IEPA Log No.: **C-0719-13**
CoE appl. #: **2013-724**

Public Notice Beginning Date: **July 22, 2015**
Public Notice Ending Date: **August 21, 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
Division of Water Pollution Control
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-3362

Name and Address of Discharger: Sugar Camp Energy, 11351 North Thompsonville Road, Macedonia, IL 62860

Discharge Location: Sections 33, 29, 28, 4 and 5, T5 and 6S, R4E of the 3rd P.M. in Franklin County near Macedonia

Name of Receiving Water: Unnamed tributaries to Middle Fork Big Muddy River, unnamed tributaries to Sugar Camp Creek and unnamed wetlands

Project Description: Sugar Camp North Refuse Disposal 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 Thaddeus Faught at 217/782-3362.

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Fact Sheet for Antidegradation Assessment
Sugar Camp Energy – Unnamed Tributaries to the Middle Fork Big Muddy River, Unnamed Tributaries to Sugar Camp Creek and Unnamed Wetlands – Franklin County
CoE# 2013-724
IEPA Log # C-0719-13
Contact: Diane Shasteen (217) 558-2012
July 22, 2015

Sugar Camp Energy, LLC ("Applicant") has applied for Section 401 water quality certification for impacts to approximately 2,742 linear feet (LF) of ephemeral streams and 4,758 LF of intermittent streams, unnamed tributaries (UTs) to Sugar Camp Creek (SCC) and the Middle Fork Big Muddy (MFBM). The proposed project encompasses Sections 28, 29, and 33, Township 5 South, and Sections 4 and 5, Township 6 South, Range 4 East, northwest of Akin, Franklin County, Illinois. The proposed permitted area covers 1,154 acres, currently in agricultural production with scattered forested wetlands, with an impacted area of approximately 749 acres. The proposed coarse coal refuse embankment will range from 110' to 115' high with a 40' wide crest at an elevation of 525'. A four foot thick compacted clay liner or a geosynthetic liner will be placed below the coarse coal refuse embankment and within the limits of the incised portion of the impoundment. Additional infrastructure for the proposed project includes a 200' x 84" beltline corridor, 30' wide maintenance/access road, two soil storage areas, sediment control structures around the soil stockpiles and main impoundment, slurry lines and decant water return pipes (2 each), and 6 culverts at road crossings (2-30", 4-36"). The purpose of the project is to construct a new refuse disposal area which will provide approximately 5 years of coarse coal and 9 years of fine coal refuse disposal from the Sugar Camp Energy, LLC, MC #1 Mine preparation plant located south of the proposed site. This project will maximize the storage capacity of the project area.

In addition to the stream impacts, the proposed project will impact 20.33 acres of jurisdictional forested (19.96 acres) and scrub/shrub (0.37 acres) wetlands and 0.11 acres of jurisdictional farm ditch. Stream mitigation includes the rerouting and reestablishment of 4,853 LF of an existing intermittent stream and restoration of an additional 2,768 LF of ephemeral stream. Wetlands will be mitigated on-site at a ratio of 3:1 for a total of 68.39 acres of created forested wetlands.
Fifty foot riparian buffers will be established for the relocated and restored streams and the mitigated wetlands. Stream and wetland mitigation sites will be constructed prior to or concurrent with the refuse facility development.

Identification and Characterization of the Affected Water Body.

The ephemeral and intermittent streams to be impacted, unnamed tributaries (no Segment Codes) to SCC and the MFBM have not been assessed by Illinois EPA. These streams 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 USGS Illinois Streamstats basin characteristics program gives a watershed size of 0.10 square miles and 0.47 square miles for the SCC UTs and 0.47 square miles to the MFBM UT. According to the Illinois State Water Survey, these UTs are likely to be 7Q1.1 zero flow streams. In this region of Illinois, 7Q1.1 zero flow streams are streams with a watershed area of 5 square miles or less. These streams will exhibit no flow for at least a continuous seven day period nine out of ten years. Aquatic life communities in these headwater streams are tolerant of the effects of drying. Depending on the rainfall received before biological surveys, either a very limited aquatic life community, or no community at all would be found. Given this flow regime, no additional biological characterization would be required.

