Kaskaskia watershed. The proposed creek relocation, its surrounding riparian corridor, and the 5.6-acre emergent wetland are located on property currently owned by Prairie State. Once construction of the sites is complete, a deed restriction would be filed with the Washington County Recorder of Deeds to protect the relocated creek, its riparian corridor and the emergent wetland in perpetuity.

Purpose and Social & Economic Benefits of the Proposed Activity.

This alternative will benefit the eight not-for-profit power companies that own Prairie State by helping to keep production costs low and continuing the employment of more than 500 full-time employees in Washington County, Illinois, as well as the continued utilization of products and services from numerous local suppliers and vendors.

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

In the development of the project, Prairie State has sought to create an alternative that avoids and minimizes environmental impact to the greatest extent possible while achieving the purpose and needs of the project. Prairie State has evaluated several design alternatives for the monofill, including a no-build/no-action alternative, consideration of alternative sites, and variation in project design.

No-Build/No-Impact

The option of no action is not feasible since the Jordon Grove monofill will reach capacity in less than 14 years based on Prairie States estimates that they will produce 3.9 million tons of CCR and 350,000 tons of mine breaker reject per year. The lack of storage capacity at the Jordan Grove site does not meet the long-term disposal needs of the power plant, therefore additional capacity will be required to be located, purchased, designed, permitted and constructed in order to meet the requirements of the power plant. In addition to lack of capacity, the Jordan Grove site is located 19 miles by rail and 12 miles by road, from the Prairie State plant. This distance between the plant and the Jordan Grove disposal facility requires that the material be transported to the site by either rail (primary method) or truck (secondary method). The preferred alternative will eliminate the extensive rail and/or truck traffic and transportation costs due to its location adjacent to the power plant.

The no-action alternative was eliminated from further consideration since it does not fulfill the capacity requirements, and because it has significantly higher transportation costs, higher vehicular emissions, and greater potential of environmental risks associated with long-distance transportation.

Alternative Site Evaluation

During the project development process, alternative methods of material disposition and storage as well as the feasibility of developing sites other than the preferred alternative were also considered; they include:

Underground Storage

The possibility of storing CCR in the adjacent underground coal mine owned by Prairie State was also considered as an alternative disposal site. However, storing CCR in underground coal mines is neither practical nor economically viable under the Mine Safety & Health Administration (MSHA) regulations and policies. Therefore, it has been determined that underground storage is not a practicable alternative and was eliminated from further consideration.

Alterative Parcels

Prairie State owns additional parcels surrounding the power plant, however no other parcel is large enough (approximately 740 acres) to meet the minimum 40-year storage capacity needed for the monofill site. Property to the north and east of the power plant is designated for coal reserves, and under the MSHA regulations and policies, a monofill cannot be constructed on top of land designated for underground mining. The majority of land south of the power plant is in the Mud Creek floodplain and floodway, which contains high quality and diverse wetlands functioning as a riparian corridor. Developing the monofill on land south of the power plant would impact a larger quantity of much higher quality wetlands and waterbodies than the preferred alternative. Due to the parcel size required, existing land designations and avoidance of higher quality wetlands and waterbodies, the properties north, east, and south of the power plant were eliminated from further consideration. Also, due to the topography of the area, Prairie State determined it would be very difficult to find a 740-acre parcel located near their existing power plant that does not contain any wetlands or water of the United States.

No-Impact/Minimization Alternatives

During the review process, a no-impact alternative and minimized-impact alternative were considered.

No Impact

Prairie State evaluated avoiding impacts to the tributaries and wetlands. However, this would reduce the monofill space by approximately 125 acres and remove approximately 70 million cubic yards of disposal space or nearly one-half the designed volume. Leaving the tributary in place would also require berms on both sides of the tributary. Management of the leachate becomes more complex and difficult if containment areas are required on either side of the tributary.

Minimization Impact

Minimizing the overall project impacts by leaving the unnamed tributary undisturbed and developing cells on both the north and south sides was also considered. This alternative would require at least eight separate creek crossings. These eight crossings would be as follows: conveyor crossing, outbound vehicles, inbound vehicles, general site access, two leachate conveyance crossings, and two storm water/process water crossings from additional storm water retention basins.

These no-impact/minimization-impact alternatives were ruled out since they do not provide the needed storage.

Because Prairie State is not strictly a public or private company, they proceeded to use an alternative cost analysis method which is allowable by the *Interim Economic Guidance for Water Quality Standards – Workbook* (EPA-823-B-95-002), published by USEPA, dated March 1995. Prairie State evaluated the cost of continuing to use the Jordan Grove Mine (and permitted landfill facility when the Jordan Grove Mine is full) for disposal of CCR and the cost of constructing the Near Field Monofill in the "Alternatives Cost Analysis of the Near Field Monofill Requiring a Stream Relocation" that was submitted to the Agency on November 13, 2014. Prairie State determined that difference in cost was significant and the construction of the Near Field Monofill and associated stream location and wetland impacts were justified.

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

On December 16, 2014, the IDNR EcoCAT web-based tool was used and indicated that there were no endangered/threatened species present in the vicinity of the discharge. The IDNR EcoCAT web-based tool terminated the 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 this antidegradation review summary 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 waters will be maintained; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will benefit the community at large by continuing the employment of more than 500 full-time employees in Washington County, Illinois, as well as the continued utilization of products and services from numerous local suppliers and vendors. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.