The Middle Fork Big Muddy River (IL_NH-07), a direct tributary to the Big Muddy River, is a General Use Water with an estimated zero cfs 7Q10 flow. According to the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List, MFBM has been assessed by Illinois EPA and is listed as not supporting Aquatic Life use. Causes of impairment include Manganese, Dissolved Oxygen, and Sedimentation/Siltation. Fish Consumption, Primary Contact Recreation, Secondary Contact, and Aesthetic Quality uses have not been assessed. MFBM is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*; nor is it given an integrity rating in that document at this location. MFBM is not designated as an enhanced water pursuant to the dissolved oxygen water quality standard.

Sugar Camp Creek (IL_NHH), a direct tributary to the MFBM, is a General Use Water with an estimated zero cfs 7Q10 flow. According to the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List, SCC has been assessed by Illinois EPA and is listed as fully supporting Aquatic Life use. Fish Consumption, Primary Contact Recreation, Secondary Contact, and Aesthetic Quality uses have not been assessed. SCC is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*; it is given an integrity rating of "B" in that document at this location. SCC is not designated as an enhanced water pursuant to the dissolved oxygen water quality standard.

The Applicant contracted Alliance Consulting, Inc. to field investigate the waters of the U.S. and prepare a report of the project area. Twenty-four potentially jurisdictional stream channels were identified within the permit area, along with one jurisdictional farm ditch. Stream measurements were collected in January and August 2013 to determine the total stream acreage. No additional biological characterization or assessments of the stream channels were conducted due to the intermittent flow regime of the stream channels identified. The 7,500 LF (0.58 acres) of proposed stream impacts include the filling and relocating of two stream channels, MFBM UTs (Channel C and BL2A) and the filling of four additional stream channels, SCC UTs (Channel A1, 2A, and B) and MFBM UT (Channel C1) and one jurisdictional farm ditch. A culvert will be constructed on Channel BL2 (MFBM), and bridges will be constructed over Channels 2 (SCC) and BM (MFBM). Directional boring for slurry lines and decant pipes is proposed for Channel BM (MFBM).

The Applicant contracted Alliance Consulting, Inc. to conduct a wetland delineation report of the project area. Wetland measurements were collected in October 2010, and January and August 2013 to determine the total acreage within the permit area. Ten wetlands (Wetland A-G, Y, Z, and VP-A), including the Sugar Camp Mine No. 1 Mitigation Area constructed wetland, totaling 44.60 acres of forested (44.23) and scrub/shrub (0.37) wetlands were identified within the permit area. Wetlands B and VP-A were determined to be non-jurisdictional. No floristic quality scores were given for these wetlands. The species lists from these sites contain common wetland species such as phragmites, facultative upland tree species such as Red Oak (*Quercus furcata*) and Shag-bark Hickory (*Carya ovata*), and facultative wetland tree species such as River Birch (*Betula nigra*), American Sycamore (*Platanus occidentalis*), and Red Maple (*Acer rubrum*). No further assessments or classifications were given for the delineated wetlands. Percentage of wetland impacted varies by site from approximately 17% of Wetland G, 60% of Wetland F and Y, and 100% of the remaining wetlands (A-E and VP-A) for a total of 20.33 acres impacted. The constructed wetland located within the permit area will not be impacted.

Impacts to the stream channels and wetland areas are unavoidable and will be mitigated on-site prior to or concurrent with the refuse facility development. Completion is expected before the end of the 2nd growing season from the issuance of the Section 404 permit. Stream channels will be mitigated in excess of a l:1 ratio; 4,853 LF of intermittent stream will be relocated/reestablished and 2,768 LF of ephemeral streams will be restored. Wetland impacts will be mitigated at a 3:1 ratio; 68.39 acres of forested wetlands will be restored within the floodplain of the Big Muddy River. Additional requirements for the mitigation sites include annual monitoring for 5 years or until success criteria are met and the COE determines the sites to be self-sustaining. Mitigation areas will be protected in perpetuity with a Declaration of Covenants and Restrictions to be placed with the County Recorder of Deeds.

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

The pollutant load increases that would occur during this project include possible increases in suspended solids during construction. Prior to land clearing, the Applicant will construct sediment control structures such as temporary silt basins, ditches, ponds, rock toe sediment structures, straw bale fencing, and cloth filter fences to minimize any increase in suspended solids. These structures will be maintained in combination with concurrent reclamation and revegetation of disturbed areas. Water discharged from the permit area will be monitored per the applicant's NPDES permit.

The project will fill approximately 2,742 LF of ephemeral streams (0.222 acres) and 4,758 LF of intermittent streams (0.378 acres). Channel C, a MFBM UT, will be filled and relocated during construction of the proposed storage facility. Approximately 20.33 acres of forested (19.96) and scrub/shrub (0.37) wetlands will be eliminated by the proposed construction.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids in the project area will be local and temporary. Erosion control measures mentioned above will be utilized to minimize any increase in suspended solids. Perimeter ditches, flumes, and road gutters will be constructed to direct storm runoff away from the embankment. All discharges from the proposed site will be regulated by Section 402 of the Clean Water Act and subject to the NPDES effluent discharge limits for this location.

Runoff associated with the West Subsoil Stockpiles and the Far West Stockpiles was originally planned to discharge through NPDES Outlet No. 15 and 16 to Sugar Camp Creek and an unnamed tributary of Sugar Camp Creek, respectively. Revisions to the plan include placing a 500 gpm pump in Pond 015 and two 2,000 gpm turbine pumps in Pond 016 to avoid discharges into Sugar Camp Creek and its associated tributary during construction. The pumps will maintain a minimum water level of 2.5' and 4' feet below the primary spillway elevation in Pond 015 and 016, respectively. The pumps, operating on a float system that will automatically start and stop based on the water elevation in the pond, will pump the excess water to the slurry impoundment, the preparation pond, or other sediment pond with excess capacity not located in the Sugar Camp Creek drainage. Upon vegetation establishment (75 percent cover) of the Stockpiles, the NPDES outfalls will release effluent during storm events into Sugar Camp Creek (#15) and the unnamed tributary to Sugar Camp Creek (#16).

On-site intermittent stream relocation (4,853 LF), ephemeral stream restoration (2,768 LF) and on-site wetland construction (68.39 acres) will be completed prior to and concurrent to the refuse facility development. The relocation of the intermittent stream and its associated riparian zone will create a drainage network on the eastern portion of the site. A 50 foot forested riparian buffer will be established for the stream relocation and restoration projects. Based on the Illinois Stream Mitigation

Method, a total of 31,394.49 stream credits will be required due to impacts by this project; the mitigation plan results in the generation of 36,961.85 stream credits. On-site mitigation for the forested wetlands will completed at a ratio of 3:1 for a total wetland creation of 68.39 acres.

Purpose and Social & Economic Benefits of the Proposed Activity.
The purpose of constructing the Sugar Camp North Refuse Disposal Facility is to provide storage for approximately five years of coarse coal refuse and approximately 9 years of fine coal refuse based on Sugar Camp production rates, totaling approximately 65 million cubic yards of coal refuse. Coal refuse may include coal, rock, shale, slurry, culm, gob, boney, slate, clay and related materials, associated with or near the coal seam that are removed in the process of mining or are separated from coal during the cleaning or preparation operations. The coal preparation plant, located south of the proposed refuse site, separates the non-combustible materials from the mined coal producing clean coal and coarse or fine refuse; fine refuse is blended with water to produce slurry. The Herrin No. 6 coal seam is proposed to be mined in the areas surrounding the proposed facility.

The construction of the North Refuse Disposal Facility will provide continuation of mining activities, coal preparation plant operations, and provide coarse and fine coal refuse containment on site. The Sugar Camp Mine is expected to generate 12-14 million tons of useable coal and 9.26 million cubic yards of coal refuse annually. This project will allow for the continued employment of 397 Sugar Camp Mine and coal preparation plant employees and generate local retail trade for associated supply needs and employee commerce. The operation of the mine provides tax revenues through payroll, coal severance, and mineral resource taxes for the surrounding counties and the State of Illinois.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.
The applicant considered four alternatives (No Action and Alternatives 1-3) for completion of the proposed refuse facility and completed a review of the economic and environmental advantages and disadvantages of these alternatives. The No Action alternative (Table 1) would result in the premature closure of Sugar Camp Mine #1 and its preparation plant. These closures would result in a loss of approximately 397 jobs, annual production of 12-14 million tons of coal, and other negative economic consequences such as losses in taxes and local retail trade generated from associated supply needs and employee commerce. This alternative was deemed impracticable based on the project purpose and need.

Due to related costs, the Applicant considered it necessary to build the disposal area in the vicinity of the preparation plant and three primary criteria were used to narrow down the alternative site locations based on operation and cost feasibility. Alternatives 1-3 were chosen based on these three primary criteria: 1.) Site within a two mile radius of existing preparation plant facilities, 2.) Facility must be located on a previously undermined area or an area not proposed for undermining so as not to limit future coal extraction opportunities and/or negatively affect the structural stability of the coal refuse disposal area and 3.) Facility must be large enough to facilitate a minimum of approximately 7 years (based on one longwall) or 3.5 years (based on two longwalls) of service to the preparation plant.
The Applicant reviewed several sources including Illinois Hydrography, National Wetland Inventory (NWI), Soil Survey Geographic (SSURGO), Sanborn Aerial Planimetrics, and Illinois National Agriculture Aerial Photography Program (NAPP) datasets to complete the Alternative Analysis. SSURGO provided prime farmland and soil data and NAPP was utilized to determine forest and road resources. Due to the lack of current updates to the Illinois Hydrography and NWI datasets, the Applicant chose the 2006 Sanborn aerial planimetric data to evaluate the aquatic resources (streams

and wetlands) of the alternative sites. Environmental and infrastructure impact, refuse storage efficiency, and cost analyses for Alternatives 1-3, based on these datasets, are listed in Table 2. The Applicant elected to pursue Alternative 3 based on the original Alternative Site Evaluation utilizing Sanborn Planimetric Mapping which identified substantially fewer wetland acres (7.02 total; 0.79 to be impacted) than were delineated by Alliance Consulting, Inc. and the USACOE (44.60 total acres; 20.33 acres impacted). The Applicant stated the following: "*We have found that the aerial mapping did not match up well with actual field conditions. Comparing the resources identified within Alternative Nos. 1 and 2 with the actual field work is not appropriate since they have not been subjected to the same level of evaluation.*"

All build alternatives would result in a loss of aquatic habitat, including wetlands. Alternative 2 was determined to be impracticable based on the cost of construction, which would be nearly two times greater than Alternatives 1 and 3. Cost of construction is comparable for Alternatives 1 and 3; however, the storage capacity of Alternative 3 is nearly double the capacity of Alternative 1. Therefore, Alternative 3 was chosen as the preferred action alternative. This alternative provides the highest refuse storage volume per land cover area and stream and forest impacts. Due to the proximity to the existing coal preparation plant, Alternative 3 requires the least linear footage of belt and ancillary features which increases the operational and maintenance efficiency while maintaining the least total belt and ancillary costs. While Alternative 3 does have the largest footprint, it was determined to have the greatest use efficiency, highest refuse storage capacity per impacted resource, and is the most practicable, cost efficient alternative.

Table 1: No Action Alternative for Sugar Camp Energy, LLC North Refuse Disposal Facility

Disadvantages		
Loss of 12-14 million tons of coal annually; threatens necessary coal supply for electric utilities	Loss of retail trade generated from associated supply needs and employee commerce	Site disturbance could potentially occur without regulated requirements
Loss of ~397 direct jobs associated with closure of Sugar Camp Mine and preparation plant	Fails to meet Applicant's purpose and need of utilizing Sugar Camp Mine's viable coal reserves	Continued degradation of jurisdictional waters from agriculture
Loss of annual tax revenue for surrounding counties and state		

Advantage
Eliminates refuse expansion-related disturbances of streams and wetlands

Table 2: Project Alternatives Comparison for Sugar Camp Energy, LLC North Refuse Disposal Facility

Alternative	Land Area Impacted (Acres)	Stream Impact (LF)	Wetland Impact (Acres)	Forest Impact (Acres)	Prime Farmland (Acres)
1	415	34,477	1.28	125	244
2	366	48,899	0.88	115	351
3	512	33,384	0.79*	78	563

Alternative	Refuse Storage per Land Area Impacted (CY/AC)	Refuse Storage per Stream Impacted (CY/LF)	Refuse Storage per Wetland Impacted (MCY/AC)	Refuse Storage per Forest Impacted (CY/AC)	Refuse Storage per Farmland Impacted (CY/AC)
1	86,136	1,542	27.9	285,973	146,502
2	106,639	1,600	44.4	339,391	111,197
3	127,142	6,152	82.4*	834,575	121,449

Alternative	Refuse Storage (MCY)	Belt Distance (Miles)	Total Belt and Ancillary Costs (M)	Property Acquisition Costs (M)	Total Project Costs (M)
1	35.7	1.9	7.9	0.0	7.9
2	39.0	2.8	11.6	3.7	15.3
3	65.0	1.3	5.2	2.0	7.3

* Information based on original evaluation of site alternatives utilizing 2006 Sanborn aerial planimetric data. Actual wetland acre impacts of project according to USACOE delineation is 20.33 acres.

Conclusion:

The construction of the proposed project will follow conditions set forth by the Agency and USACE. The completion of the coal refuse facility construction project is the most cost effective, viable means for providing permanent coal byproduct storage for the existing Sugar Camp Mine. Sedimentation ponds, ditches, and diversions will be placed throughout the construction site to collect surface runoff and convey water to NPDES outlets, thereby, minimizing the increase in total suspended solids and any adverse effects to aquatic resources. The construction of the proposed facility will allow Sugar Camp Mine and its coal preparation plant to remain operational and retain 397 employees. The availability of high quality coal and a tax revenue base will remain uncompromised. Disturbance to ephemeral and intermittent streams and wetlands will be mitigated through the creation of a new intermittent stream and the restoration of the ephemeral stream channel and the creation and restoration of forested wetlands in the Big Muddy River watershed.

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

An Eco-CAT endangered species consultation submitted on December 19, 2014 to the Illinois Department of Natural Resources resulted in the following protected resources, Indiana Bat (*Myotis sodalis*) and Rice Rat (*Oryzomys palustris*), in the vicinity of the project location. IDNR has evaluated the EcoCAT information for Project #1507431 and determined that adverse effects to endangered species could occur. IDNR recommends that no trees be trimmed, felled, or removed except between the dates of November 1 and the subsequent April 1. If trees must be removed between April 1 and November 1, IDNR requires a survey by a qualified biologist for use by the Indian Bat and the Northern Long-Eared Bat, which has been approved for listing as threatened by the Illinois Endangered Species Protection Board. If either bat species is present, an Incidental Take Authorization (ITA) for these species would be required in accordance with 17 Ill. Adm. Code Part 1080. The Rice Rat has been approved for delisting by the Illinois Endangered Species Protection Board, pending publication in the Illinois Register. If construction begins before the species is delisted, the Applicant must apply for an ITA for the Rice Rat. In accordance with 17 Ill. Adm. Code Part 1075.40(h) the Applicant is required to notify IDNR of their decision to comply with these recommendations. Consultation under 17 Ill. Adm. Code Part 1075 was completed for IDNR Project #1507431 on January 13, 2015.

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 401 Water Quality Certification was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; 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 retaining the employment of approximately 397 residents and provide the continuation of the tax revenue base and affordable energy to Illinois's citizens and businesses. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.